

PN APY-900  
91208

**RAPID ASSESSMENT OF FOOD SECURITY  
AND THE  
IMPACT OF CARE FOOD PROGRAMMING IN  
NORTHWEST HAITI**

**March, 1994**

**Report Prepared by:**

**Mamadou Baro - University of Arizona (Team Leader), Anthropologist  
Marshall Ashley - Independent Consultant, Agronomy and Statistics  
Carol Chang - CARE/Haiti, Food Aid Project  
John Currelly - USAID/Haiti, Monitoring Unit  
Alexis Gardella - Independent Consultant, Anthropologist  
Anne Leonhardt - CARE/Atlanta, Rural Sociologist  
Jane Yudelman - Independent Consultant, Nutrition  
Anna Giuliano - Nutritionist, University of Arizona**

## ACKNOWLEDGEMENTS

*This report incorporates a tremendous amount of effort by a large number of people, each of whom played a critical role to the success of the mission. We would like to express our heartfelt gratitude to our Haitian colleagues who offered not only their intellectual competence and dedication, but also their friendship during a very intense fieldwork project. In Haiti, we would like to thank all the people who took time from their busy schedules to answer our questions and complete our questionnaires. We also received great support from CARE (Atlanta & Haiti) and USAID (Haiti). We specially thank Curt Shaeffer (CARE-Atlanta), Chris Conrad (CARE-Haiti), Lance Downing (USAID-Haiti), Terry Hardt (USAID-Haiti), Vernon Conaway (USAID-Haiti), K. M. Adeeb (CARE-Haiti), Doug Clark (CARE-Haiti), Marie-France Racette (CARE-Haiti), Greg Brady (CARE-Haiti), Margaritte Gideon (USAID-Haiti), Gary Philoctete (CARE-Haiti), Abdul Wuhab (USAID-Haiti), Jim Kelly (CRS-Haiti), Sheila O' Rourke (USAID-Haiti), Carol & Geoge Truelove (Mare Rouge),*

*At the University of Arizona, we would like to thank Timothy Frankenberger, Drexel Woodson, Anna Giuliano, Jennefer J. Manthei, Claude Bart and Katherine McCaston who provided support and useful suggestions throughout the project.*

*Finally, our greatest debt of gratitude is with the people of the Northwest who so warmly offered their unmeasured hospitality in their communities and homes. Despite the interruptions that we caused in their daily routines, they gave us shelter, shared their experiences, and became our partners in research. We hope that this effort may someday make a small difference in their very difficult lives. To all these people, we reiterate our sincere thanks and acknowledge their respective contribution to our study. We can guarantee that any errors or misinterpretations found in this report are strictly the fault of the authors.*

## TABLE OF CONTENTS

I.	EXECUTIVE SUMMARY .....	1
II.	INTRODUCTION .....	9
	A. Objectives .....	9
	B. Methodology .....	9
	1. Institutional Assessment .....	9
	2. Rapid Food Security Assessment .....	10
III.	INSTITUTIONAL ASSESSMENT .....	14
	A. Socio-political and Development context .....	14
	B. History of the Cantines Populaires .....	18
	C. Assessment of the Cantines Populaires .....	20
	1. Overall observations .....	20
	2. Rationale for the Cantines Populaires .....	20
	3. Objectives .....	21
	a. Participation of the poor .....	21
	b. Mortality and morbidity .....	21
	4. Targeting .....	22
	a. Overall numbers .....	22
	b. Vulnerable Groups .....	22
	c. Site Selection .....	23
	5. Design Process .....	24
	a. Needs Assessment .....	24
	b. Disincentive Analysis .....	24
	c. Commodity mix and ration size .....	24
	d. Coordination with other Organizations, Programs and the Communities. ....	24
	6. Implementation and Management .....	25
	a. Commodity Management .....	25
	b. Monitoring and Evaluation .....	26
	c. Training .....	26
	7. Adequacy of Program inputs .....	27
	a. Monetary .....	27
	b. Community .....	27
	c. Project .....	27
	D. Specific Effects of the 1991 Coup d'Etat .....	27
	E. Government views and Perspectives .....	29

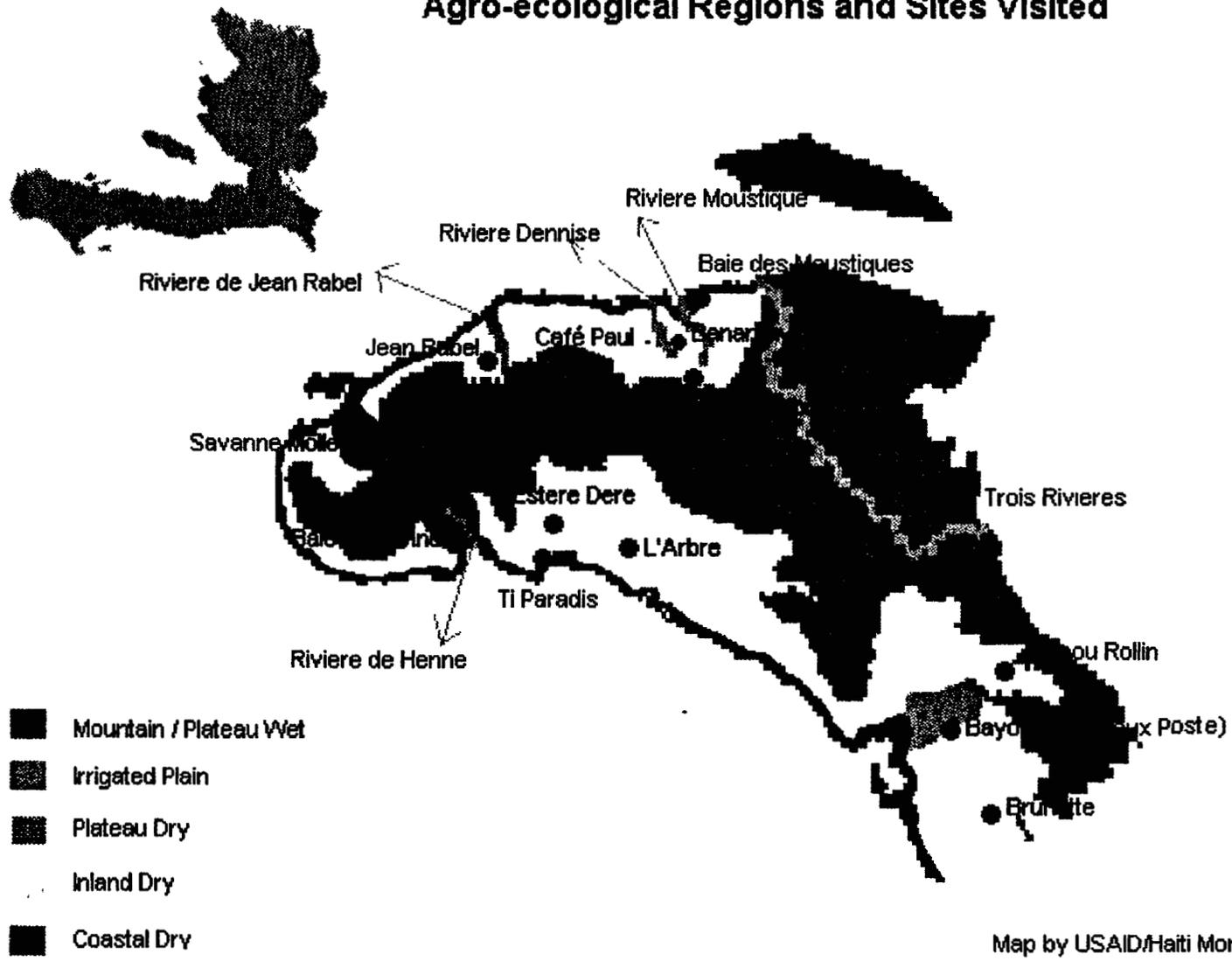
IV. RAPID FOOD SECURITY ASSESSMENT . . . . .	31
A. The Irrigated Plain Agro-Ecological Zone . . . . .	31
1. General Features of Area Surveyed . . . . .	31
2. Livelihood Strategies . . . . .	34
3. Coping Strategies . . . . .	36
4. Food Consumption Patterns . . . . .	37
5. Child Care . . . . .	38
6. CARE Food Programs . . . . .	39
B. The Inland Dry Agro-Ecological Zone . . . . .	39
1. General Features of Area Surveyed . . . . .	39
2. Livelihood Strategies . . . . .	42
3. Coping Strategies . . . . .	43
4. Food Consumption Patterns . . . . .	44
5. Child Care . . . . .	45
6. CARE Food Programs . . . . .	45
C. The Plateau-Dry Agro-Ecological Zone . . . . .	46
1. General Features of Area Surveyed . . . . .	46
2. Livelihood Strategies . . . . .	48
3. Coping Strategies . . . . .	49
4. Food Consumption Patterns . . . . .	49
5. Child Care . . . . .	50
6. CARE Food Programs . . . . .	50
D. The Mountain and Plateau Wet Agro-Ecological Zone . . . . .	51
1. General Features of Area Surveyed . . . . .	51
2. Livelihood Strategies . . . . .	54
3. Coping Strategies . . . . .	55
4. Food Consumption Patterns . . . . .	55
5. Child Care . . . . .	56
6. CARE Food Programs . . . . .	56
E. The Dry Coastal Agro-Ecological Zone . . . . .	57
1. General Features of Area Surveyed . . . . .	57
2. Livelihood Strategies . . . . .	59
3. Coping Strategies . . . . .	60
4. Food Consumption Patterns . . . . .	61
5. Child Care . . . . .	61
6. CARE Food Programs . . . . .	62

*h*

F.	Nutritional Status . . . . .	62
	1. Calculation of malnutrition Rates . . . . .	62
	2. Sex Distribution . . . . .	62
	3. Percent of Children Malnourished . . . . .	63
	a) Dry coastal . . . . .	64
	b) Inland Dry . . . . .	65
	c) Plateau Dry . . . . .	65
	d) Mountain and Plateau Wet . . . . .	65
	e)Irrigated Plain . . . . .	66
	4. Child Health . . . . .	66
G.	Recommendations . . . . .	67
H.	A Multi-dimensional Monitoring System . . . . .	68
V.	CONCLUSIONS . . . . .	72
VI.	ANNEXES	
	1. CARE Haiti Historical Background . . . . .	75
	2. Overview on Donor Organizations . . . . .	82
	3. Nutritional Data . . . . .	86
	4. Persons Interviewed . . . . .	89
	5. Rapid Fodd Security Assessment Training Module . . . . .	91
	6. Data Sources and Bibliography . . . . .	93
	7. Matrices . . . . .	96
	8. Agricultural Calendar . . . . .	184

# The Northwest of Haiti

## Agro-ecological Regions and Sites Visited



Map by USAID/Haiti Monitoring Unit

## I. EXECUTIVE SUMMARY

The team's objective was to evaluate CARE-Haiti's Cantine Populaire Program. A two-part methodology was implemented in order to achieve that objective. The team prepared an institutional assessment that addressed issues of project design and management. It also conducted a rapid rural assessment focusing on the food security situation, the program's success in reaching and assisting its target population, the effectiveness of its delivery mechanisms, and identifying factors relevant to future policy and strategy options.

The Institutional Assessment, completed for the most part during the first half of the team's visit, included a thorough document review, inquiry into the program's history, and a series of interviews with key informants. The second half of the visit was devoted primarily to the rapid rural assessment. Following standardized methodological procedures, the team was divided into three mobile units, each including CARE field staff selected for the task. The CARE Northwest region was divided into five agroecological zones--dry inland, dry coastal, mountain/plateau wet, plateau dry, and irrigated plain--and three sites were selected within each zone for visits by the three mobile units. Each unit's investigations included community-level meetings on general issues with men and women, a series of more in-depth household surveys following a standard interview schedule, and the weighing and measuring of 25 children aged three months to five years.

### A. INSTITUTIONAL ASSESSMENT

General findings of the institutional assessment center around three major points:

1. CARE's management and distribution systems are well organized, well managed, and efficient down to the community level. This is an especially noteworthy accomplishment given the extremely difficult working conditions in Haiti during the last two to three years.
2. However, CARE has been handicapped in its ability to formulate and/or implement long-term policy and planning considerations due to the great fluctuations in targeted beneficiary levels and unrealistic expectations of donors regarding the speed with which program changes may be accomplished. These handicaps have also had negative effects at the field level: on the one hand, in terms of overtaxed staff as well as rapid staff turnover; and, on the other, in terms of insufficient time to remedy perceived problems and to implement new approaches. Management design and policy, originally formulated to service a beneficiary population of only 5,000, is now serving more than 186,000 beneficiaries.
3. The original service-delivery model, the Cantine Populaire, was conceived and implemented for a small beneficiary population in mostly urban neighborhoods. Given the lack of MCH infrastructure in the Northwest, it was felt that the Cantine Populaire model would be the most efficient delivery mechanism for reaching vulnerable populations. However, the team found this model to be structurally flawed and inappropriate when applied to the largely rural peasant population it now serves. This inappropriate fit is in large measure responsible for many of the problems that CARE faces at the community level, including misappropriation of food commodities by Cantine responsab, inequitable distribution, ineligible beneficiaries, monitoring difficulties, and questionable impact.

## **B. RAPID RURAL ASSESSMENT**

The team's rapid rural assessment identified a series of factors, conditions, and trends that have direct relevance not only for the Cantine program, but for any future activities, strategies, and planning exercises undertaken by CARE or, for that matter, any development institution. The most salient findings are:

1. Although the team acknowledges that the Northwest is an area that has long suffered from difficult and worsening conditions, it observed definite indicators that point to an irreversible degradation of the natural-resource and asset bases of the population. For example, charcoal production and trade, initially undertaken as a stop-gap measure when agricultural activities failed, has become the major and, in some cases, the only economic activity of ever-larger numbers of people. At the same time, not only has the number of trees decreased as a result of charcoal production, but also tree stumps and roots and cactus roots have now become the major source of wood for charcoal production. There is nothing left after this. Obviously, this state of affairs has dire implications for both environmental conditions and human livelihood systems.
2. The Northwest's long-term economic and environmental stress has resulted in a striking lack of diversity, both at the ecological level and at the individual farm plot level. Vegetation is limited in numbers and in kind; farm plots do not exhibit the multicrop associations that ensure a minimum of security for the average peasant. This lack of diversity renders the area even more vulnerable to pest infestations, animal diseases, and closed opportunities for scratching out a living.
3. Virtually every household surveyed relies to a greater or lesser degree on the collection of wild plants for everyday subsistence needs. The list is quite extensive and includes items that are known to induce vomiting. The latter, along with tè blanc (lime), are consumed during particularly hard times. However, many communities reported dwindling amounts or the total disappearance of certain of these plants, whereas other communities reported their availability only during the rare rainy season.
4. Fishing is an important resource in coastal areas beyond fishing communities per se. Most, if not all, inshore fishing resources are totally depleted and storms have damaged the coastal ecological system. Although offshore fishing resources still hold great potential, the local population's lack of appropriate gear makes those resources virtually unattainable.
5. Coupled with the deterioration of the natural resource base is a related but separate process of decapitalization among the majority of peasant households. The destruction or sale of primary assets simply to earn enough money to buy one's next meal is now normal. In most cases, in the absence of a land market, land is farmed out for charcoal production with obviously deleterious effects on any future agricultural potential. Animals, the traditional "savings bank," are currently sold just to finance the next meal. Overall, livestock numbers are steadily decreasing and animals succumb to diseases, starvation, and dog attacks. Every single household surveyed had lost a large proportion of its chickens, goats, or sheep to disease over the past twelve months. Just as the natural resource base reveals a narrowing of possibilities, the process of decapitalization in the Northwest narrows the possibilities for earning a livelihood, forcing specialization in untenable strategies like charcoal production.
6. This process of decapitalization is especially evident among female-headed households. In some cases women have never had any access to any sort of productive asset or have lost it as a result of being abandoned. In other cases women have been forced to sell their assets to finance the funerals of their

husbands. In the majority of cases, single women with children represent the most vulnerable category of the population.

### C. NUTRITIONAL SURVEY

The rapid rural assessment included a nutritional survey. In each of the fifteen communities surveyed, 25 children were selected for weighing and measuring. The selections were based on socioeconomic indicators, which were also used in the household surveys. In all, the weight, height, and age measurements were recorded in 15 communities for 371 children between the ages of three and 59 months. The sex distribution did not differ between agro-ecological zones. There were no sex differences in rates of malnutrition in the zones surveyed.

Height for Age The mean height for age Z score ranged from -0.99 in the inland dry region to -1.57 in the mountain and wet plateau region. Although variation in the mean height for age Z scores were observed across agro-ecological zones, there were no statistically significant differences across zones. In general, fewer than normal children are growing in height at the normal rate. With a mean Z score of -1 to -2, these data suggest that stunting is a significant problem. Low height for age, or stunting is usually the result of chronic undernutrition, which occurs when there is a chronic calorie deficit or during recurrent periods of significant food shortage. Another contributor to poor linear growth of children is a high prevalence of low birth weight deliveries due to maternal malnutrition. Future assessments should examine the prevalence and the relationship of maternal malnutrition to the nutritional status of children in these communities.

The percent of children that are mild to moderately malnourished ( $-3 < Z \text{ score} < -2$ ) based on height for age is 19.4%. The percent of children that are severely malnourished ( $Z \text{ score} < -3$ ) is 8.6%. Nearly a quarter of the children measured are suffering from mild to moderate growth deficit.

Weight for Age Similar to the height for age values, the mean weight for age Z score was between -1 and -2 SD (Table 2) from the median of the reference population, suggesting that a significant proportion of children is undernourished. Again, children in the inland dry zone appeared to be best off, and children in the mountain and plateau wet zone appeared most undernourished based on the weight for age indicator. However, there were no statistically significant differences between these zones. In general low weight for age is most affected by low height (poor linear growth). Other variables which contribute to low weight for age are current food shortage, that is consumption of a diet insufficient to meet caloric needs, and high rates of infection such as diarrheal and respiratory infections.

Approximately 16% of the children measured have not gained the expected weight for their age and are categorized as mild to moderately malnourished based on the weight for age indicator. Approximately 4.6% of the total children assessed are severely underweight for their age.

Weight for Height Weight for height is an indicator of how thin, or proportional a child is for his height. This nutritional indicator is a reflection of current nutritional status and reflects current or acute caloric deficits in the diet or recurrent and/or severe infections such as diarrhea and respiratory infections and measles. The overall mean weight for height Z score was approximately -0.4 (Table 2). Unlike the other nutrition indicators, children in the mountain and plateau wet zone appeared to be least undernourished based on their weight for height. Children in the plateau dry zone appeared most malnourished with a mean Z score of -0.62. As with the other indicators, there were no statistically significant differences across agriculture/ecological zones. Mean Z scores above -1 indicate that most of the children surveyed

are proportionately small, and are not suffering from acute malnutrition. However a small percentage of children appear to be wasted, that is are too thin for their height. The percentage of children falling into these different categories (wasted, stunted) is detailed in Table 3.

The percent of children that are mild-moderately malnourished based on weight for height is 3.2%. There are no severely malnourished (Z score < -3) children based on this indicator. These results suggest that of the zones surveyed, chronic undernutrition, or recurrent food shortages is a much more serious problem than acute malnutrition.

To better distinguish active malnutrition from chronic malnutrition, children were classified into three groups: wasted, stunted, and wasted and stunted. More than a quarter of the children assessed are stunted according to this classification scheme, meaning these children have experienced chronic malnutrition. Only 1.3% of children are wasted. This is the percentage of children currently experiencing malnutrition for the first time. Approximately 1.9% are both wasted and stunted. This is the percentage of children that have experienced malnutrition in the past (chronic) and are also currently malnourished (active).

Distribution of Malnutrition by Child Age Children in the age group 3 to 5.9 months had the lowest rate of both chronic and acute malnutrition as evidenced by the percentage of children with Z score under -2 for height for age, weight for age and weight for height (Table 4). The percent of children with faltering linear growth (height for age) increased with increasing age of the child. The percent of children with low weight for age and low weight for height did not change once the age of 6 months was reached. These data indicate that consistent mild undernutrition accumulates over a child's life such that the proportion of children categorized as stunted increases with increasing age of the child. Weight gains for a particular height in general continues proportionately through the first 5 years of life in this population of children. Unlike growth deficits, no one age group appears to be more susceptible to deficits in weight gain in the first 5 years.

## **D. RECOMMENDATIONS**

Drawing on its field data, and buttressing that data with an understanding of the CARE program's needs and objectives, the team makes the following recommendations:

### **1. Strategic Planning**

In order to restore regional food security in the Northwest, regions that are currently receiving CARE food aid should be targeted as well for interventions directed at rebuilding their livelihood systems and improving access to food supplies for local populations.

To address properly the presently declining food security situation in the Northwest, CARE-Haiti must approach the problem from a variety of carefully placed vantage points. Based on a systematic analysis of needs, the food program should distinguish two different types of areas: those in which food interventions are urgent and the only viable response, and those where development interventions should also be implemented both to protect and restore the resiliency of the local communities' food and livelihood systems. In the latter case, interventions should be designed to prevent areas from reaching the extremely desperate conditions exhibited by regions where production systems have already deteriorated to such a point that food aid is the only possible response.

To accomplish this strategic planning goal, CARE must establish a three-part structure incorporating three separate units: one consisting of the Food Program, one comprising all of CARE's development activities, and a new third unit--a Monitoring, Targeting, and Impact Evaluation (MTIE) Unit.

This new MTIE Unit would be responsible for gathering baseline, monitoring, and evaluation data and for carrying out community censuses. This information would allow CARE to identify and prioritize target communities and households within the Food Unit programs or the Development Unit programs. In addition to internal coordination of CARE's various activities, MTIE would be in a position to tap resources in the larger NGO community and research efforts undertaken by universities and other research organizations.

The Development Unit would couple sectoral expertise in agriculture, agroforestry, health community organization, and so on with its ongoing projects (e.g., PLUS, RICHES, etc.), so as to launch appropriate community-based nonfood aid interventions to help protect and rebuild vulnerable areas. These efforts should also incorporate coordination and perhaps collaboration with other development organizations working in the same areas.

The Food Unit would continue to meet its current responsibilities in the design and implementation of food aid programs in the identified communities.

Financing for the establishment and operation of the new MTIE Unit, as well as projects of the Development Unit, might be raised from local sources in the Northwest or direct funding could be requested from a variety of donors, such as CIDA and USAID.

Ideally, as the food security situation in the Northwest improves and stabilizes, these coordinated efforts will make it possible to phase out the Food Unit, leaving the Development Unit in place to promote community-based development programs.

Apart from the type of food aid program that CARE implements, the team strongly recommends a revised targeting and impact-monitoring system be established by the newly created MTIE Unit in conjunction with the Vulnerability Activity. Its function would be to conduct baseline surveys so as to identify the Northwest's most vulnerable areas and households, and then to monitor contextual and impact indicators for these. Integral to these responsibilities would be the establishment of selection criteria for communities and/or households to be targeted, as well as criteria for their exclusion. Baseline data would also form the basis for monitoring and evaluations.

Based on the team's fieldwork, we strongly recommend that targeting prioritize the following:

1. Female-headed households;
2. Vulnerable areas, as defined by agroecological indicators;
3. Vulnerable households, as defined by socioeconomic indicators;
4. Targeted households or zones in relation to changes in seasonal vulnerability, as determined by agricultural production cycles, weather patterns, and reflected in both yields and price levels; and
5. Targeted households or zones in relation to changes in vulnerability related to non agricultural livelihood factors, such as charcoal production, fishing trends, animal health, and commercial activities.

We also recommend the inclusion of the socioeconomic indicators developed for use in our own field assessment, with further expansion and refinement.

## **2. Short-term Recommendations**

### **a. Program Level**

We recommend over the short term that the amount of food aid reaching the Northwest be increased, taking into consideration the modifications of programs discussed below. This recommendation addresses current problems, such as high levels of malnutrition, reduced ration size due to excessive demand on the Cantines, and inequitable distribution mechanisms in the community.

### **b. Programmatic Issues**

The currently stated objectives and goals of the Cantine Program were found to be well-intentioned, but unrealistic. First, they cannot be achieved given community dynamics (e.g., it is normally impossible to feed the identified vulnerable groups to the exclusion of other community members). Second, they are not adequately monitored. CARE does not monitor two explicit goals—changes in morbidity and mortality—nor would it be possible to track them given the present staffing structure.

We recommend that the objectives and goals of the food programs reflect what is feasible to implement and that the monitoring system feed into a procedure for tracking progress toward goal achievement over time.

If CARE maintains the program objective of improving the nutrition and health status of children under five-years-old, pregnant lactating women and other at-risk groups, the team believes that this objective can best be achieved through household-focused interventions. Field work indicated that dry feeding effectively reaches children and other vulnerable members of the household, because they are prioritized in normal Haitian household feeding practices.

### **c. Management Issues**

At present, program quality suffers largely because staff are greatly overworked. For example, each monitor currently covers 50-70 cantines, which means that he/she can only visit each site every six weeks under optimal conditions. We recommend that CARE increase its staffing levels in order to oversee and monitor program operations adequately, including the support for the recommended expansion of program size and other modifications.

- \* Beneficiary levels should be based on the concrete findings of monitoring studies. Large fluctuations in beneficiary numbers over the past few years have challenged CARE's ability to provide solid management support. Such large swings in beneficiary levels would not occur if decisions were based on more systematic and complete information.
- \* Programming and other substantive issues are not frequently discussed between Field Monitors and Inspectors, between Field Staff and Gonaïves Staff, or between Gonaïves Staff and Port-au-Prince Staff, although mechanisms exist for communication regarding logistical and community-management issues. The team proposes that communications about programmatic and substantive issues among staff at all levels be improved.

- \* Given the doubling of beneficiary numbers in the Northwest from 300,000 to 600,000 four months ago, and shortages in both petrol and transport infrastructure, bottlenecks in commodity transport have developed. Use of the Port of Gonaïves for direct shipment, presently being considered by CARE and USAID, might substantially contribute to removing transport obstacles.

d. Program Type

i. A number of problems found at the Cantines were also found to be associated with the Dry Feeding Program, such as monitoring bottlenecks and selection biases (see Conclusions for a more complete discussion). However, the team believes that these problems could be addressed more easily through the Dry Feeding Program than through the Cantine Program. In addition, dry feeding, with its fewer distribution points and less frequent distributions, would be simpler from an administrative perspective. We therefore propose that no new Cantines be opened, and that the Dry Feeding Program be reclassified from its emergency relief status to a regular program. We also propose the following strategy for phasing out the Cantine Program, while adopting a modified Dry Feeding Program.

Proposed adjustments to the Dry Feeding Program:

- \* Identification and distribution of rations would be carried out by the CARE staff rather than by community committees. As part of the beneficiary selection process, the CARE MTIE Unit would conduct a census of the local population. This would eliminate several problems identified with either the Cantines or the current Dry Feeding Program: bias in beneficiary identification; consolidation of power in the hands of a local elite; irregularities in Cantine food preparation; inattentiveness to needs and preferences regarding the timing and manner of food preparation; lack of adequate monitoring; and absence of census data for program planning (including nonfood programs).
- \* Determination of household ration by number of members within a household. This would make rations appropriate to household size, and take into account larger households that are often the poorest. In addition, rations should be increased to 1500 kcal/person/day (a combination of cereals, pulses, herring, and oil) to provide a substantial dietary supplement.

Proposed strategy for initiating an adapted Dry Feeding Program:

- \* In one zone, the MTIE Unit would conduct a household census to identify the most vulnerable localities and households. We would point out that total program size can only be determined at this stage.
- \* At the same time, the Field Supervisors would closely analyze the operating Cantines in this zone and identify which ones should be closed.
- \* Next the structure for the Dry Feeding Program in that zone would be set up, including transport, storage, ration cards, and so forth.

- \* Once the structures are in place, the selected Cantines would be replaced by the Dry Feeding Program. We would emphasize the importance of keeping Cantines open until communities have access to dry feeding.
- \* Based on this initial experience, the Dry Feeding Program can then be expanded to the other zones in the Northwest.

ii. For those Cantines that remain in place, we strongly recommend that there be more supervision, even if it requires a staffing increase. In certain instances, Cantines might be used as catchment areas for certain types of interventions, such as vaccinations, birth control, vitamin and mineral supplementation, deworming, and oral rehydration salts. Another option would be the establishment of a nutrition/rehabilitation center with AICF assistance. This would require close collaboration with other organizations.

iii. We strongly recommend that CARE initiate small-scale projects that address the problems of resource and asset depletion and provide production inputs that help communities adjust to chronic drought conditions. Appropriate interventions were found to vary between agroecological zones as indicated in the discussion of fieldwork findings, and might include seed banks with short-maturing varieties, tools-for-work, animal health, animal raising based on the local *gardiennage* system, and credit for women traders and fishermen based on the traditional "sòl" revolving fund structure. Interventions such as the provision of locally produced foods from areas of surplus to areas of deficit, as the one currently funded by Canada and implemented by CECI, should be examined for possible replication. The newly created MTIE Unit and the reconstituted Development Unit would play a major role in these interventions.

iv. We recommend that CARE address specific infrastructure problems that impact food security conditions; namely, water, roads, and health services. We feel that public works projects should be explored, however, by proceeding slowly and taking into account past experiences and lessons learned from past efforts of this sort in Haiti.

## **II. INTRODUCTION**

### **A. OBJECTIVES**

An assessment of CARE's Cantine Populaire Project took place during December 5-23, 1993 and during January 8-24, 1994. The primary objectives of the assessment were to review: (1) how the project was designed, implemented, and evaluated, and (2) the effectiveness of the project in reaching targeted beneficiaries.

The findings of the assessment will assist in the design of a long-term strategic plan for CARE food aid programming in Haiti and provide the basis for a monitoring system to measure program impact over time.

### **B. METHODOLOGY**

The assessment reviewed the following aspects of the Cantine program: (1) strong and weak features of the project; (2) progress toward final goal achievement; (3) positive and negative project effects, both unintended and planned; (4) the effectiveness of the Cantine distribution mechanism in reaching the target beneficiary population; (5) lessons learned; and (6) the degree to which the project has had or has the potential to have sustainable, substantial impact. Evaluators were also asked to provide CARE-Haiti with recommendations for future programming.

To best meet assessment objectives, the methodology was implemented in two stages: an Institutional Assessment (December 5-23) and a Rapid Food Security Field Assessment (January 8-24).

#### **1. Institutional Assessment**

The Institutional Assessment was designed to gather information on the practices and procedures utilized in project design, targeting, implementation, and management. Information sources included the Multi-Year Operational Plan (MYOP), the Food Enhancement Action Plan, CARE's Use of Food Aid: Policy and Guidelines, USAID Monitoring Reports, CARE internal reporting documents, and other relevant secondary information (see Appendices).

In addition to the literature review, interviews were conducted with CARE staff in Port-au-Prince and in the field. Key-informant interviews were also conducted with donors and collaborative agencies such as USAID, WFP, CIDA, EEC, AICF, Red Cross, HAVA, IICA, and UNICEF. Representatives of the Ministries of Agriculture, Health, and "Affaires Sociales" were also interviewed (see Appendices).

Design inquiries focused on project needs assessment, objectives, inputs, targeting, community participation, and sustainability of project activities.

Program implementation and management questions addressed issues such as the efficiency of the present distribution mechanism in reaching targeted groups, a review of project monitoring, adequacy of resources, the role of communities in project decision-making and management, and the effectiveness of institution-building components. Information was also gathered from key informants regarding the impact of the program on project beneficiaries.

## **2. Rapid Food Security Assessment**

The second stage of the assessment was designed to provide a socioeconomic, cultural, and ecological assessment of CARE's project area in Northwest Haiti. The RFSA sought to determine the causes and magnitude of food insecurity in the region, and the degree to which CARE-Haiti's food program has helped to alleviate the food deficit problem. The RFSA employed a variety of time-effective survey techniques, including group interviews and key informant (household) interviews. Weighing and measuring of children under five years of age from select households was also done to ascertain current nutritional status.

The RFSA also attempted to (1) establish an understanding of household coping strategies, (2) assist in the development of candidate interventions derived from successful coping strategies employed by communities and individuals, and (3) determine the causes, dimensions, and characteristics of food insecurity in the Northwest of Haiti.

The survey team consisted of 19 members, including four independent consultants, one CARE-Atlanta representative, one USAID representative, seven CARE supervisors, the CARE Assistant Sub-Office Administrator for Food Aid, one Senior Representative, one local agronomist, one CARE PLUS project staff member, one nutrition data staff member, and one CARE-Haiti (TDY) staff member. The disciplinary backgrounds of the team members included anthropology, nutrition, sociology, agricultural statistics, political science, and agronomy. Three teams of six to seven members were formed, each team led by a designated team leader.

A two-day training session, January 10-11, familiarized participating CARE staff with interviewing techniques and developed an appropriate survey format. A topical list was formulated to guide the interviews before going to the field. Interview schedules, produced from the topical outlines, were discussed and revised at the training session to reflect survey priorities. Separate schedules were prepared for group interviews (male and female) and individual households. The interview schedules were tested in the first agroecological zone visited (Artibonite) and were subsequently revised as needed. This process of refinement and revision, carried out by all three teams, continued throughout fieldwork.

Five agroecological zones throughout the Northwest were covered. In each zone, three communities were surveyed (See Map 1).

Zone	% of Northwest	Communities Surveyed
1) Dry Coastal	6.7 %	Baie de Moustique Petit Paradise Baie de Henne
2) Irrigated Plain	1.7 %	Bayonnais (Vieux Poste) Bor de Mer Jean Rabel Bananier Kolas
3) In-land Dry	68.2 %	Plaine de l'Arbre Mapou Rollin Passe Catabois Brunnette
4) Plateau Dry	6.7 %	Carrefour Paul Savanne Môle
5) Mountain Plateau/ Mountain Wet	16.7 %	Carrefour Vidy Mare Rouge L'Estère Derrier

Communities were selected based on the following criteria: (1) representativeness of a location within a particular agroecological zone, (2) accessibility to CARE Canteens, and (3) CARE field staff knowledge of the community. The villages were not contacted prior to the surveys. CARE field staff assisted each team with an initial introduction to the community leaders.

Once in a locality, each team met with a key group of residents, usually community leaders recognized as such, to explain the purposes of the study. Either a group of men and women, or two separate men's and women's groups, then met with particular team members to discuss a series of general topics relevant to the community as a whole. Among them were history of the community; estimates of population and household sizes; crises experienced; local public services and infrastructure; primary economic activities; development activities; local institutions and organizations; production constraints and problems; presence and participation in the food aid program; and particularities of the area.

To gather information on diet and nutritional status, 25 children (three months to five years old) from each community were selected to be weighed and measured. For each child, a nutrition questionnaire was also completed, including information on the child's socioeconomic background, history of illness, 24-hour meal recall, and participation in CARE feeding programs.

Recognizing the socioeconomic heterogeneity of Haitian communities, the team was especially careful

to capture the vertical spread of families across socioeconomic strata in each community. However, the selection had to be made by sight alone, there being insufficient time to inquire into a particular family's agricultural land, livestock or other productive assets. To overcome this research constraint, a purposive sample in each community was selected according to house construction materials. Initially three categories were delineated. The top stratum, Type A, consisted of houses constructed of cement blocks with tin roofs. Type B houses, the middle stratum, had mud and wattle walls and tin roofs. Type C, the lowest stratum, comprised houses with mud walls and thatch roofs.

Although this initial classification proved satisfactory, as the team gained experience, qualifications became necessary. Some communities, for example, did not evidence any tin roofs, while in others the richest households had mud and wattle walls with thatch roofs. In certain instances, the most expensive-looking houses had been built in the past during better times, but economic hardship had befallen the resident family. Nonetheless, the classification scheme worked well enough, with the team adjusting criteria according to the house types evident in any one community, taking into consideration the number of rooms and freshness of paint, formal yard enclosures, and so on. It is noteworthy that while the team focused considerable effort on selecting a sample that would reflect socioeconomic ranking within any one community, logistics prevented it from systematically correcting another bias identified in this rural context. This bias has to do with relative economic ranking between communities alongside roads and those situated in marginal hinterlands inaccessible by motor vehicle. Observation and anecdotal evidence from local inhabitants strongly suggest that peripheral communities tend to be much poorer and more disadvantaged than communities alongside roads, however rudimentary. The team generally agreed, therefore, that its findings may in fact portray better conditions than actually would have been the case if both kinds of communities had been considered. This caveat holds nearly all surveys of this kind undertaken in the Northwest.

The 25 children selected for the nutritional survey were spread evenly through the three classification types. Among these 25 children's families, six were chosen for the household interviews, two from each category. A special effort was made to include at least one, and preferably two, female-headed households among these six. A female-headed household was defined as one in which an adult woman had no coresident male and had received no economic support from a man for more than six months. Due to time constraints, the teams were unable to interview a full complement of six households in some communities. However, even in those cases, a vertical spread across the socioeconomic strata was achieved. Household interviews were conducted by at least two team members in the privacy of the houses or yards. Although household surveys of this kind are notoriously unreliable in the Haitian context, the generality of the questions, a pre-interview explanation of the reasons for the study, and a plea for honesty in the interest of the community, probably served to minimize gross exaggerations. In any case, the team had no choice but to trust this information and in the end nothing emerged that challenged this assumption.

After each day of field work, the entire team collectively engaged in a day of tabulating and sharing information and analysis. These day-long discussions included elicitation of trends, formulation of preliminary hypotheses on various issues, refinement of questioning techniques, and substantive critiques of the food program itself.

Matrices for each community were constructed by each of the three teams to allow for comparisons among households, communities, and agroecological zones and served to guide team discussions. The matrices also provided a means for checking the completeness of field notes and facilitated final analysis and comparison (Cf. Appendices).

On January 22, the entire team met in Gonaïves to review all collected data, to identify patterns and to draw conclusions about livelihood systems, coping strategies, the role of food aid and overall trends for each zone visited. January 23 was reserved for a day-long discussion of issues and recommendations relevant to improving the effectiveness of food aid activities. In Port-au-Prince, the team's consultants devoted the week of January 24-31 to discussion of the findings and formulation of conclusions and recommendations, as well as writing up. The team debriefing was held at the CARE office in Port-au-Prince on January 31.

Team members that took part in the RRA were: Mamadou Baro (CARE Consultant & team leader), Jane Yudelman (CARE Consultant), John Currelly (USAID/Haiti), Alexis Gardella (Consultant), Anne Leonhardt (CARE/Atlanta), Marshall Ashley (Consultant), Jean Martel Cothias (Assistant Sub-Office Administrator - Food Aid Project in Gonaïves), Ferjuste Roosevelt (Senior Representant), Guirlene Chery (Assistant Regional Manager - Plus Project), Maurice Duperval (Field Supervisor), Paul Yves Mathieu (Field Monitor), Gary Petigny (Field Supervisor), Jean-Claude Mathelier (Field Supervisor), Vanes Jean Bernard (Field Supervisor), Loubo Amilcar (Field Monitor), Lamarre Jean Wilbert (Field Supervisor), Pierre Supreme (nutrition data entry specialist), Antoine Florent (Agronomist-Gonaïves).

### III. INSTITUTIONAL ASSESSMENT

#### A. SOCIOPOLITICAL AND DEVELOPMENT CONTEXT

Since the events leading to the overthrow of Duvalier in early 1986, Haiti has been in an almost constant state of political instability. With the exception of the seven months following the installation of the democratically elected government of Jean-Bertrand Aristide on February 7, 1991, the sociopolitical situation in Haiti has been chiefly characterized by radical change, uncertainty, and misery; eight separate governments have held power, however briefly, since Duvalier was driven out eight years ago.

On September 30, 1991, a military coup deposed the democratically elected Government of Haiti. In accordance with US law (Section 513 of the Foreign Appropriations Act of 1991) and policy, the AID program in Haiti was suspended. An OAS-sponsored embargo went into effect shortly thereafter. In February 1992, an agreement brokered by the OAS between President Aristide and representatives of the Haitian Parliament was ruled unconstitutional by the de facto Supreme Court of Haiti and failed to receive the ratification of the sitting Haitian Parliament. The OAS-sponsored economic and diplomatic sanctions were maintained and supported primarily by the United States, Canada, France, and Venezuela. In June, 1993, the geographic scope and effectiveness of the OAS embargo was broadened through UN Security Council Resolution No. 841, which prohibited the delivery of petroleum and military supplies to Haiti. On July 3, 1993, UN-sponsored negotiations between President Aristide and Lt. General Raoul Cedras resulted in an agreement, known as the "Governor's Island Accord," calling for the restoration of a constitutional democratic government in Haiti, which included a series of phased actions on the part of both Aristide and the de facto authorities, culminating in Aristide's return to power in Haiti on October 30, 1993.

A series of actions, and inactions, on the part of the de facto authorities, including a marked increase in repression, terrorism, and political assassinations, as well as General Cedras' failure to retire from his position, resulted in a virtual breakdown of the Accord. Subsequent to this failure, the OAS/UN embargo was reinstated, with more stringent monitoring measures in place through the navies of the US, Canada, and Venezuela, among others, patrolling Haitian waters. This stricter policing of embargo sanctions has had a direct and devastating impact on the supplies and prices of fuel, with negative consequences in all sectors of the economy. Despite the emergence of a parallel, "underground" fuel market, since December the entire country has been increasingly paralyzed by dwindling supplies of fuel, restricted means of transportation, severely diminished electrical service, and inflation.

The transition back to democratic governance will be a delicate one, given the severe economic decline caused by decades of corrupt and incompetent government and exacerbated by the recent crisis. Since the coup d'etat, the economic situation has been characterized by deterioration of the balance of payments, flight of foreign investments, degradation of real GDP per capita, crumbling infrastructure (e.g., power shortages, deteriorating roads), decreased agricultural output, falling real wages, increased unemployment, rising insolvency among private businesses and financial institutions, and accelerated inflation.

In addition to the immediate political roots of the ongoing economic crisis, a variety of other factors have been instrumental, including: long-term and continuous political instability, erosion of the public sector at the hands of past authoritarian, unprincipled, and kleptocratic governments, inappropriate pricing policies, and inefficient parastatals. The severe political instability and the economic sanctions triggered

by the coup d'etat over the last two years have contributed to the virtual collapse of the export assembly sector, resulting in the loss of more than 25,000 direct jobs in that sector alone. With approximately 100,000 jobs lost since September 1991, the Haitian economy now faces its worst unemployment situation in recent memory. Treasury revenues have declined sharply and, with most of the GOH's foreign assets frozen, the de facto government is bankrupt for all practical purposes. Even before the coup, restrictive agricultural import licensing requirements and tariffs encouraged contraband trade. Moreover, years of public enterprise mismanagement have resulted in a continuous drain on the Treasury, leading to reduced public revenues and growing deficits. Public infrastructure investments and service delivery have suffered as a result. Public sector deficits have led to rising inflation, reaching 30-32% in 1992 and projected at more than 40% in 1993. The collapse of the International Coffee Agreement in 1989 caused coffee prices to plummet and remain depressed ever since. Because coffee is the primary export crop, this has further reduced foreign exchange earnings. The appearance and spread of coffee rust disease in the last ten years has further exacerbated this already downward trend.

One important result of these combined factors is decreased food security. Food security, defined in the Agricultural and Trade Act of 1990 as "access by all people at all times to sufficient food and nutrition for a healthy and productive life," requires that three areas of need be addressed in a country: (1) adequate availability of food, through increased food production and generation of foreign exchange to import required amounts of food; (2) adequate access to food, especially by food-deficit segments of the population, by raising incomes, increasing employment levels, and stabilizing food prices; and (3) adequate health and nutrition, which increases the efficient use of food by the body and ensures productive potential.

Haiti's national food availability has been in double jeopardy as a result of the decline in purchasing power resulting from job loss caused by the economic sanctions and depressed agricultural output, itself caused by inadequate policy, service delivery, and infrastructure. Even in those areas of the country reporting adequate or surplus production, commercial and marketing constraints have prevented adequate or equitable distribution. Furthermore, reduced export earnings from the embargo and the freeze on GOH foreign assets have led to a decrease in available foreign exchange with which to import needed commodities. Within the first six months following the coup d'etat, the embargo had caused a shortage of needed imported agricultural inputs, such as seeds and fertilizers--an ongoing shortage that also directly contributes to declining production yields.

In addition to the negative impact on agricultural production caused by these social and economic disruptions during the post-coup period, a two-year drought (1991-1992), the worst in 20 years, affected production all over the country, but especially in the South, Southwest, and Northwest provinces of the country. Although the three agricultural seasons of 1993 were generally much better, overall the past decade has been characterized by considerable climatic change with regard to rainfall, as well as greater seasonal rainfall variation than in the past. These shifts in rainfall patterns have disrupted the agricultural production calendar, further leading to an increase in crop failures.

Rising unemployment, underemployment, and a rapidly growing population have decreased access to food. Because of import restrictions and high nominal tariffs, contraband trade in food commodities has often gone hand in hand with wide variations in food prices. This has led to greater price instability and thus further limits access to food for the greater part of the population. Declines in the collection of revenues, resulting partly from corruption, have also impeded the delivery of health and nutrition services and the maintenance and repair of the country's road network, especially agricultural feeder roads. Uneven distribution of locally produced agricultural commodities has had a negative impact on those

producers as well as on those would-be consumers. And deteriorating overall health status for the population as a whole has further constrained their ability to both produce and purchase food.

### **Social Situation**

The dire effects of recent events and long-term trends in the political and economic sectors are reflected dramatically in various socioeconomic indicators such as malnutrition, infant morbidity and mortality, food production, and retail prices. Since September 30, 1991, USAID has maintained a humanitarian surveillance system that regularly collects and monitors data on these same indicators. The USAID Monitoring Unit reports indicate:

Nutrition: The National Nutrition Survey of 1978 revealed that already by that time almost three-quarters of Haitian children under five years of age were undernourished, with approximately 30% suffering from moderate or severe malnutrition. Today, hunger in Haiti remains widespread. Current statistics for the country as a whole show that about half of the children under five years of age are undernourished and that about 15% of all children suffer from moderate to severe malnutrition. The differential impact of recent economic trends can be most readily appreciated by considering the Northwest. According to an August, 1993, CDC study, in the Northwest alone, over 63% of children under five suffer from malnutrition, with over 18% rated moderate or severe. USAID monitoring for September 1993, indicates 64% total malnutrition in the group, with over 36% falling in the moderate or severe categories.

Malnutrition, though common throughout the country, has not worsened appreciably since the coup, although there was a significant drop during the 1991-92 drought. Reduced purchasing power brought about by overall economic decline is now a major element in the hunger equation. Although production and import statistics in Haiti are hard to come by, past USAID and World Bank studies have estimated the food deficit to be as high as 336,000 metric tons. Annual food donations (from all donors) to Haiti since about 1987 have averaged 100,000 to 120,000 MT. It would appear that local food production is unlikely to be able to offset the food deficit in the near term. Given the extreme poverty of much of the population and the depressed economic outlook, demand for high levels of commercially imported food is not likely to diminish even if the current political crisis were resolved. The need for concessional food aid will probably continue for the foreseeable future, if only to ensure the minimal health and welfare requirements of the nutritionally vulnerable population.

As of October 1993, the staple food (corn, beans, and rice) price index was about 150 nationwide and 145 in the North, as compared to Port-au-Prince prices on November 5, 1991. Although the main food-producing areas of Haiti received the best rains in 30 years for the three 1993 harvest seasons, and the country produced an above-average harvest last fall, the country's chronic food gap remains a major concern. Current estimates foresee production levels in six of Haiti's nine departments below the levels required to meet the minimum annual needs of rural residents. Food production deficits tend to be highest in the West, the Southeast, and the Northwest. Purchasing power in the West and Southwest is stronger, leaving the Northwest as the area most severely affected by food deficits.

Health: Although there have been no major disease outbreaks after 26 months of political crisis, the health situation in Haiti, already the worst in the hemisphere, continues to worsen. The infant and child mortality rates of 101 and 151 per thousand live births, respectively, are close to the average for Sub-Saharan Africa; the maternal mortality ratio is estimated at 300 per 100,000 births, compared to only 100 per 100,000 births in the neighboring Dominican Republic. Life expectancy, at 54 years, is two-thirds of that attained in many other Caribbean countries. The major cause of this deplorable

situation is the country's absolute poverty. There is a severe lack of health services throughout the country. Even when those services are available, most Haitian families lack the means to meet their basic health needs. Severe undernutrition influences the morbidity and mortality rates of both sexes and all age groups, but especially children less than five years old and women of reproductive age. Nearly 50% of households consume less than 75% of the recommended caloric intake, and nearly 36% consume less than 75% of the recommended amount of protein. Diarrhea, pneumonia and measles, aggravated by poor nutritional status and poor birth spacing, are the major causes of infant and child mortality in Haiti.

Only 53% of the urban population and 59% of the rural population have access to potable water. Just 43% of the urban and 16% of the rural population have safe excreta disposal through latrines and septic tanks. Safe disposal of other refuse is almost unknown. Vaccination coverage rates for preventable childhood diseases have doubled in the past three years, but are still among the lowest in the hemisphere, so measles and neonatal tetanus account for a large number of needless infant deaths.

Unlike fertility trends elsewhere in Latin America, fertility in Haiti has not declined. On the contrary, the total fertility rate has gone up from 5.5 to 6.4 children per woman over the past decade. The national contraceptive prevalence rate is approximately 9%, or one-fourth that of other countries in the region. At the present population growth rate (1.9% per year), Haiti's total population will increase from 6.5 million today to 12.1 million by 2025. Haiti would thus become the most populated country in the Caribbean.

Education: The literacy rate in Haiti is among the lowest in the Western Hemisphere—only 25% of the adult population can read and write. Factors such as access, efficiency, and quality account in large part for such low levels of literacy. Although school enrollment nearly doubled to 1,000,000 students during the 1980s, only about 31% of those enrolled in urban areas are likely to complete the sixth grade; in rural areas only 10% achieve that. Inadequate commitment and resources on the part of the national government will ensure that inadequate learning materials, underpaid and underskilled teachers, and serious nutritional deficiencies will continue their negative impact on student achievement.

Over 75% of primary school-age Haitians attend private institutions. Following the 1991 coup d'etat, most schools were unable to function for most of the first quarter of 1992, with the private education sector suffering a major setback in terms of revenue. Conditions of political instability, including systematic repression, together with lower incomes, have left many students unwilling or unable to continue their studies. As a result of the political situation, most donor assistance for primary education and training programs has been eliminated, further jeopardizing the current and future viability of Haiti's private education system.

International donors' feeding programs have continued almost unabated from the beginning of the present crisis. In response to a greater perceived need in the Northwest, an emergency dry food program was introduced by CARE to supplement its Cantine Populaire network already in place there, providing for an additional 60,000 beneficiaries since September, 1993. Currently USAID-sponsored feeding programs are reaching about 662,000 beneficiaries. The efforts of all donors together are providing food assistance to at least 1,000,000 people throughout Haiti, and this despite continued logistical and implementation problems caused by the political and economic situation. The current assessment of Haiti's overall social and economic situation is extremely bleak and frightening in its negative implications for potential improvement. As grim as the situation is, it will only worsen unless an acceptable political resolution emerges soon.

## **B. HISTORY OF THE CANTINES POPULAIRES**

CARE-Haiti's community-managed canteen program (Cantine Populaire) was first implemented by a Haitian community counterpart organization, the Gonaïves Association for the Provision of Social Assistance (AGPAS). The organization was founded by a local political leader who helped to organize community development activities in the slum areas of Gonaïves. Starting in 1990, AGPAS selected neighborhoods to participate in the program, organized block committees, and requested food from CARE. CARE trained the AGPAS Cantine directors and cooks, and AGPAS assisted in the management and supervision of the Cantine staff.

When the Cantines first began, CARE-Haiti's Food Aid Project consisted of two parts: School Feeding and General Relief. Due to large funding cuts in 1990 (to less than half of the previous year's level), the Food Aid Project beneficiary levels and geographic coverage was reduced from 335,200 at the end of 1989 to 135,000. In addition, because community participation components of the Food Aid Project had made little progress since their introduction in the late 1980s, they were also suspended in conjunction with funding cuts.

In 1990, the Cantines represented a small portion of total food aid activities, with school feeding comprising the bulk of CARE-Haiti food programming, targeting 118,279 children in primary schools and 6,170 in preschools. The General Relief component provided a wet feeding ration through two mechanisms: 32 urban neighborhood AGPAS centers in the slum areas of Gonaïves (which would later become the Cantine Populaire program), with a total target beneficiary population of 5,530, and MCH centers targeting another 4,038 beneficiaries.

In the same year, CARE-Haiti prepared its FY 90-95 Multi-Year Plan (MYP), which set forth the mission's five year strategic plan for programming, including the use of food aid. CARE concluded that it was difficult to reconcile long-term, nonemergency food objectives with CARE-Haiti's programming goals for the following reasons: (1) the limited possibilities of geographic integration of food in other sectoral programming, (2) inconsistent and fluctuating funding cycles, which impede rational strategic planning, and (3) the difficulty of developing food aid activities that truly address the root causes of development problems in Haiti.

CARE-Haiti decided in its MYP to focus Food Aid Project activities on refining the logistics, monitoring, and management of commodity delivery, storage, and end-use checking systems. Further, CARE resolved to identify local NGOs and/or a GOH entity to phase-over operations within two to five years. Food aid activities not related to the improvement of commodity logistics systems, such as short-term food-for-work, were not given priority.

Political crises and increasing food shortages throughout the country eclipsed MYP objectives in the months following the MYP's submission. Except for the few months of relative stability after the installation of the democratically-elected government of Jean-Bertrand Aristide in 1991, CARE-Haiti has maintained operations within the context of an increasingly adverse and unstable political and economic situation.

The core of the Food Aid Project, the School Feeding Program, was suspended after Roger Lafontant's unsuccessful coup attempt and the subsequent school closings from December 1990 through April 1991. Although the project resumed feeding in mid-1991, deliveries were again suspended following the September 30, 1991 military coup, which deposed the Aristide government.

With project activities limited to nonschool feeding in Gonaïves proper, and political turmoil increasing need, CARE replicated the Cantine Populaire model in other parts of the city. Given the lack of a viable MCH structure in the Northwest, CARE considered the Cantine model the most efficient strategy for reaching especially vulnerable population segments: mothers and children, as well as the elderly and chronically ill. This expansion of the regular program, called the Gonaïves General Relief Program, began on an emergency basis in November 1991 and was planned to continue until January 1992. The program targeted up to 20,000 beneficiaries in the poorest neighborhoods around Gonaïves. By January 1992, 100 Cantines were in operation.

In February/March 1992, USAID requested that CARE expand its emergency efforts to include 140,000 beneficiaries in Port-au-Prince. CARE used the criteria of the Gonaïves General Relief Program as the standard for participation in the Port-au-Prince program. In the 10 months from November 1991, to August 1992, the number of target beneficiaries fed by the Cantines had climbed from 5,530 in the Gonaïves urban areas to 175,468 in Port-au-Prince, the Northwest, and the Artibonite.

Anticipating resolution of the political crisis, USAID directed CARE and other Cooperating Sponsors to phase out emergency programs effective October 1, 1992. CARE planned to reduce the Cantine Program to its original 5,530 level and terminate operations in Port-au-Prince.

As conditions continued to worsen in the Northwest due to a combination of economic and social disruptions resulting from the coup and a two-year drought that seriously affected agricultural production, CARE sought to feed 50,000 beneficiaries through the Cantines in its regular program. USAID approved the increase in beneficiary levels until September 30, 1993.

By May 1993, USAID authorized CARE to further increase beneficiary levels by 111,000, because poor crop yields, below average rainfall, and the continuing embargo had exposed certain subareas of the Northwest and the northern Artibonite to famine. CARE and USAID mutually agreed that, given the ever-deteriorating conditions in those regions, and with no political solution to the crisis in sight, CARE be authorized to feed 300,000 beneficiaries in its regular program (including both School Feeding and Cantine Populaires). The Cantine Populaires thus became the primary distribution mechanism to reach 186,573 beneficiaries in CARE's FY 94 Regular Program.

In November 1991, Cantines Populaires comprised less than 4% of the total Food Aid Project, with the School Feeding Program constituting the majority of operations. By May 1993, the Cantines made up 63% of the Food Aid Project beneficiaries. During the eighteen-month period from November 1991 to May 1993, the number of Cantine beneficiaries jumped from 5,540 (at 32 urban Cantines surrounding Gonaïves) to 186,573 (at 940 mostly rural Cantines throughout the North, the Northwest, and Artibonite). The key differences between the original Cantines operating in Gonaïves and the spin-off Cantines were: (1) lack of an AGPAS-like counterpart in other regions to assist with targeting, training, and monitoring the new Cantines; and (2) logistical difficulties associated with providing a mix of food, six days per week, to remote and dispersed areas, connected only by a deteriorating road network.

## **C. ASSESSMENT OF THE CANTINES POPULAIRES**

### **1. Overall Observations**

In a period of Haitian history characterized by radical change, uncertainty, deteriorating infrastructure, and social misery, CARE has managed not only to continue its operations, but also to reach increasing numbers of needy populations. Few other legitimate organizations working in Haiti had the political will or institutional capacity to meet these needs. Over the two years since the coup d'etat, many organizations have chosen to reduce or eliminate operations, for both political and security reasons or as a response to funding cuts. Residents of the communities visited by the assessment team frequently expressed their appreciation of CARE's willingness to continue distributions despite logistical difficulties and political controversy.

Overall, the team found CARE's direct management and distribution systems to be well organized, well managed, and efficient down to the community level. This is an especially noteworthy accomplishment given the extremely difficult working conditions in Haiti over the last two to three years.

Many of this section's observations had already been made by CARE-Haiti staff and discussed in several working plans awaiting implementation when the assessment team began its research. The Country Director, Food Aid Project Manager, and staff have worked hard to develop strategies to upgrade commodity management systems, notably conceptualization of a computerized inventory tracking system, enhanced staff training programs, improved program monitoring and evaluation (e.g., the Vulnerability Assessment and Ration Size Study), and promotion of greater public awareness of food aid through a radio and poster campaign, as well as a "Beneficiary Bill of Rights." In programmatic terms, the mission had produced a Food-in-Development concept paper that addressed design issues regarding an integrated package of services to Food Aid Project participants, including training and education lessons in immunization, oral rehydration, family planning, breast feeding, and other primary health care topics.

The team observed that due to the intense pressures of managing the Cantine program, especially in its logistical and regulation-enforcement aspects, CARE field staff have had little time to consider broader issues of program impact, sectoral integration, monitoring of beneficiaries, evaluation, and analysis. Given fluctuating levels of beneficiaries, coupled with the sense of urgency throughout the post-coup period, it is understandable that long-term programming goals were overshadowed by the exigencies of commodity movement and distribution.

### **2. Rationale for the Cantines Populaires**

The Cantines began as a mechanism to ensure that food reach identified vulnerable groups: children under five years, pregnant and lactating women, the elderly, and the chronically ill. Under conditions of political instability and continuing drought, these groups were not being adequately reached through CARE's Regular Program in the Northwest. The Cantine Populaire was selected as the distribution mode for reaching vulnerable groups because: (1) adequate institutional infrastructure with which to coordinate activities in the Northwest did not exist, and (2) on-site feeding was thought to ensure that target groups received full rations at regular intervals.

The Cantine model was originally conceived and implemented for a small beneficiary population in mostly urban neighborhoods. However, the assessment team found the model to be structurally flawed and inappropriate when applied to the largely rural peasant population it now serves. Despite appearances

to the contrary, even the poorest of Haitian rural communities are extremely heterogeneous socially and economically, and the relations between their different socioeconomic strata are hierarchical. Vertical distribution mechanisms, those that depend on goods or services passing down through the various strata, will automatically follow the social "paths" already established by patron/client relations. Because the Cantine model utilizes those very paths to achieve vertical distribution--the individual **responsab** (manager) is virtually always a community leader of relatively elite status--the selection and feeding of beneficiaries are biased by particular Cantine **responsab**-beneficiary relations. Moreover, the local social standing and power of the Cantine **responsab** are enhanced by his or her control of these food resources. Evidence to support the foregoing conclusion is discussed below, together with its implications.

### 3. Objectives

The current Food Aid Project documentation specifies that the principle objective of the Cantine Populaire Program is "to significantly improve the health and well-being of 186,000 children under the age of five, pregnant and lactating women, the elderly and chronically ill through community-managed feeding centers over a three year period." Under this main objective, two program goals are named: to broaden participation of the poor, and to decrease mortality and morbidity among the most vulnerable segments of the population.

#### a. Participation of the Poor

In this context, increased "community participation" signifies: (1) a shift from Cantines operated by a single **responsab** to management by a committee elected by the community, and (2) the provision of water, wood, and condiments for food preparation by the community itself.

Although in principle the committee structure should allow for more controls on bias and corruption through public scrutiny and community pressure, in practice the same caveats hold as for an individual Cantine **responsab**. None of the communities visited had a committee that was representative of all socioeconomic strata, nor was community pressure particularly evident. Notably, the lack of community pressure does not preclude the community's intimate knowledge of corruption and bias in a Cantine's operation. Committee members continued to be selected from the ranks of the community elite, thus, reinforcing and consolidating elite power.

The supply of water, charcoal, and condiments is difficult to ensure. Few communities visited had developed a systematic plan for providing inputs, particularly in areas of greatest scarcity. Indeed, in many communities, the bulk of beneficiaries was unable or unwilling to provide them. Consequently, many communities reported missed feeding days. Certain Cantine **responsab** (FR, responsables) resorted to obtaining needed inputs, as well as the services of a cook, in exchange either for food rations or for cash from their sale. Putting aside these merely "operational" inadequacies of the Cantine model, it is in principle at least questionable whether the provision of water, fuel, and condiments can be properly termed "community participation."

#### b. Mortality and Morbidity

As CARE monitoring systems are presently designed only to track commodity movement and not nutritional status or rates of mortality/morbidity, it is impossible to measure CARE's success in meeting the goal of reducing mortality and morbidity among vulnerable population segments.

#### 4. Targeting

##### a. Overall Numbers

The absence of comprehensive qualitative and quantitative data about the Northwest, including reliable statistics on local food production, availability, access, relative dependence on imported and local food items, household consumption patterns, and coping strategies among vulnerable groups, has reduced knowledge of the area to the level of the impressionistic and anecdotal. Therefore, targeting decisions for the region have been based for the most part upon uncritical and untested assumptions made in Washington, DC, and Port-au-Prince.

In fact, the constant expansion and contraction of approved beneficiary levels since November 1991 have tended to coincide with major political events, rather than to reflect data gathered at the community or household level.

While CARE is an advocate for the needs of the communities and individuals that it serves, it has been handicapped by the exigencies, unrealistic donor expectations, and emergency status of the program. The need to establish a firm data base with which to plan and design program improvements has not received the attention it deserves.

##### b. Vulnerable Groups

As stated above, children under five, pregnant and lactating women, the elderly, and the chronically ill, are the target groups for the Cantine program. These groups' special nutritional needs, it is conventionally thought, make them the most vulnerable population segments. In fact, the Cantine as a distribution mechanism tends to compromise the feeding of some of these target beneficiaries.

The timing of feeding was, the assessment team learned, a constraint in the many cases where mothers had other economic demands on her time. Food preparation, no less than the food itself, was found to be problematic for the digestion of infants and children at weaning ages and diarrhea was sometimes reported. Less serious was distaste on the part of beneficiaries with a given Cantine's particular mode of food preparation.

However, the most serious, and most commonly cited, constraints on CARE's ability to reach targeted groups stem from a single source: the largely unregulated numbers of people fed at virtually every Cantine. While the official numbers of beneficiaries for each Cantine vary between 250 and 300 individuals, most Cantines fed at least twice that number. This resulted in seriously decreased rations per individual and much disorder, with beneficiaries pushing and even fighting to receive an adequate ration. In this atmosphere of general melee, mothers were reluctant to send very young children to Cantines, even in the company of their older siblings, or mothers refused to send children at all. Likewise, the chronically ill and elderly had similar reservations about attending Cantine feedings.

Given the fact that Cantines are both public and free, it is at best difficult to enforce strictly the identity of the recipients. In light of this situation, many Cantines allowed individuals to take rations home for the entire family. Although that solves the problem of disorder, it does nothing to ensure proper targeting.

In normal Haitian household feeding patterns, it should be noted, infants, young children, pregnant and lactating mothers, the ill, and the elderly are not disadvantaged. Quite the contrary. The team found that, in times of scarcity, these particular groups receive priority in feeding, even when the more productive household members go without.

Other indicators of vulnerability discovered by the team, it should be emphasized, either compound or cross-cut these groups targeted by the program. That is to say, without further cross-referencing to socioeconomic strata, the target beneficiaries may either not be needy at all—as in households of relatively high socioeconomic standing—or they may be doubly disadvantaged by the extremely low socioeconomic standing of their households. More significant indicators of nutritional vulnerability include socioeconomic standing as measured by access to production assets; overall household size and, specifically, numbers of children; and exposure to seasonal and climatic factors affecting production. Within this more finely circumscribed target group, female-headed households are especially in jeopardy.

### c. Site Selection

CARE's employs four geographic selection criteria for Cantines: (1) number of beneficiaries to receive food at the Cantine (between 50 and 300); (2) whether donated food is already available in the area under consideration; (3) the location's accessibility; and (4) level of community participation. However, the team found Cantine site selection to be neither systematic nor guided by any specific rationale. Even though the criteria just listed are rather general, for instance, they were not strictly applied due to the absence a clear methodology for defining needs.

Two factors seem to cause this situation. First, the volume of requests for Cantines is enormous. From October 1992 through October 1993, the Gonaïves office received 3,216 visitors and 3,843 letters requesting food assistance. Some of these were repeat requests, while others had to do with problems at already functioning Cantines. One of the field inspectors reported receiving at least 80 visitors to his house a week, on average, all requesting food assistance in only one zone.

Second, field staff are already pressed for time simply to meet their regular duties and responsibilities. There is little time to sift through so large a number of requests and decide, in a methodical way, on the placement of Cantines, even if guidelines other than those mentioned above were available. Furthermore, Title II commodity approval levels are set in March/April for the Government fiscal year beginning October 1 and ending September 30. Thus, for example, CARE must be able to predict food needs for September 1995 in March 1994. Although it is possible to procure additional amounts of food during the fiscal year, the required lead time for procurement via Washington is minimally four months. Predictably, Cantine site selection appears to be idiosyncratic and haphazard. The team encountered many Cantines that serve areas larger than their immediate community, or where there were insufficient Cantines to serve just one community. However, it also came across one community that hosted 11 Cantines, and another that fed an entire community, plus any passers-by.

The enormous number of applicants, insufficient staff for selection, and only vague guidelines are significant factors that also impact on proper targeting of beneficiaries and the operation of individual Cantines, and open opportunities for improper comportment between staff and potential Cantine responsab.

## 5. Design Process

### a. Needs Assessment

It is possible that the absence of a needs assessment was due, in part, to the fact that the majority of Cantines were add-ons to an Emergency Program. As mentioned above, beneficiary levels have been designated by a combination of impressionistic information and political considerations in Port-au-Prince and Washington, DC.

### b. Disincentive Analysis

Overall commodity approval levels were based upon national-level data on malnutrition rates and food production deficits from such sources as the Intersectional Division for Nutritional Planning, the Ministries of Health and Planning, and various USAID consultant studies.

Although pertinent literature on Haiti concludes that a program such as the Cantine Populaire at its present size has no significant impact on farm production or market prices, no regional analysis seems to have been conducted to determine the program's potential for disincentive effects. As the program continues in other than an emergency status, this issue should be explored in-depth at the local level.

### c. Commodity Mix and Ration Size

The basic commodity mix for the Cantine program consists of soy-fortified bulgur, green peas, wheat soya blend, oil, and, three days per week, Canadian-donated herring. No one interviewed could recall why this commodity mix was selected, although nearly all American-sponsored programs used it.

Individual ration sizes are calculated at 1,500 calories per day for six days per week for all categories of identified vulnerable groups. The ration's caloric content conforms to a WHO standard ration size comprising 100% of a small child's caloric requirements and 50-60% of a pregnant or lactating women's caloric needs. In other words, the CARE ration has been selected because of its appropriateness as a dietary supplement that will contribute substantially to, but not fully supply, the required levels of protein energy intake.

Although members of some households interviewed said that they preferred rice or corn to bulgur, and although some reported that bulgur caused increased incidence of diarrhea in children, most said that bulgur was acceptable.

CARE, in coordination with USAID, CRS, and ADRA, is now developing a ration size study to determine the adequacy of the current ration and/or change the ration to meet the nutritional needs of target beneficiaries. However, CARE should recognize that increasing the ration size alone may not necessarily result in improved nutritional status. Given the current distribution mechanism, including the team's observations that not only targeted populations eat at the Cantines, rations are not always consistent or complete.

### d. Coordination with other Organizations, Programs, and the Communities

Program design for the Cantines takes place almost exclusively within the CARE-Haiti Food Program office. However, the design for the original urban Cantines was developed in coordination with AGPAS.

*Counterparts:* The rural Cantine program currently has no formal counterpart, although food is distributed in certain instances through a variety of local organizations, including the Red Cross, churches, and hospitals.

The Food Aid Project has for many years sought counterparts with which to work and to which it may eventually phase-over operations. However, CARE has not been able to identify any organizations with the capacity and/or the objectivity to manage a food program designed to benefit the most vulnerable population segments. Currently, both international and national NGOs have either suspended many of their activities or purposefully kept a low profile. This political climate and deteriorating economic conditions have caused many local popular organizations to go underground or to disband entirely, thus removing potential counterparts at the local level. Given the political situation, and the presence of an only minimally active de facto government with few if any operating funds, the possibility of a government counterpart is unrealistic at this time.

## **6. Implementation and Management**

### **a. Commodity Management**

The past 12 months of the Food Aid Project have been occupied by a process of uncovering and weeding out corruption (both Cantine responsab as well as CARE employees), and restaffing. The current field staff, which appears to be highly motivated and capable, would like to participate in more development-oriented activities that link food aid interventions to agriculture, health, irrigation, and other development activities.

Commodity management systems seem to be well organized and are constantly being refined to improve commodity accounting and control. A thorough-going set of paperwork controls has evolved to document commodity flows from port to Cantine. Although not yet fully operational, the WIC and FOODMIS computerized tracking systems appear to be well conceptualized. However, the Cantine Project is structurally difficult to manage because it requires a mix of commodities to be stored and served at frequent and regular intervals in distribution centers that are difficult to access.

Consequently, at any given time, an estimated 10% of the food is not delivered to Cantine sites on time. This has implications for a regular feeding program that is required to provide food six days per week. Some major constraints are as follows:

- o Fuel shortages resulting from the embargo that produce transportation bottlenecks both from Port-au-Prince to Gonaïves, and from Gonaïves to the distribution points.
- o Private trucking companies are only able to deliver a fraction of the cargo they are contractually obligated to deliver.
- o Disrepair and continual deterioration of road networks in the Northwest that limit accessibility to vulnerable populations.
- o Lack of spare parts, and astronomical price increases as a result of the embargo, hamper service for private tracking companies and CARE vehicles.
- o Because five commodities are cooked in the Cantines, if the proper mix and ration is not at the site at the scheduled times, feeding days are sometimes missed.

From the time commodities are purchased by USDA and leave the processor in the U.S., they change hand ten times before reaching the end-use beneficiary:

- 1) from processor to U.S. railway;
- 2) from railway to U.S. port;
- 3) from U.S. port to Haitian port;
- 4) customs in Port-au-Prince;
- 5) from port to private truckers;
- 6) trucker to the CARE warehouse yard;
- 7) to CARE warehouse inventory;
- 8) to private or CARE trucks for distribution to the Northwest;
- 9) to the Cantine responsab/committee;
- 10) to the cooks; and finally
- 11) to the beneficiary.

Each time the food changes hands is an occasion for possible misappropriation, and decreases the probability that the intended beneficiary will receive the full ration. It should thus be no surprise that food is found for sale on the local market or in the wrong hands.

Although these issues are beyond the scope of the team's assignment, certain losses could be reduced by simplifying distribution mechanisms.

#### b. Monitoring and Evaluation

The recent history of program expansion and contraction, of fluctuating beneficiary numbers and of geographic spread, has made implementation of a systematic monitoring process difficult. Under present conditions, the staff is overworked, with program quality suffering as a consequence. For example, each field inspector covers 50-70 sites; this means that he/she can only visit each site every six weeks. Recognizing this problem, CARE plans to hire additional monitors and limit the number of sites for which each inspector is responsible to 45. Difficulties in identifying qualified individuals to fill vacant positions and rapid turn-over has resulted in over-taxed staff with insufficient time to remedy perceived problems and implement new approaches.

The current monitoring system is designed only to track commodity logistics. Because there are no baseline data, it is difficult to determine the impact of specific project inputs. Monitoring systems have not been put into place to measure the degree to which the project has met its objectives (i.e., nutritional status, mortality, and morbidity). Furthermore, no information system is in place that would enable project decision-makers to better understand the livelihood systems of the communities they serve and through that understanding design and implement more effective interventions.

#### c. Training

Staff training appears to have been a CARE-Haiti priority. The staff know their responsibilities in regard to the program and its various institutional aspects, and there are no apparent gaps or overlaps. Field staff did express frustration with their lack of input and feedback concerning planning and substantive program issues. The interests of both the beneficiaries and a more efficient program would be served by regular communication among field staff in one zone, between the field and Gonaïves, and between Gonaïves and Port-au-Prince.

It is perhaps worth noting that the large majority of field staff are of the educated, urban middle classes. Certain of their class prejudices and stereotypes vis-à-vis the rural population they serve are quite apparent. CARE-Haiti might consider informal sessions to sensitize staff to such issues and, more generally, promote their understanding of the rural milieu so that they might be more effective in the field. That field staff who participated in the team's fieldwork expressed a new-found knowledge of the beneficiaries and their lives is a testament to the potential value of such sessions.

Periodic refresher-course training for the Cantine **responsab** was felt to be necessary. Training within the communities themselves is one possible means of overcoming some of the problems associated with monitoring mentioned above, especially regarding favoritism and misappropriation of rations. However, given that CARE monitors are already over-stretched due to heavy time demands, community-level training may not be possible within the present staffing structure.

## **7. Adequacy of Program Inputs**

### **a. Monetary**

Dollar funding for current project activities is sufficient. In the past, however, the program suffered from inconsistent and short-term funding cycles. The Enhancing Food Security Project now provides for greater funding continuity. USAID has made efforts to provide multiyear funding commitments. Because the Canadian fish program is classified as an Emergency Program, funding cannot be allocated for more than a 15-month period.

### **b. Community**

The Cantine model's structure limits the role that a community can fulfill. Aside from the absolute lack of means in many, if not most, of the communities being served, infrastructure deficiencies and inadequate management capabilities among individuals are also serious impediments to an ideal Cantine operation. Communities often cannot provide charcoal, firewood, and water to ensure that feeding takes place and even literate individuals are at a premium.

### **c. Project**

Although the number of monitors has increased over the past two years, there does not appear to be a sufficient number of inspectors to track Cantine activities.

Shortages of fuel, trucks, and food are constant problems.

## **D. SPECIFIC EFFECTS OF THE 1991 COUP D'ETAT**

The specific effects of the 1991 coup d'etat can be viewed in terms of two different issues: (1) the embargo and (2) the general climate of political repression. Both were at play during the team's rapid survey of the Northwest.

The term "embargo" is fully incorporated into Creole (**anbago**) and referred to frequently in urban areas. However, in the areas under study it was not widely used, nor offered overwhelmingly as either a serious constraint or a calamitous event. The reference "after Aristide left" was perhaps used more often than

"embargo." But whether the limited use of these terms is motivated by political concerns or general lack of information does not in itself indicate that the effects of the embargo have neither been felt nor perceived in the Northwest. During the team's elicitation of current, seasonal, and past prices for certain food commodities and livestock, respondents were acutely aware of those items whose prices had been steadily rising in the last two to three years as opposed to those items whose prices had remained relatively stable despite seasonal fluctuations. Similarly, there was an acute awareness of the effect of higher prices for fuel and consequently higher transportation costs for both goods and people, reduced profit for items sold (e.g., charcoal), and higher prices for items imported into the region.

This awareness of the effects of the embargo, rather than the embargo itself, should be understood within the sociohistorical context of the Northwest itself. The region, which was not particularly well endowed to begin with, has been dominated by long-term trends in environmental deterioration and decreased agricultural production, conditions exacerbated both continually and periodically by droughts, cyclones, and floods. Since well before the 1970s, these various disasters and crises have resulted in out-migration (to urban centers and overseas), at sometimes massive, sometimes limited but steady rates. Remaining populations are increasingly dependent on what were initially only coping strategies, possibly contributing to periodic epidemics, continuously high rates of malnutrition, and maybe even famine. Given this sociohistorical context, the embargo and its particular effects represent one more negative event in a long list. In fact, the embargo pales in comparison to various cyclones, the great floods in 1971 and 1985, and the current drought, which dates back to 1986. The fact that this study's nutritional data reports essentially the same levels of malnutrition as those done in August 1993 and even 1978 is further corroboration of the long-term nature of the current economic crisis.

However, lest we forget the proverbial straw that broke the camel's back, the embargo's effect of raising prices has greater amplification in an area of the country with only meager agricultural production and very few income-generating activities, and where it is the poorest of the poor who purchase almost all of their food. In addition, there is every indication that desperate attempts to earn some kind of income (e.g., through charcoal production) will soon deplete the resource base definitively and finally. The unavoidable conclusion is that the Northwest, after years of approaching the edge, is about to go over that edge into irreversible destitution. Whether that ultimate fall will be precipitated by a continuing embargo and spiraling prices, another cyclone or flood, or a leap in population cannot be predicted. But there is no doubt that it is inevitable, tomorrow or in ten years, unless appropriate measures are undertaken now.

The existence of pervasive political repression since the coup has been amply reported in the national and international press, a variety of human rights reports and studies, and the documentation compiled by the formerly resident UN/OAS Civil Mission. The particularities of this repression in rural areas is underreported and in most cases extremely difficult to verify. During the team's trip through the Northwest, it is worth noting that there was an extremely low level of reporting of the presence of local organizations of any kind. This in itself is instructive, as prior to the coup there was a resurgence and expansion of this sector all over the country, including the Northwest. Also instructive was the guarded and fearful manner in which people mentioned the Jean Rabel Massacre of 1987, even in communes many kilometers away from the incidents, and citation of the massacre as a reason for extreme respect for the property rights of even long-absent landlords. Reports of people being arrested and taken away by armed men after having pilfered or even merely trespassed on particular plots of land were not uncommon. In sum, although the team did not collect any direct information on this topic, its lack of mention, the conspicuous absence of popular organizations, and extreme sensitivity to land rights all indicate a general level of tension.

## **E. GOVERNMENT VIEWS AND PERSPECTIVES**

Perspectives, action priorities, and recommendations were sought from sitting officials at several Ministries, including Agriculture, Social Affairs, and Health. Although the current political impasse has severely limited the scope and financing of their activities, as well as put a damper on prospective actions, they all continue to develop and refine policies and comprehensive sector plans that they hope to put into effect once the situation normalizes.

Virtually all the Ministries identified a fundamental problem that must be considered seriously by all parties in the development sector upon the reestablishment of a constitutional government. This problem has arisen in the wake of decades of corrupt, inefficient, or unstable governments, and has led to the assumption of normal public sector responsibilities by international and national development institutions. This justifiable distrust and avoidance of working with government entities could prove a serious stumbling block to the public sector's efforts to reestablish itself as legitimate, rational, and responsible to genuinely national interests. The process of democratization and a solid commitment to improving the socioeconomic conditions of the country through development must include at least an initial degree of trust, confidence, and willingness to collaborate with government entities on the part of international and national development institutions.

Assuming a new spirit of collaboration between government entities and development institutions, the various Ministries all expressed the importance of unified overall sector policies and plans, directed and coordinated by the relevant Ministry but developed in cooperation with national and international development institutions, as well as the local communities themselves. Such sector plans and policies, ideally, would incorporate new strategic approaches, addressing priority interventions, the balance and fit between short- and long-term efforts, the necessity of integrated approaches and activities, specific objectives of reducing dependence on outside aid, and emphasis on the transfer of knowledge and expertise to Haitian individuals and organizations through training, active and equitable collaboration, and institutional development.

Specifically for the Northwest and food-aid programs, and in recognition of the long-standing net food deficit in this area, these new collaborative strategic approaches would translate into an energetic identification and development of alternatives to traditional reliance on agricultural and charcoal production--for example, salt production, fishing, and fuel-energy substitutions. Agricultural interventions would need to be situated precisely where they are most needed; for instance in the establishment of seed banks and methods of low-cost agricultural inputs distribution. The overwhelming importance of all forms of food aid in the Northwest is obvious, and cannot at the present time be dropped without risk of even more severe rates of malnutrition and famine. Nevertheless, the current emergency and short-term status of the food-aid program must be regularized and integrated into longer-term development objectives for the region.

Serious misgivings regarding current methods of food distribution through Cantines Populaires were expressed. Of special note were those concerning the very structure of this mode of distribution, which make it particularly vulnerable to misuse, corruption, and favoritism. Finally, nearly everyone recognized that the food commodities used in food-aid programs come packaged in certain constraints because of their origin in the U.S.A. or in other developed countries. Many of those who assisted the team to investigate ways to overcome those constraints, emphasized that certain regions of Haiti enjoy agricultural production surpluses that are being disadvantaged by low prices because of market and

transport conditions. A current CECI project that purchases locally produced surplus agricultural commodities and redistributes them in food-deficit areas was cited as a particularly effective effort to address food assistance needs, while at the same time encouraging local production where it is still viable. The immediate importance of the CARE Cantine Populaire Program's objectives notwithstanding, they can only be achieved if food aid is understood in the context of a broader institution-building mission for the benefit of rural Haitian populations: to counter the negative effects of massive food commodity imports.

## IV. RAPID FOOD SECURITY ASSESSMENT

### A. THE IRRIGATED PLAIN AGROECOLOGICAL AREAS

#### 1. General Features of the Area Surveyed

Irrigated plain areas are scattered throughout the Northwest and upper Artibonite, but as a "type" represent only about 1.7% of the total study area. These areas occur on or near river plains and the ravine-confined flood plains of streams, and are usually at elevations of less than 220 meters above sea level. Their soils, generally silt-like, are high in organic content. Bananier Colas, Bord de Mer Jean Rabel and Vieux Poste in Bayonnais are examples of such areas studied by the team. Other examples, not visited by the team, include the Trois Rivières area, the environs of Gonaïves, and small pockets in the Bombardopolis and Môle St. Nicholas areas. The small irrigated area of Rivière de Henne is considered by the team in its discussion and findings for the community of Baie de Henne, situated in a dry coastal area.

A distinction among the three sites selected should be noted. Whereas Bord de Mer Jean Rabel and Vieux Poste have river-fed irrigation perimeters with a year-round water supply, Bananier Colas' irrigation system is rainfed (stream overflow) and provides irrigation only three to four months of the year. Despite this critical difference in water availability, the apparent predominance of irrigated agriculture at all three sites is deceptive. That is, each site was characterized by a mixed economic base beyond irrigated agriculture, including dry farming, livestock and charcoal production, seasonal and occasional agricultural wage labor, various degrees of involvement in marketing and fishing in the coastal site (Bord de Mer Jean Rabel).

##### a. Population

Bord de Mer reported a population of approximately 1500 households and Bananier Colas about 260 households. Community leaders in Vieux Poste would not even hazard a guess. Without secondary population information, these approximations cannot be considered reliable. In terms of relative size, however, Bord de Mer appeared the most populous, Vieux Poste relatively less so and Bananier Colas the least. Bord de Mer reported 35-50% of all households headed by women only, Vieux Poste between 25-40% and Bananier Colas less than 15%, but, again, these figures are extremely impressionistic.

In Vieux Poste, four households were interviewed, three of which were female headed. Of the four households, three were Category B and one Category C. In Bananier Colas, six households were interviewed, only one of which was female headed. One household was Category A, one Category B and four Category C, including the female-headed one. For Bord de Mer Jean Rabel, five households were interviewed, two of which were female headed. One household was Category A and one was Category B, whereas the remaining five, including the female-headed ones, were Category C.

All three areas reported more or less continual emigration, increasing during the periods after cyclones and during droughts or particular political events; however, precise numbers are unavailable.

## b. Natural Resources

The virtually continuous drought since the mid-1980s reported for all three areas has intensified exploitation of natural resources in each area. In Bananier Colas, the vegetative cover is only 10-20% and dwindling. Tree stumps, roots and wood from abandoned living structures provide what few resources remain for charcoal production, whether used locally or sold elsewhere. In both Bord de Mer and Vieux Poste, the search for wood resources for charcoal production involves traveling great distances. Vieux Poste reported a full day of traveling and collection to provide two days of fuel for household consumption. Bord de Mer reported one day of traveling to a collection site and up to two weeks of collection to produce two sacks of charcoal. People travel on foot. A general estimate of actual distances involved would be more than 15 kilometers distance from homes to collection sites in the Vieux Poste and Bord de Mer areas. For all three sites, wood collection currently involves uprooting tree stumps, unearthing root systems of dead trees or bushes and, especially in Bord de Mer, certain species of cactus roots are the primary sources of "wood." Needless to say, wood collection is extremely labor intensive and particularly destructive to soil cover.

Drought and charcoal production have greatly contributed to the dwindling vegetative cover, which directly affects the amount and quality of pasturage for livestock, resulting in weak and undernourished animals particularly vulnerable to cold or wet weather, disease and predation by dogs. Despite extensive lands available for dry farming, all three areas reported small harvests from them or none at all since the mid-1980s. Bord de Mer reported over-exploited inshore fishing, with very few conch and lobster catches, and those achieved on by great effort, using the rare spear gun and mask. Bord de Mer fishermen reported still abundant offshore fish resources, particularly from June through September. However, their ability to exploit this resource even minimally was seriously limited by the deficiency or absence of crucial fishing gear, including sea-worthy boats, sails, nets, nylon fishing lines, hooks, and bamboo fish traps.

## c. Infrastructure

All three areas were relatively accessible, although Bananier Colas is cut off during flood stages of the Trois Rivières. However, all reported serious difficulties of accessibility and transportation when it rains, due to excessive mud.

Both Bananier Colas and Bord de Mer Jean Rabel enjoyed potable water systems right in their communities, both built by international projects. Vieux Poste was dependent on the nearby river, a 15-minute walk away, for all water needs.

All three communities had access to dispensaries, although two were staffed only by a nurse or an auxiliary, and the other, Vieux Poste, had a doctor only twice a week. In all the dispensaries, the lack of medicines and their high costs were major problems.

Bananier Colas had two primary schools run by two local Protestant churches. Bord de Mer Jean Rabel had five primary schools, three run by local Protestant pastors, one "communautaire," and one public (State), although at a distance of five km. Jean Rabel itself hosts many primary and secondary schools frequented by local children. Vieux Poste had two primary schools, both private, one run by the local Protestant pastor. All three had relatively easy access to major regional markets, ranging in distance from 5-15 km away.

#### d. Government Services

The only government services in any of the three areas took the form of a State syndik responsible for the monitoring and control of irrigation perimeters in Bord de Mer Jean Rabel and in Vieux Poste.

#### e. Credit Sources

Currently there are no sources of formal credit in any of the three zones. Bananier Colas reported previous access to the State-run BCA program. Loans from traditional moneylenders, with land as collateral and at 20%-100% interest, were reported in Bananier Colas. Otherwise, informal credit sources included in-kind loans, delayed payment for certain food purchases and, in the recent past, sold among market women (a rotating credit fund, financed by its individual participants, each participant receiving the full amount of the fund on a regular basis). Currently, these forms of informal credit are used primarily to finance small marketing ventures, the tiny profits so derived being devoted to food purchases.

#### f. Formal and Informal Social Organizations

Except for active Protestant congregations in each of the communities, only Bord de Mer Jean Rabel reported a local organization, "Groupe de developpement des jeunes," founded in 1991.

All three areas reported some permutation of the traditional eskwad, or rotating work groups. Here the groups, called "kwadi," vary in structure. Some are fairly permanent groups of 10-15 farmers that take turns working as a group on one another's land and occasionally sell the entire group's labor, splitting the cash proceeds. On the other end of the spectrum are kwadi with shifting personnel who only come together on a contingency basis. All areas reported konbit, a large group of people that works together for one day on a particular task and garden, and receives in return an abundant meal and drink at the end of the day. However, the use of konbit has been limited recently, due to depleted cash reserves and poor agricultural yields. Kolonn, large groups of volunteers to perform a task seen as essential and beneficial for the entire community, were reported in Bananier Colas. Vieux Poste appeared to exhibit a greater and deeper degree of interfamilial relations; various kin and marital relationships linked virtually all residents. Although a certain amount of hierarchy and attendant socioeconomic heterogeneity was evident in all three communities, they seemed to be more pronounced in Bord de Mer Jean Rabel than in the other two communities.

#### g. CARE and Other Development Projects

Bananier Colas has had one CARE Cantine Populaire for 300 official beneficiaries since June, 1993. It also hosts a CARE Cantine Scolaire for 100 beneficiaries and, since 1991, a CARE-run nutrition center for 40 beneficiaries. Vieux Poste itself has no Cantine Populaire, but varying numbers of local people avail themselves of the CARE Cantine in the neighboring habitation of Lakoup on an irregular basis. Bord de Mer Jean Rabel has had two CARE Cantines Populaires since December, 1992.

Bananier Colas currently receives both agricultural and forestry extension services through CARE's PLUS project, as well as USAID-sponsored activity for the improvement of irrigation canals and cisterns. Neither of the other two communities currently benefits from any other development projects or activities. In the past, in addition to the above-mentioned potable water interventions for two communities, certain

Vieux Poste residents had participated in the USAID/CRS/CARITAS Bayonnais Project (integrated development with local groupements), but it was dechouke (destroyed) in 1986. Bord de Mer Jean Rabel had an unsuccessful experience with a Government tree-planting project in about 1990.

## **2. Livelihood Strategies**

### **a. Primary Production Systems**

Residents of two areas, Vieux Poste and Bananier Colas, would concede that farming was their primary source of livelihood despite limited yields or none at all in the past few years. In Bord de Mer Jean Rabel, those below Category A depended for the most part on fishing as their primary source of livelihood. However, such general statements about the three areas disguise the very different socioeconomic relations of their residents to the main factor of production--land.

In Vieux Poste, three of the four households surveyed had parcels in the irrigated area of the river valley. However, none of them was larger than 1/16th of a carreau. Judging from these households, and from the information gathered during the community meetings, most families in this area had some form of access to these irrigated gardens. However, their average size was too small to provide an adequate living for one family. The tenure modes of these gardens indicate that most families inherited their plots, whose size diminished as a result of generational fragmentation. Significantly, one of these households had bought dry land for millet cultivation at a distance of 25 km. Made nine years ago, this purchase indicates a relatively prosperous period for this one household and the perceived limitations of land availability in the area. Possession of an irrigated parcel, however small, did not in itself provide economic security. In one case, pressing cash needs forced a family to rent their land out for a lump sum, leaving them with no access to land. Another landless family, who in the past had relied on agricultural day labor in the immediate area, now must resort to day labor in distant areas around the Artibonite Valley. In sum, although most Vieux Poste families had access to irrigated land, long-term fragmentation resulted in plots too small to provide an adequate income.

In Bananier Colas, despite the limited value of the rain-fed irrigation system, irrigated land was highly esteemed and in great demand. Here, a significant number of parcels were held by absentee landlords, as indicated by the larger proportion of rental and sharecropping arrangements among the households surveyed. Judging from the length of time the Category A families had resided in Bananier Colas, it would appear that outsiders with money have been moving in and buying up land, some maintaining local residence, others renting or sharecropping their land and living in Port-de-Paix or Gonaïves. For those native to the area, the purchase of dry lands in neighboring communities was a strategy commonly employed to enlarge the agricultural base. The average plot size of Category A households was about 1 carreau, whereas Category C households owned up to 1.5 carreaux. The former plots, however, were generally located in irrigated areas; the latter in distant, dry, marginal areas. In general, Bananier Colas shows a pattern of differential access to the valuable irrigated land, and an inflow of wealthier individuals buying this land, then renting and sharecropping it to the longer-term residents. Thus, despite poor yields on marginal lands, the long-term residents have partially offset their agricultural deficits by acquiring such marginal lands.

Bord de Mer Jean Rabel, at first sight, would appear to be a prosperous and verdant community, surrounded by lush plantain gardens and a variety of fruit trees. However, it quickly became clear that less than 10% of the Bord de Mer families actually owned or had access to these gardens. Here, the trend identified in the Bananier Colas area is of much longer standing and it involves greater

disenfranchisement of the local residents. Most of these irrigated gardens are in fact owned by individuals or families living in Jean Rabel and Port-au-Prince who rent or sharecrop out only a limited amount of their land, preferring instead to hire wage laborers to produce less labor-intensive crops. The bulk of the population in Bord de Mer relies on a combination of farming dry marginal lands in the surrounding hills, livestock raising and, especially, fishing.

Despite great reliance on fishing, this sector exhibits a paucity of the major factors of production necessary for an adequate income. There are very few boats, and none of them are equipped with motors. Although quite a few of the small, one-person *topilyè* (three-logged canoe/rafts, capable of limited offshore fishing) may be found, there are no functioning nets or seines. Likewise, only a limited number of the still-viable *nas* (bamboo fish traps) exist, and high prices make even nylon cord and hooks increasingly rare. One of the households surveyed was headed by a *bòs file* (net-maker) who had not made a net or seine for many years because of the high cost of materials and lack of customers with sufficient cash reserves. The high, or best, fishing season begins around June and normally runs through September, coinciding with the seasonal migrations of certain key fish species. During this time, residents earn the bulk of their cash income for the entire year. This includes not only fishermen and their families, but virtually the entire community, as most of its women engage to a greater or lesser degree in fish marketing.

#### b. Secondary Production Systems

A standard inventory of secondary production systems was reported for the three zones, supplemented in the case of Bord de Mer by irrigated agriculture and fishing. In each zone, farmers plant gardens on marginal dry lands only when they anticipate a "good" rainy season, virtually nonexistent for at least the last six or seven years. Bord de Mer has not had a dry land harvest since 1978. There, dry lands, previously purchased or leased from the State, have provided a different source of revenue: charcoal production. The collection of wood, roots, and so forth to make charcoal follows rules similar to those governing land tenure. That is, the owner of a parcel from which someone collects wood or roots receives 50% of the revenue generated by the sale of charcoal made from them. The other 50% goes to those who have done the actual collection and preparation of the charcoal. This transfer of conventional modes of handling land rights from agriculture to charcoal production was observed in all three areas where land was held in some sort of proprietary mode, including cases where individuals leased State land, but primarily around Bord de Mer. In the Vieux Poste area, State land, for which occupants do not pay rent, provided a limited common resource.

It is worth repeating that the current means of charcoal production entail a quantitative and qualitative change from patterns in the past. Standing trees and bushes no longer provide the wood for charcoal; rather, stumps and roots, including those of certain species of cactus, now provide the overwhelming bulk of "wood" used for charcoal production. Aside from enormously increased labor costs in the face of relatively static charcoal prices, it should be emphasized that the current charcoal production methods point to the imminent total depletion of this resource. Once the roots are gone, nothing will be left with which to make charcoal.

In all three areas, the importance of livestock as a means of livelihood was marked. While only Category A households usually had cattle, and in some cases pigs, virtually everyone had at least a couple of goats or sheep and chickens. In traditional Haitian peasant economic strategies, livestock holds a privileged place, second only to land itself. Traditionally, surplus production or revenue is "stored" by purchasing animals until enough cash has been saved eventually to buy a piece of land. Before the Swine Eradication

Program, pigs were the primary vehicle for this mode of saving and expansion. Since their general disappearance, the primary vehicle has shifted to cattle for those who can afford them, and to goats and sheep for those who are less well off.

More significant than this shift from pigs to cattle or goats/sheep, however, is the fact that livestock has become a means of livelihood, not a means of saving. That is, people are raising livestock and selling it simply for cash to purchase food. This represents a trend of serious decapitalization, a shrinking of the asset base, which effectively precludes the possibility of returning to higher economic standing. The dwindling vegetative cover, erosion, droughts, and so on are also affecting pasturage severely, resulting in malnourished and undernourished animals that succumb easily to disease, adverse weather conditions and dog attacks. Mortality rates for all animals, including donkeys, mules and horses, are extreme in all three of these areas, and these animals were also effectively wiped out by the apparently Northwest-wide epidemic of [Newcastle] poultry disease that has been raging since October/November 1993.

Petty commerce by virtually all rural women is another traditional pillar of the Haitian peasant economy. However, in conjunction with, at best, minimal yields from agricultural production, charcoal production, fishing, or animal husbandry, commerce as a revenue source has also declined. Dependent as it is on surplus household production to provide even the small amounts of capital necessary for petty commerce, this sector's steady downturn is easily understood. It is worth mentioning, however, that when a little extra is available and not immediately consumed, marketing stretches it, even though profits peak at about \$5 for \$80 invested.

In the past, agricultural wage labor--a mainstay for some households, a stopgap measure in bad periods for others--was normally a regular opportunity. But with droughts and diminished agricultural production throughout the Northwest, the possibilities of finding local wage labor are slim at best. Even in Bord de Mer Jean Rabel, agricultural wage labor on the irrigated parcels was insignificant. Although emigration to more fertile areas such as the Artibonite was occurring, very poor remittances were reported. In several cases, Vieux Poste residents, migrants to Gonaïves or Port-au-Prince in search of employment, had been unable to earn anything and were in fact being supported by the meager earnings of family members still in Vieux Poste.

In the past, land sales in dry areas would have been a means to raise cash, even for consumption purposes. Today, however, the lack of buyers has foreclosed this avenue of income generation.

### **3. Coping Strategies**

For the large majority of income-generating activities in these three zones, it is rather difficult to distinguish a "normal" livelihood strategy from a "coping" strategy for the short-term situation. Clearly, however, certain income-generating activities that were previously secondary, marginal, or stopgap measures have now become the prime income-generation venue--charcoal production being the example par excellence. Animal husbandry represents a shift in strategy, from a focus on preserving and expanding assets to a focus on income generation for survival. Agricultural wage labor, which in the past could have been considered a coping strategy, has now become either minimal, defunct, or a further drain on household resources. In many cases, especially among female-headed households of Category C, petty commerce, based on short-term loans in kind, is the only source of cash revenue.

Other coping strategies, not directly related to earning cash, involve borrowing and mutual exchange of food among kin-related households, as well as reliance on the food-assistance programs available in the

three areas. For Category B and C households, the number of meals per day has dropped to two in the former and one or none in the latter. In many of the Category C households, meals were commonly served only on alternate days. For both Category B and C households, food preferences were irrelevant; one ate what was available. However, when a few extra gourdes or dollars were available, a conscious effort to purchase a protein-rich food (a fistful of meat, fish or beans) was made. Virtually all Category B and C households gathered wild plants to supplement food products they consumed. Yet even this resource, dwindling due to continued droughts and overgrazing, is available only after rains or in pockets of moist land. Credit for food purchases was only accepted when repayment within a couple of days was fairly certain. Fear of imprisonment for nonpayment of such debts was palpable and apparently on the rise.

In general, then, it is difficult to distinguish between normal livelihood strategies and immediate coping strategies in all three of these areas. This in itself indicates the long-term duration of the economic crisis. Most alarmingly, the increasing reliance on previously short-term coping strategies has become normal, and the resource base of even these livelihood/coping strategies is either extremely vulnerable or imminently defunct. Continued droughts, or cyclones, flooding and other small-scale disasters, will be enough to tip the balance toward more widespread destitution and famine.

#### **4. Food Consumption Patterns**

Again, given the generally limited amount of food available to households of Categories B and C in all three areas, choice and preference of food items is a luxury scarcely contemplated. Items consumed follow the prices at which they are available. The first to be given up are meat and beans--protein-rich foods that are also the most expensive. Vegetables are eaten only when they are in season and locally available, hence cheap. Finally, households may do without the various staples: rice at the top of the list, and flour at the bottom, in terms of price. At the same time, adult household members are so conscious of the importance of protein, and so aware that it is normally lacking in quotidian diets, that when a little extra cash is available they often spend it on minuscule amounts of meat, fish, or beans.

The importance of Cantine Populaire rations was recognized by all, even those who were unable to eat in the Cantines regularly or whose rations amounted to a soup-spoon of food. Understandably, there was a marked reluctance to criticize the Cantines at all, or the nature and size of the rations, given their importance in each locality. Responding to persistent questions, however, certain individuals conceded that they would prefer to cook the rations themselves. There are differences, they noted, in food preparation preferences: sweet rather than salty, soupier (wet) rather than solid (dry), etc.

For Category B and C households, food was nearly always purchased; this was also true for Category A households, the amount of food depending on their particular landholdings and crops. For all households, when the harvest is good, a small proportion is held back for seed or home consumption, and the rest is sold for revenue. However, when prices are too low for a particular crop, or when the harvest is minuscule, it is considered better to eat your own harvest rather than to accept ridiculous prices that would not furnish adequate amounts of cash to buy other food items.

The situation is analogous for fishing. Household members eat small catches (i.e., a couple of fish) at home. Fish are sold only when there is a relative surplus and, even then, sale depends on the quality of the catch and the price it will fetch.

Given the continuing nonviability of the most commonly accessible agricultural lands in the three areas, and the restricted amount of irrigated land available to the bulk of their populations, self-sufficiency of food production by households is a thing of the past. Everything is sold--from poultry to goats, from labor to charcoal--simply to purchase food that can no longer be produced locally. Within such a system, of course, the major problem is not food availability per se; rather the problem that households face is having sufficient cash to buy food.

A general pattern in food-sharing networks of the Northwest emerged from the data collected by the team. Due to the rapid pace at which the study's methodology was implemented, it was impossible to document or explore the pattern fully. Thus, it must be described here in a general and tentative manner. Food-sharing networks among close neighbors, and affines were pervasive, but highly variable. When times were relatively good, these networks were little utilized. When food and cash began to reach scarce levels, food-sharing networks were activated, going beyond siblings and parents to include more extended kin. When things became very desperate, however, food-sharing networks again disappeared, reflecting a retreat to a position, within the nuclear family, of everyone on his or her own. Exceptions to the pattern were Protestant households that did not appear to engage in food-sharing networks beyond the immediate nuclear family at any time. Most nominal Catholics also "serve the gods" or practice Vodoun, whose ceremonies revolve around the consumption of food and beverages for the entire company. One informant said that he could no longer serve the gods because he did not have sufficient food or cash to purchase the necessary food.

Food-sharing and apportionment within nuclear families followed a similar pattern regardless of the household's socioeconomic status or religion. During normal times, or during times when food was still available but of poorer quality, the adult males and females received larger portions of food in recognition of their earning abilities. Men received more, especially if they engaged in manual labor or other arduous tasks. When food became scarce, however, or when there was not enough to go around, children, especially very young children were fed first, and adults went without. This was necessary, one woman explained, because young children were still "coming up" or growing and, she added, it was also important to feed them meat, fish, or beans for this same reason, even if only rarely.

## 5. Child Care

Across the board, in the absence of their mothers, children were cared for by their fathers if at home, grandparents if coresident or neighbors, and older siblings. Occasionally, nonrelated neighbors also cared for children if no one in the immediate family was available. Children below the age of eight or nine were never left unsupervised.

Children receive the same kinds of foods as adults, beginning when they are three to six months old and still nursing. Some households cited instances where Cantine food had given infants diarrhea. During times of plenty, certain foods were thought best for infants--for example, various cereals, especially rice, cooked with milk--in addition to the family's regular foods. During times of stress, weaning appeared to occur between 18 and 24 months, although in a few cases where the mother had to travel due to marketing obligations, weaning could occur at 12 months. The commonly noted disorder, and even fighting, at the majority of Cantines, made many families reluctant to send young children there, even when accompanied by their mother or siblings. For this reason they preferred to bring the food home.

## **6. CARE/Haiti Food Programs**

As mentioned earlier, there is no Cantine Populaire in Vieux Poste itself; rather people go to the one in the neighboring habitation of Lakoup. But the problem cited there was repeated in both Bord de Mer Jean Rabel and Bananier Colas, despite the fact that they did host their own Cantines. Simply put, the number of people who actually eat at the various Cantines is well beyond the official number of beneficiaries. The resulting disappointment with ration size, as well as associated problems of disorder—pushing, shoving, and crowding—all derive from this fact.

It would be unrealistic to expect Cantine **responsab** (FR, responsables) to control which people come to eat or when, given that the need is so much greater than the supply. By the same token, the fact that Cantine **responsab** favor certain people in each of the areas poses another problem. So, too, do the facts that such "favorites" receive larger rations, are often given a privileged place to sit or are allowed to go home with the food. People favored by Cantine **responsab** may be relatives or merely friends, or, given the elite status of many such officials, a member of his or her constituency within the local system of patron/client relationships. In Bananier Colas, various community members strongly implied that the Cantine **responsab** was selling part of the food supply for his own personal gain. Generally speaking, then, the difficulties cited in all three areas highlight two basic problems: (1) insufficiency of rations for the numbers of people who go to the Cantines, and (2) inequitable distribution by a community elites according to their own agendas.

Residents of the three areas expressed a preference for dry-food distribution, largely due to different tastes in food preparation and the different time-scheduling demands in particular households. That form of distribution, certain residents insisted, was the only way to ensure that they would receive the proper ration. With one exception, everyone mentioned the danger to young children of the shoving and general chaos during feeding times. All were adamant, however, about their appreciation of and gratitude for the Cantines' presence, and perceived the rations they received there as aiding their general survival.

## **B. THE INLAND DRY AGROECOLOGICAL ZONE**

### **1. General Features Of The Zone**

This agroecological zone's land area is greater than the combined areas of all other zones distinguished during the team's Rapid Rural Assessment of Haiti's Northwest and Artibonite regions. Accounting for about 68 percent of the study area, it covers nearly all of the Northwest from the coastal dry zone up to the mountain/wet and plateau/wet areas along the central axis of the northwest peninsula.

Socioeconomically, the dry inland zone is a prime example of an area generally lacking in natural resources. Yet people living in the zone have adapted to its resource deficiencies by taking advantage of resources located in other agroecological zones. This adaptation is reflected in the RRA's findings that the zone's number of livelihood and coping strategies is significantly higher than those found in other regions of the Northwest. However, like the other zones, households headed by women had significantly fewer resources and livelihood options than households headed by men.

### Location and Geographic Features

Four communities were studied in this zone: Brunette (in Savanne Desole, about 12 km south of Gonaïves), Mapou Rollin (16 km north of Gonaïves), Passe Catabois (several km southwest of Port-de-Paix, about one hour to the west of Bassin Bleu across the Trois Rivières river), and Plaine de l'Arbre (about four km from Anse Rouge).

Brunette is located on a flat plain with good agricultural soils (alluvium). However, the area normally has one of the lowest rainfalls in Haiti, averaging less than 500 mm. The topography and soils at Mapou Rollin are similar to those in Brunette, but the rainfall is usually slightly higher. Passe Catabois is representative of a large area composed of rolling hills, covered with grasses and epiphytic plants, and intervening valley bottoms with clay/sand/alluvium soils devoted to dryland agriculture. Rainfall here averages 550-650 mm annually. Plaine de l'Arbre is similar to Brunette.

### Principal Economic Activities

This zone is notable for the diversity and breadth of its economic activities. All of the communities visited reported some agriculture, livestock raising and sale, petty commerce in goods bought in other agroecological zones, trading, and the sale of labor outside local communities. Plaine de l'Arbre reported the least intensive cropping, recent droughts having been very severe.

### Population and Characteristics

Population density is near the average found for all of the agroecological zones, and only Mapou Rollin and Brunette did not report heavy out-migration. Nevertheless, immigration to the Passe Catabois area has resulted in a net population increase in recent years.

From the RRA of households it can be inferred that 50-75% of the husbands and wives are formally married, the rest living in a common law relationship. There are on average six to 12 persons per household and two to three adults per household.

Religious affiliation varied within each community and seemed more dependent on the faith practiced at the nearest church than any other factor. Almost all adults were illiterate, but nearly all of their school-age children attended school.

A significant number of households were headed by women in Brunette and Plaine de l'Arbre. These generally had fewer assets of all kinds and lived in the poorest of housing.

### Natural Resources and Trends

All of the sites visited lacked a wide variety of natural resources, except for soils that could be made productive if watered. Most of the forest resources have been cut down and, in the case of Plaine de l'Arbre and Passe Catabois, the stumps have also been removed for fuelwood and charcoal production.

Water resources for agricultural uses either do not exist or have not been developed. Mapou Rollin was the only community where a potential water supply from still uncapped springs was found. Each of the

communities has a supply of potable water; however, it was often brought to the community from an outside source and the delivery was not adequate. All of the communities found that there could be significant waiting times in line to get water from the local fountain or pipe. Residents of Plaine de l'Arbre claimed to receive water only once every two or three days. In Mapou Rollin there was a fountain, but it wasn't functioning well because a replacement part for the delivery system could not be bought.

### Infrastructure

There were no readily available health services in half of the assessed area. The two communities having either a dispensary or health center reported that qualified health staff were lacking and that medicines were unavailable or prohibitively priced.

All of the communities had primary schools. More than 80% were private, almost all with a religious affiliation. Mapou Rollin was an exception in that it had only one State-sponsored school.

With one exception, the communities studied in this zone had no markets, and the average distance to the nearest market was about 8 km. Passe Catabois did have a small market once a week, but most residents attended other, larger markets some distance away.

There was at least one road in decent condition in three of the four locations except following rains. The road into Plaine de l'Arbre was reported to be in a permanently poor state of repair.

### Government Services

Aside from a few schools, government services do not exist.

### Access To Credit

Only informal credit systems were found in this zone's communities. These credit sources ranged from advances on food purchases at the market for a one- or two-week period without interest, to the *sold*, in which a group of women gives a member a pot of cash with which to buy goods for resale and the member repays the group at no interest. The *sold* provides an investment pool that would not otherwise be available, but reports indicate that they were organized only at Brunette.

### Formal and Informal Social Organizations

Three of the four communities had some form of work-group organizations, usually the *eskwad*, *kwadi* (pay for work) or the *konbit* (food for shared work). One community reported that a committee had been formed to manage a *boutik* (shop) set up by AICF.

### Access to CARE and Other Development Projects

Passe Catabois has a CARE PLUS project that demonstrates farming improvement techniques. The Rotary Club of Gonaïves, also active in this area, supports work to improve the roadside drainage of the major routes. Almost all communities reported having had development projects funded by a wide variety of sponsors in the past, but such projects are now closed or inactive.

## **2. Livelihood Strategies**

Prolonged drought and other natural disasters, more than average incidence of plagues and diseases affecting crops and livestock, the last few years of civil unrest, and the embargo all appear to have resulted in generally very poor living conditions in the Northwest. The traditional livelihood strategies of the region's people have been severely and negatively affected by these conditions. This section discusses current livelihood strategies in the region.

### **Primary Production Systems**

As in most of the agroecological zones, agriculture is this area's primary form of production. The chief constraint no production is historically low rainfall, followed by increasingly drought-like conditions over the past 10 years.

Charcoal production is almost nonexistent in the zone itself due to lack of forest resources.

Livestock raising and sale are ordinarily important factors in the livelihoods of the zone's residents. However, recent epidemics affecting poultry, swine, and ruminants, along with livestock sales to support food purchases, have made this livelihood component's contribution fall far below its potential.

*The Resource Base:* The average number of parcels farmed by a household did not vary significantly between communities, averaging two to four per farm family. Almost all of these parcels were owned, rented, or farmed under sharecropping arrangements. Passe Catabois and Mapou Rollin reported that more than 75% of the land there was owned, property rights having been transferred by purchase or inheritance. The average parcel size was less than one carreau.

Maize, sorghum, sweet potatoes, and varieties of beans were grown in all locations except Plaine de l'Arbre, where sorghum was the only staple grown. Passe Catabois also had peanuts and manioc, whereas Brunette reported significant plantings of watermelons. All crops grown are adapted to average climate/soil conditions, and the exact crop mix in any one place seems to be determined by what can be most readily sold in local markets. The exception to this is the peanut crop in Passe Catabois, where the soils are more suited to peanuts than elsewhere.

*Means and Factors of Production:* All gardens are worked using hand tools, most commonly and machetes, and, occasionally, picks and shovels. Tools were frequently shared among neighbors.

Men were generally involved in all phases of cropping, but not sale of harvests at the market. Land was prepared either by an individual farmer or by means of reciprocal labor exchanges (swaps or *konbit*) with other farmers. Women, always responsible for marketing, were usually involved as well in planting, weeding, and harvesting. Children also participated in harvesting, and women and children are the primary wood and water collectors for the zone's households.

*Constraints:* Many factors constrain the livelihood strategies of this zone, including chronic drought and lack of cash to buy fertilizers, seed, insecticides, and medication to immunize animals or treat their diseases. The absence of technical advice was also cited by a few of those interviewed.

### Secondary Production Systems

Trading goods and produce from other zones and selling labor were common in all communities visited. A number of people from Plaine de l'Arbre did wage labor in nearby coastal salt production.

### **3. Coping Strategies**

The inland dry zone's population employs several coping strategies to survive adversity. These generally involve innovations in the use of scant food and financial resources.

#### Meals and Food Substitution

The number of meals has generally been reduced below the preferred number. The majority of families eats one meal each day, if at all. Protein consumption has diminished, resulting in a diet high in starches and carbohydrates. The zone's residents view CARE food aid as critical, although not sufficient, to meet food needs.

#### Wild Foods

All communities reported significant consumption of wild plants and fruit in their diets. Plant leaves are often cooked together with ground maize or sorghum in a dish called "leginm." However, plants are only available during or immediately after rainy periods.

#### Sale of Assets

Three of the four communities surveyed reported that many people currently sell their livestock in order to meet their basic food needs.

#### Borrowing

Borrowing among parents and children in extended families was common throughout the zone. A small amount of borrowing from friends and neighbors was also reported. Such loans usually entail pledging part of an expected harvest or some other form of collateral, and often carry high interest charges (25%).

#### Credit

Households in all communities used informal credit for market purchases. Usually, no interest was charged if reimbursement occurred within one week. Pawning farm tools and family jewelry was also reported in Mapou Rollin. Those living in Type B households had the greatest access to credit.

#### Alternative Employment

Aside from the wage labor cited above, the only local alternative work available to this zone's farmers was acting as a guardian for someone else's animal's. High livestock losses in recent years make this activity's significance negligible.

### Migration

Seasonal migration to sell labor in more productive agricultural areas was found in all communities. Permanent out-migration over the past few years to cities in Haiti or to other countries was reported but involved small numbers of people. Inability to find work or money necessary to pay for travel were cited as the primary inhibitors to migration.

### Remittances

Residents reported that remittances by family members living outside the community do not exist.

### Changes in Livelihood Strategies

The traditional livelihood strategy--working one's own land to produce much of what is needed for autoconsumption and the sale of crop or livestock "surpluses" to meet remaining household needs--no longer operates successfully. What were originally intended to be short-term coping strategies have now become the main sources of livelihood.

## **4. Food Consumption Patterns**

Over the past decade, significant changes in per capita food intake, as well as in the sources and availability of food, were reported. All informants stated that they had reduced the amount they eat and that their diets had shifted more heavily to starches and carbohydrates, with a proportional reduction in dry protein intake.

### Diet

The major dietary staples in all of the communities surveyed were corn, sorghum, sweet potatoes, oil, and flour. In one community, beans, breadfruit, bread, and fruits were also reported to be consumed by residents having greater assets than average for the zone.

### Sources of Food

Marketplace purchases constituted the major source of food, followed by food aid. Almost all harvests from this zone's gardens were autoconsumed, but these harvests, often lasting for a month or less, fell far short of meeting total household food needs.

### Problems of Food Availability

Chronic drought and rapidly increasing food prices over the past few years were cited almost universally as the major problems of food acquisition. Market prices for staples were reported to have risen more than 100% since January 1992 alone.

### Traditional Food Sharing Networks

The historical pattern of food sharing during funerals, weddings, and religious holidays has been curtailed greatly. No sharing between relatives was reported, except when the relatives lived in the same lakou

(house-yard complex). Female household heads did receive some gifts of food from both relatives and neighbors.

## **5. Child Care**

Child care practices in this zone are similar to those found in the other zones. Children usually take care of their younger siblings when the mother is not at home.

### Feeding Patterns

Breast feeding on demand is widespread. Once weaned, children eat the same foods as the adults and at the same time.

### Weaning Foods

No special weaning foods were reported. However, children are given small amounts of solid foods from whatever is cooked for the rest of the family, starting as early as two months.

## **Summary of Constraints To Household Food and Nutritional Security**

Crop failures caused by chronic drought, excessive livestock losses from epidemics, and a rapid increase in market prices for food have resulted in serious household food shortages. Measures of nutritional security for children reveal unacceptably low results. The CARE food aid program is presently considered one of the major support mechanisms for any sense of food and nutritional security.

## **6. CARE-Haiti Food Programs**

CARE's Cantine Populaire Program (wet feeding) was active in all of the communities visited. Dry distribution and a Cantine Scolaire (inoperative in January) were also found in Plaine de l'Arbre.

### Number of Cantines and Beneficiaries

As Cantine responsab were unavailable, the official number of active cantines and beneficiaries could not be determined. However, local residents universally felt that the number of cantines was inadequate and that many deserving beneficiaries were not being served. The team also noted that the cantines are feeding many more people with the amount of food allocated than planned by CARE.

### Regularity of Feeding

Cantines operated between four and six days per week, and were generally open six days. Dry feeding occurred on the final day of every 15-day period.

### Beneficiary Selection

There seemed to be only one selection criterion: that the participant reside close to the cantine. Adult males were not prohibited from participating.

### Ration Sizes

Both wet and dry feeding rations were felt to be inadequate. Cantines were feeding many more people than planned, resulting in smaller serving sizes per person and, according to those receiving dry food, rations that lasted only one week, instead of the intended two.

### Beneficiaries Perceptions of Program Impact on Their Lives

Those interviewed in Plaine de l'Arbre felt that CARE's food aid programs were their only real food source. In another community, some people reported that it was a good program because it promoted better child health.

### Strong and Weak Points of the Program

There are various strong and weak points accruing separately to the wet and dry distribution programs. On the one hand, the wet program was perceived as good because it provides food on a daily basis. On the other, it was perceived as bad because there aren't enough of them. Consequently, some people feel discriminated against, there is corruption on the part of some canteen managers and, often, problems of order and security abound.

Dry feeding is felt to have an advantage because the household is the beneficiary, distribution can take place over two to three days per two-week period, and food can be taken home and prepared to individual taste.

## **C. THE PLATEAU DRY AGROECOLOGICAL ZONE**

### **1. General Features of the Zone**

#### **a. Location, Geographic Features, and Principal Economic Activities**

The two areas studied, Savanne Molle and Café Paul, are similar in that they are relatively flat and have relatively low rainfall (< 500 mm/yr). Their altitude is also between 75 and 150 meters above sea level. Savanne Molle is representative of a large, fairly isolated area, extending from Môle St. Nicolas to Baie de Henne, whereas Café Paul represents a slightly smaller area in the interior, just to the west of Passe Catabois.

Vegetation, soils, and farming systems in the two localities are similar in some respects, but also exhibit notable differences. For example, vegetation coverage in both localities is sparse. The former is covered primarily by mesquite, acacias, and other epiphytic vegetation with widely spaced, scattered gardens. There are almost no fruit trees found in the area. Café Paul, on the other hand, has a scattered covering of fruit trees, grasses, and a preponderance of gardens.

Soils in both areas are droughty. However, Savanne Molle has very thin, rocky soils sitting on an ancient reef, with scattered pockets of alluvium collected from general sheet erosion. Café Paul is located on relatively deeper calcarious, based soils with a clay-like/sand/organic matter composition that is slightly less droughty than that at Savanne Molle. The Café Paul plain is probably the result of ancient erosion from the surrounding hills and mountains.

Savanne Molle was founded 20 years ago on land traditionally used for pasturage by the population of Mar Rouge. The principal economic activities are animal husbandry (mainly goats and donkeys) and charcoal production, which in recent years has obtained equal importance. Café Paul, in contrast, is a long-established community where animal husbandry and agricultural production have held equal importance. In the past fifteen years charcoal production and trade rose but then dropped off when existing wood resources became rapidly exhausted.

#### b. Population Characteristics

The two areas have a relatively low population, with approximately 50 households in Savanne Molle and 80 households in Café Paul. The density of Savanne Molle is much less per unit area. Savanne Molle has a high proportion of Type C housing, while at Café Paul it is mostly Type B, followed by Type C, with some Type A. Proportions of female-headed households are estimated to be 28% for Savanne Molle and 20% for Café Paul.

#### c. Natural Resources

Both localities are highly dependent on tree cover for charcoal production, but their trees have rapidly disappeared due to over-cutting. This has proceeded to the extent that all suitable wood in the two localities has been cut. In each place, a six- to seven-hour trip to distant localities is now necessary to collect wood.

Safe drinking water availability is also problematic: in Savanne Molle it takes two to three hours to collect drinking water, whereas in Café Paul waiting on line at the locality's one water pump may last three hours, and frequent impurities in the water stored in a cistern cause skin diseases and diarrhea.

Due to generalized and long-standing food production constraints, wild foods have been integrated more fully into the diets of this agroecological zone's populations than in several of the other zones visited. Availability of wild plants, however, is limited to the rainy season. These plants fall into three main groups: leaves--liane panier, épinard sauvage, bon dieu bag, laman larille, and coupier; fruit--tamarind (only in Café Paul); and tubers--yanm dala, yanm chat, and benzolive (only in Savanne Molle). In Savanne Molle, the guinea fowl that was traditionally hunted is no longer found close by.

In Café Paul, rainfall patterns were reported to have become increasingly irregular over the past 10 years.

#### d. Infrastructure

The nearest available market places and health centers are in larger towns, one to two hours away from both locations. Road access to each locality is difficult, along tertiary roads. Both localities have Baptist-run primary schools, with costs ranging from \$75/year in Savanne Molle to \$750/year in Café Paul.

#### e. NGO and Government Projects and Services

No government services were found in either locality. A private veterinarian serves the Café Paul area, but no veterinary service is available in Savanne Molle.

NGO projects include a primary health care project funded by Inter-Aid (a French NGO) in Savanne Molle, and a seeds-and-tools distribution and irrigation system project in Café Paul, funded, respectively,

by FONDEV (a German NGO) and an organization affiliated with the Baptist church. The Savanne Molle population mentioned the importance of the former CARE Agroforestry Project for their community.

Each community has a functioning Cantine Populaire, and a Cantine Scolaire that has not operated since October due to the fuel shortage.

f. Credit

Accessibility of all credit is very limited, and no formal credit is available. However, for the Savanne Molle population, some households find it possible to obtain credit from the Mar Rouge Cooperative at a high interest rates. In Café Paul, some households may purchase merchandise on credit in Jean Rabel, at six percent interest over eight days.

g. Social Organizations

Organizations in Café Paul include two forms of kwadi, one for trading labor and one for payment in kind. Women's singing and prayer groups affiliated with the Baptist Church also exist. No social organizations were reported in Savanne Molle.

2. **Livelihood Strategies**

a. Principal Production Strategies

In Savanne Molle, main production strategies are animal husbandry and charcoal production. Goats and donkeys are the most important animals. However, serious animal husbandry problems have led to diminished household ownership levels. These include animal deaths caused by diseases, parched pasture land, and attacks by wild dogs or cats. Another problem is the presence of animals from other localities grazing on the scarcely adequate pasture land. As mentioned above, the community is not served by a veterinarian.

Charcoal production constraints in terms of wood availability have been discussed in the section on Natural Resources. An additional difficulty is availability of tools: several households reported broken tools but lacked the money to replace them.

In Café Paul, the main production activities are agriculture and animal husbandry. Agriculture has been adversely affected by chronic drought since 1990. Principal crops include maize, congo beans, yam, sorghum, plantain, and sugar cane. Landholding sizes are reasonable (averaging 1 2/3 carreaux for the households interviewed), but serious production obstacles exist, involving the drought, infestation, unavailability of seed adapted to existing conditions, and a lack of effective insecticide. The pesticide presently available, SEVIN, does not function effectively. Seed is purchased from the market place by all but the better-off households who have managed to set aside a portion of their harvest for the next agricultural season's planting. Production levels as well as labor patterns were found to correspond to levels of wealth, with the better-off households having larger harvests and the capacity to purchase manpower, whereas the worse-off households have smaller harvests and sell their labor. Between 50% and 70% of last season's production was sold, also corresponding to socioeconomic class, with the poorer households keeping a greater proportion of their harvest for autoconsumption.

Animal production in Café Paul faces many of the same constraints as that in Savanne Molle, such as drought-affected pasturage and disease. In addition, its residents reported that the Black Pig Slaughter carried out in 1981 to halt the spread of the Swine Fever epidemic was one of the community's main disasters.

Another important income-earning activity adopted by households in both Savanne Molle and Café Paul is agricultural wage labor in neighboring localities. Also, women are involved in trade activities, and in donkey leasing (in Savanne Molle).

The situation of female-headed households was found to be quite difficult, unless the household has an adult male member such as a son. Interviews revealed that the female-headed households without an adult male member found it hard to earn an adequate living from their laundry work and occasional involvement in small-scale trade, which depended on access to credit access. These households were often dependent on other family members or begging, as they were unable to participate in the principal income-earning activities of the area and lacked other options.

### **3. Coping Strategies**

In Savanne Molle, strategies for surviving difficult situations include animal distress sales, gardiennage, decreased meal frequency, increased gathering and consumption of wild plants, attendance at the Canteen Populaire, seasonal migration, and begging (for female-headed households). Little sharing between households occurs, even as a coping strategy, reportedly due to a shortage of resources in the community.

Café Paul's coping strategies involve a greater degree of sharing than exists in Savanne Molle's strategies. However, these sharing networks are also weak compared to other localities visited, and the same factor, resource shortages, is reported as the cause. Other strategies involve decreased diversity and quality of diet; distress sales of cooking utensils, linens, and drapes; diversification of credit sources; purchases of food on credit; and borrowing money from friends in Jean Rabel or Gonaïves. The other strategies are the same as those reported in Savanne Molle.

Over time, agricultural wage labor in neighboring localities, both daily and seasonally, has become increasingly important. In addition, taking up work washing clothes in the community, and migration to nearby towns, were both reported to have increased, as has borrowing money from acquaintances in other regions.

### **4. Food Consumption Patterns**

Food consumption patterns have shifted toward increased dependence on wild plants and on the CARE feeding program. Levels of protein in the diet have fallen somewhat, due to decreased local production of pulses caused by the drought and livestock deaths.

In both Savanne Molle and Café Paul, the population depends heavily on the market. On average, a household's own production covers one to three months of its consumption needs, and only seven months in the best case reported by a Café Paul household.

Food-sharing patterns were reported to be stronger in both areas 10 years ago. Now, most sharing is restricted to parent-children relations and religious ceremonies or other special occasions.

## **5. Child Care**

When the mother is away, child care is normally assumed by grandparents, the father, elder siblings, or neighbors. The reported age for weaning in Café Paul is 18-24 months, and the introduction of supplementary food occurs at 2-3 months.

### **Summary of Constraints on Household Food and Nutrition**

#### **Security**

Health status in the localities is adversely affected by the area's lack of readily-available safe drinking water. Moreover, a lack of cooking fuel may lead to inadequate preparation of food.

Residents attribute problems of food accessibility to lack of money, high prices, and lack of cooking fuel in Café Paul. Savanne Molle residents also mentioned unavailability of merchandise in the market place, no rain, and insufficient yields as conditions that threaten food security.

## **6. CARE Food Programs**

Both localities have a functioning Cantine Populaire, which is overcrowded because it serves anyone in the locality who appears. Food may be taken home and does not have to be consumed in the Cantine yard. Preparation of food is regular, and affected adversely only by rain or a death in the community. However, in each place, the Cantine organizers were reported to receive food rations in excess of the normal ration.

A number of households clearly view the Cantine as an essential source of food, especially female-headed households and extremely poor households. Without the Cantine, more food would have to be purchased from the market place, which many of these households could not afford.

According to local residents, small ration size was the main problem at both Cantines. Other problems include long waiting times; disorder or violence in lines that leads to nonattendance by some of the vulnerable population; serving times that conflict with work schedules; and the humiliation for adults that is associated with attending a Cantine, a subtle factor that limiting program participation by elderly, as well as pregnant and lactating, women.

Residents of both localities expressed a preference for Dry Distribution Programs. These are seen as eliminating several of the difficulties presently found with the Cantines, namely daily waiting lines and conflicts with other tasks, humiliation from adult's daily reception of food, and risk of injury to children or the elderly.

## D. THE MOUNTAIN AND PLATEAU WET AGROECOLOGICAL ZONE

### 1. General Features of the Area Surveyed

#### a. Location and Geographic Features

Comprising about 17% of the land area of the Northwest, the sloped and flat mountain zones have historically enjoyed over 800 mm of rain per annum, the greatest amount in the Northwest. The mountain/plateau wet zone consists of the "platform" area around Bombardopolis and the elevations of 500 meters or more on the northern slopes and mountain tops of the chains that run the length of the Northwest. The soils, usually deep, are of calcarious origin, and have a heavy clay-like composition. This zone is particularly susceptible to wind damage caused by hurricanes, as well as to erosion and land slip occasioned by heavy rains. The soils are often depleted by excessive cultivation and nutrient leaching.

#### b. Principal Economic Activities

With the qualified exception of Mare, which is a medium-sized town, the principal occupation of the people interviewed is agricultural production.

#### c. Demographics

The three sites selected in the region were Carrefour Vidy (Vidy), Mare Rouge (Mare), and L'Estère Derrière (Estère). Table 1 provides demographic information about each area.

Site	Vidy	Mare	Estère
Department	Northwest	Northwest	Northwest
Section	2nd, Guinaudée	Môle St. Nicholas	3rd & 4th, Baie de Henne
Settlement Age	Beyond memory	Beyond memory	Beyond memory
Est. Population	2,000 - 3,500	8,000 - 9,000	1,800 - 2,000
Est. Households	165 - 330	800 - 900	300 - 400
Est. Female-headed Households	35 - 40%	30 - 50%	Unknown

Vidy consists of widely scattered houses, roughly centered around a crossroads on a high mountain slope (about 500 m). The atmosphere was of an idyllic mountain farming community. There appeared to be several prosperous fields with banana, plantain, coconut, and latanier trees (the leaves of the latter used for making baskets), intercropped with beans and a few other crops. However, these few fields belonged to absentee owners who jealously protected them. The coconuts were barren due to disease, and the transportation costs for artisanal products has priced Vidy out of what is left of that market in Port-au-

Prince. There has reportedly been heavy male migration out of the area, causing a high number of female-headed households.

Mare is a spacious, treed town at about 600 meters elevation. Many professions are represented, and the majority of businesses pursue some form of commerce.

Estère is a high windswept mountain area (900 meters) characterized by some grasses and scattered fruit trees. Houses are dispersed throughout the area, whose slopes are such that they are prone to erosion and slippage. Residents suffer from high winds and heavy rains to such an extent that they often have to leave and/or rebuild. During a storm three days before the team's arrival, for instance, four houses were destroyed by wind and nearly 100 animals killed by hypothermia.

#### d. Natural Resources and Trends

This area has always been thought to have excellent rainfall, good ground cover, many food-bearing trees, good soils, good forage for animals, and plenty of available water and food. The reality now is very different. Population pressure has forced residents to overcrop, overgraze, and overcut to the point that food production appears to be in deficit, compared to needs, by a wide margin. The weakened production systems, in turn, limit the farmers' ability respond to negative events, which take a higher toll than they might otherwise.

Once home to a great many animals, Vidy residents have been reduced to very few: reportedly no chickens, about one sheep or goat per family, "many" donkeys, and 15-20 cattle for the entire area. Most of the chickens were killed by Newcastle disease, as the Ministry of Agriculture's vaccination services are no longer available. Other animals have been lost in great numbers over the last year to "floods." These tend to be heavy rainfalls of two or three days that chill animals already weakened by lack of feeding. Both wild dog attacks and animal theft have become problems recently. Mare and Estère residents tell virtually the same story. Market prices for animals have increased greatly (over 100%) during the last 12 months.

#### e. Infrastructure and Government Services

Overall, the zone's infrastructure is poor. Due to its position as a regional center, Mare has somewhat better infrastructure than Vidy or Estère. In Mare, there is a clinic and a recuperation center run by an energetic American missionary family. There are two State schools, one each of primary and secondary classes. Eleven private schools were identified, nine primary and two secondary. Fees varied from 10 to 75 gourdes per month, but often went unpaid. There is a market in town (Tuesday and Thursday). The roads to and from Mare are not in good repair and few commercial vehicles ply them. Surprisingly for a town of its size, Mare's nearest potable water supply is 30 minutes away by foot, dirty, extremely overcrowded, and can cause sickness. Wood for cooking fires is still freely available by foraging for dead branches and dry stubble, but it is also available at a price in the market. There are no functioning government services except a telephone company office, currently not working.

Vidy is less well supplied, its only access to a clinic requiring a ninety-minute walk to a neighboring community. A local clergyman provides first aid, but residents rely more heavily on local traditional healers (leaf doctors, Voodoo practitioners, etc.). There are eight schools in the area, all private primary schools. Fees are 15 to 18 gourdes per month. None of the women in the focus group had any education. The nearest market was in Gombo, the same locality as the clinic, and the nearest potable

water source was about an hour away. Some of the houses had rain-fed cisterns as a result of a foreign aid project some time ago. The roads to and from Vidy are quite good (although less so during rains) and there is one commercial truck that picks up and delivers goods on a weekly basis. Wood for cooking is becoming a problem. Whereas at one time charcoal was made from local trees, people have since been reduced to digging up roots. Now they cannot even find those, and are using coconut husks and dried stubble for fuel. The government is not in evidence unless someone trespasses on the property of absentee landowners, at which time, according to the residents, "a pickup truck comes and soldiers tie your hands and take you away." This is a legacy of the terrible Jean Rabel Massacre of 1987 that was precipitated by land tenure conflict. Vidy residents lost family members in the killings.

Estère is totally without health or market facilities of any kind, the nearest being in Godette, one hour away by foot. There are four private primary schools (one Catholic, one Adventist, and two Baptist). The dirt road to the area is steep over some stretches. No commercial vehicles pass through the area, given its isolation and lack of production. Wood is unavailable, unless residents are prepared to walk at least three hours one way. What trees still exist (Guava and *Ponm Wòz* [Pink Rose] are disappearing) are needed for windbreaks. Tree branches and parts of bamboo stands are used for cooking. No government services are available.

f. Credit

Credit is unavailable, except among family members (with chickens as collateral) or from a few informal sources (usually for one week and interest-free) for food purchases at the markets.

g. Formal and Informal Social Organizations

Social organizations were weak in the areas visited. It appears that as times get worse, politically as well as economically, work groups are less likely to form. Functioning groups encountered in the mountain/plateau wet areas included *kolonn*, groups of 10 farmers who trade labor with each other (also known as "*Ti Gwoup Dis*"), and *kwadi* (squad), a similar organization that sell or share work. In the latter case, *kwadi* may or may not pay a token amount to each member each day. In Mare, there was an odd work group encountered called "*Plum*" (pronounced "ploom"). This group worked for non-members for five gourdes per person per day, but stopped after the first hour for food and water, which had to be provided in order for work to continue.

h. Access to CARE and Other Development Projects

Vidy has access to a CARE Cantine Populaire, as well as a visiting primary health care nurse (through INTERAIDE), and it participates in a road rehabilitation project financed by FONDEV.

Mare has several CARE Cantines Populaires, school feeding, and dry distribution sites. In addition, FONDEV is fixing roads and INTERAIDE reportedly has a cistern project for individual houses.

Estère was once the site of a CARE agroforestry and seed distribution project, but now awaits the commencement of the FONDEV-sponsored road rehabilitation activity in the area.

## **2. Livelihood Strategies**

### **a. Primary Production Systems**

In all three areas, the primary production system was subsistence farming. Cropping patterns are similar in all three areas. The main crops are corn, beans, and manioc, plus peanuts in Mare and Estère, and sweet potatoes in Vidy and Estère. Historically, the cropping season was bimodal: April to June and August to December. However, irregularity of rainfall over the last few years has forced farmers to plant by rainfall arrival rather than season. The "false starts" caused by planting after one rainfall that is not followed by others causes crop loss and creates additional expenses for replanting. Farmers in the area report that cropping cycles have as much as doubled in time, while yields have dropped considerably.

The land, though potentially good, is depleted. Farmers are forced by their families' food needs to plant all available land whenever possible. In addition, animals are grazed on the stubble after harvest, improper rotations are practiced, inappropriate slopes are farmed, and almost no purchased inputs are used (except poor-quality seeds). Although most of these complaints apply to other areas of the Northwest, the mountain zones suffer the additional difficulty of obtaining seeds adapted to the altitude and temperature of the region.

Farmers interviewed in the area (16) tended to have two parcels of land, each averaging about eight sèzyenm (one sèzyenm is equal to about 860 square meters). As landholders, they ranged from having no land to having five parcels, from one to 32 sèzyenm in area. Land acquisition varies. Vidy farmers acquire land by purchase (Type A), inheritance (Type B), and sharecropping (Type C), whereas in Mare and Estère nearly all farm land has been inherited by the present user, with some being leased. The distance from the farmers' residences to their gardens varied widely, both within localities and between them. In Vidy, fields are fairly close. In Mare, field distance ranged from on-site to seven km from the residence. In Estère, peanut gardens were 2.5 to five hours away, whereas it took five minutes to two hours to reach gardens for other crops. Most of the land had been in the present users' hands for a long time. In Estère, peanut production is a relatively recent phenomenon.

Agricultural labor is almost universally provided by family members. Ownership of tools was limited in almost all households to one hoe and one machete, but some had picks. Borrowing of tools was universal.

The major constraints on production cited by farmers were lack of rain, pest infestation, inconsistent seasons, and in the case of Estère, high winds and poor-quality seeds. Other constraints were insufficient health for fieldwork (Vidy), lack of proper storage facilities for crops (Mare), and animal diseases (Estère). It was interesting to note that the farmers complained about the high prices of the crops they produced, which means that they purchase more food than they harvest.

### **b. Secondary Production Systems**

In general, it became evident to the RRA that Type A (wealthier) households had more revenue-generating activity options than Types B (medium) or C (poorest) households, if not the same incentives. Activities undertaken by Type A households tended to generate greater amounts of income than those by Type B households, and those by Type B households more than by Type C. From Type A through Type C, there was a descending chance that both spouses participated in such activities. Finally, it appeared that the health of households was directly correlated with their socioeconomic status.

In terms of quantity available, both the revenue-generating activities and the coping strategies employed seem to be greater for Type B households than for either As or Cs. As households are classed from C to A, the opportunity for income generation and the selection of coping strategies increases, but the incentive (need) decreases. In other words, a Type A household has many opportunities but less reason to take them up, probably because those already employed are sufficient or more profitable. The Type C household, on the other hand, has the greatest incentive (hunger), but the least opportunity because they lack the means to act. Differential access to non-family labor illustrates this point well. A Type B household may see an opportunity to collect some charcoal. Because the household head has a hoe, a machete and a few Gourdes, he may be able to hire a few laborers for the day to help him make charcoal. By contrast, a Type C household, presented with the same opportunity, may not have the resources to exploit the situation.

In all three mountain areas, labor was sold by Type C families, either in the fields or as domestic help. Type Bs engaged in small-scale commercial activities such as buying market items and reselling in smaller quantities, production of artisanal woven items (Vidy) or sewing. Type A families had outside wage income or larger retail commercial activities. Charcoal production, a traditional crisis-time income-generating activity, was virtually nonexistent due to the scarcity of wood.

### **3. Coping Strategies**

Mountain households are particularly susceptible to weather-related crises, and each area visited chronicled a long list. All started with the famous "12 Oktòb," Hurricane Hazel of 12 October 1954. Times were much better then, and populations, although devastated, recovered quickly. Other crises followed: a severe drought of the early 1960s, another drought in the late 1960s, the killing of pigs infected by African Swine Fever in the early 1980s, and the unseasonably heavy rains and long droughts of the last six years. With each crisis, household coping strategies remained the same but were more difficult to implement and resulted in a longer recovery time.

Present coping strategies revolve around getting something to eat each day. Thus, families often manage by mortgaging both their health and their children's education. Meals are skipped on a regular basis, children are kept away from school, traditional healers are consulted instead of formally trained health-care workers, and so forth. Some people migrate to what they hope are better places to live in Haiti; some leave the country altogether. Those who stay rely heavily upon CARE's feeding program if it exists nearby (wet) or within reasonable walking distance (dry). As the family's situation worsens, coping strategies employed tend to be more drastic, less productive, and more irreversible. A Type A household falling on hard times may eat twice a day instead of three times. A Type B might be forced to sell a goat (hopefully male), whereas, in the extreme case, a Type C male household head may cope by abandoning his family for months at a time to look for work elsewhere, and be unable to send money home until he finds work. However, the fact that the team encountered no families who admitted to receiving remittances from urban areas or from abroad suggests how unsuccessful this emigration strategy can be.

### **4. Food Consumption Patterns**

Foodstuff is either grown, purchased in the market, provided by foreign donors, or foraged. Many wild foods are eaten in each of the mountain areas visited. Wild food consumed by residents can be categorized in three main groups. The first comprises those foods that are not customarily eaten by Haitians but are regular items in diets elsewhere. These foods are often available in the market at low

prices and might be eaten by a Type A household as the third meal of the day, by a Type B household as a regular part of the diet, but rarely eaten by one in Type C. They would include, for example, green mangos (roasted or boiled), **chou montad** (a Brassica-like leaf that smells like cabbage), guava fruit, **nigrènn** or **pwa manyòk**, **koupye** (a spinach-like leaf), and Tamarind. The second group would include those wild foods that appear to give nourishment but do not taste good. Sometimes, but not always, available on the market, these foods are eaten by Type C and some Type B households which can forage for them. They include **Yanm Chat** and the small, spiky seeds of the Torch tree. The last category includes those foods that only mask hunger, or actually make one uncomfortable or ill. They are eaten by Type C households in really dire straights. Examples of these foods are, respectively, Corrosol leaves (from which a tea/soup is made that dulls hunger pangs and allows children to sleep having had no food for 24 hours); and **Yanm Dala** (a root, from which a weak soup is made after two to three days preparation).

Funerals, RRA revealed, contribute to asset depletion. The bereaved family is socially obligated to spend as much as 10,000 gourdes for the funeral, an expenditure that often forces them to sell productive assets. One household was observed in which the husband had passed away 15 days before. The family was instantly reduced from a well-functioning Type A unit with two income sources and liquid assets, to a completely destitute Type C family eating Corrosol soup, because of the husband's sudden death.

In general, Type A households sold more crops and ate less often than Type B, and Type C ate virtually all they produced, often, including stored seeds.

Farmers suggested several remedial actions that would assist them to retain assets, including using coffee bean husks as insecticide for stored crops; buying plants or animals with the proceeds of charcoal sales; **gardiennage** (looking after another person's stock in return for the next offspring); seed banks; increased diversity of plant stock; irrigation systems; provision of silos for seed storage; and agricultural extension services.

## **5. Child Care**

As a rule, child care varies with the socioeconomic status of households. The poorest Type C parents (usually single mothers) were forced to take their children with them to market and the fields or to leave them with older children. Type A and B families, usually better structured, could either afford help or leave children with responsible family members.

Breast feeding of babies was universal and done on-demand, with weaning occurring from 12 to 24 months. In Vidy, children begin to eat "solid" foods (i.e., other than milk) from 15 days to two or three months--usually rice flour and WSB (blended wheat/soy flour), manioc flour at three months, and "CARE Flour" at four months. In Estère, porridges of plantain, peas, and wheat were made.

## **6. CARE Food Programs**

### **a. CARE-Haiti Cantines Populaires**

In Vidy, only one family participated in the wet feeding program because the distance to an operating Cantine was great. Although several Cantines operate in Mare, none of the people interviewed (approximately 40) admitted to the existence of a Cantine. In Estère some 85% of the households

interviewed (six out of seven) have participated in the Cantines since they were founded (mid-1992 and mid-1993). This discussion, then, focuses on the perceptions of the Estère families.

The two Cantines operated on a regular basis (six days per week), and all members of participating families attended. The families reported receiving 30-70% of their total food supply from the Cantine. They were able to reduce their consumption of wild foods due to the Cantine's presence. Complaints ranged from small ration size due to the fact that well over the registered number of beneficiaries are fed, to jealousy on the part of those not receiving rations and intolerance of wheat. Cantine participants disagree about whether wet feeding is preferable to dry, because wet feeding at least allows children to have a meal while their parents are in the fields or at the markets (quite far away in the case of Estère). They recommended prolonging dry distribution, however, and opening Cantines in neighboring areas to relieve pressure or expanding the existing Cantine.

#### **b. CARE-Haiti Dry Feeding**

In Vidy, it was unclear how many people received dry rations, but there were many. In Mare, every person (with only one exception) participated, even the woman purported to be the richest person in town. (She also gives food away, according to the American missionary in the area). In L'Estère, residents participate in nearby Petite Rivière's dry feeding at four to five week intervals.

Dry feeding is generally preferred because the food can be taken home for preparation, it targets the whole family, and they have the option to sell or give away a portion. In addition, beneficiaries do not like the management committees of the wet programs, and they do not have to sit around waiting for the dry ration as they do for wet. They do not like the small ration size, the lack of variety in the distributed food, or the corruption/sale of food. Respondents also claimed that dry food rations only lasted for four to eight days, not the 15 between distributions. They were evidently unaware that the dry program provides food supplements and was never intended to provide 15 full rations to each family member.

### **E. DRY COASTAL ZONE**

#### **1. General features of the zone**

##### **a. Location and Geographic Features**

The dry coastal zone comprises 6.7% of the land mass of the Northwest and Artibonite. The three communities visited were Baie de Henne, Baie de Moustique and Ti Paradis.

The coastal dry zone is characterized by a drought-ridden area immediately surrounding the shores of Haiti's northwest peninsula. Its drought-like conditions result from a combination of low rainfall, soils with little water retention capacity, high temperatures and frequent winds. The average elevation in this zone is less than fifty meters above sea level and the soils vary from exposed, calcareous reefs to alluvium and sand deposited by ocean action and inland erosion. The zone's vegetation exhibits varying densities of epiphytes and scattered palms, with few other cultigens.

b. Principal Economic Activities

The principal economic activities are charcoal production, fishing, livestock, and commerce, the mix of which varies from one community to another. Agricultural production usually requires irrigation.

c. Population

Settlements visited in this zone vary in size from as few as 220 people to as many as 5,000, with household numbers ranging from 50-500. Residents of these communities reported that migration and changing social patterns have created a considerable number of female-headed households. Population sizes also fluctuate as a result of out-migration. For example, in Ti Paradis, the population has dwindled from 600 to 200 people since about 1979 due to emigration.

d. Natural Resources/Trends

Cyclones have badly battered the coastal dry zone at regular intervals over the last forty years. Storms during the past fifteen years have been so damaging to the coastal ecology that, according to residents, offshore fishing is no longer productive, whereas deep-sea fishing is probably more viable.

Wood for charcoal production is another important natural resource here. While all three communities visited were involved in charcoal production, their residents indicated that the availability of wood has greatly diminished, to the point that bushes, roots and cacti are now being used as raw materials.

Agricultural land in all three communities is productive provided that water, from rain or irrigation, is available. In Baie de Moustique, this meant that cultivable land is quite a distance from the community and, in Baie de Henne, the cultivable land was nearby because land behind the community had been irrigated. In Ti Paradis, however, although State land was available for all, lack of rain had made it virtually impossible to farm for some five years.

e. Infrastructure

*Health:* The two larger communities, Baie de Moustique and Baie de Henne, had one health center/dispensary, although the availability and prices of services were open to criticism. Ti Paradis residents had to travel two and a half to five hours on foot to utilize health services.

*Education:* Each of these communities had schools. Again, the two largest communities, Baie de Moustique and Baie de Henne, had a larger number and variety of schools than Ti Paradis. In the latter case, the one school was having difficulties paying the teacher and maintaining the fee structure.

*Markets:* None of the three communities had market places. Their residents were required to travel, for two to three hours, by sea, foot or road to other markets.

*Roads:* All three communities indicated that roads were very bad and particularly so during the rainy season. Residents of Ti Paradis, which is on a main road, complained that both shade and water are lacking when one travels the road on foot. All three communities are accessible by boat.

*Water:* Baie de Moustique recently had a water system installed that pipes in clean water 24 hours a day. The two other communities indicated that their water sources (an artesian well in Ti Paradis, and a river and wells in Baie de Henne) were unclean.

f. Government Services

Neither Baie de Moustique nor Ti Paradis presently has access to government services. Baie de Henne, on the other hand, has access to government agricultural services in the person of one employee who lives in town and manages Baie de Henne's state cooperative.

g. Access to Credit

There was no formal credit in the three communities, but Ti Paradis and Baie de Henne residents indicated that there were informal credit systems available for tapping. In Baie de Henne, women's credit groups had organized a rotating fund to help women establish trading activities. For Ti Paradis, informal credit systems were available in nearby towns, but these were not tapped because the community's prospective borrowers could not repay loans.

h. Social Organizations

The two larger communities, Baie de Moustique and Baie de Henne, have a variety of formal and informal social organizations. The formal organizations include a water management committee, a development association, an emergency committee, an agricultural cooperative, and a fisherman's association. Here, as in other zones, the more informal organizations are loose configurations for selling and trading labor, known as *kwadi*. Ti Paradis has no formal organizations and the *kwadi* have been dormant for several years.

g. Access to CARE projects and other development projects

CARE's Cantine Populaire and Dry Feeding Program operate in all three communities. Baie de Henne has eleven Cantines Populaires for 2,200 official beneficiaries; Baie de Moustique has two Cantines Populaires for 500-600 official beneficiaries, and Ti Paradis has one Cantine for 100 official beneficiaries.

2. Livelihood Strategies

a. Primary Production Systems

The primary production systems in the three communities differ. In Baie de Henne the main activities are commerce, trading and transportation; in Baie de Moustique, livestock, charcoal and fishing; and in Ti Paradis, there is only one productive activity, charcoal production. The different production systems reflect the different resource bases and access to resources within this zone.

Fishing in both Baie de Henne and Baie de Moustique is small-scale, utilizing small boats, traps, and nets. Fishermen go out alone or in small groups. Adaptation for the change from coastal to deep-sea fishing has not been completed, especially for materials such as sails, as fishermen have been unable to purchase the necessary equipment. Replacement of even existing equipment was seen as difficult, due to price inflation.

Fisherman in Baie de Moustique normally participate in farming activities as well. This contrasts with Baie de Henne, where a lack of arable land surrounding the locality precludes this two-pronged strategy.

Charcoal production in Ti Paradis is based on what was once a relatively abundant wood supply obtained from State land surrounding the area. Over time different scales of production have evolved, including a division of labor between those who organize the production and/or trade of charcoal and those who sell their labor.

Trade and transport activities based in Baie de Henne link the interior of the western portion of the peninsula to the main cities of Gonaïves and Port-au-Prince. Trade has traditionally involved an exchange of charcoal and animals against essential items. Transport boat owners and principal traders control the majority of resources in the locality and employ stevedores and crew. UN-mandated sanctions against Haiti have affected the transport prices, due to the increased petrol prices, doubling the price of transport between Baie de Henne and Port-au-Prince or Gonaïves from January 1993 to January 1994.

### c. Other productive activities

These activities include petty commerce, animal husbandry, canal work, salt production (in Anse Rouge), and some agricultural production in Baie de Moustique, and on limited irrigated lands in Baie de Henne. Among the constraints identified by residents of the communities are a lack of capital for livestock and petty commerce investments, animal diseases, insufficient pasturage, and the need to expand irrigated land area.

## 3. Coping Strategies

Coping strategies for households in the three communities include decreases in meal frequency and quantities of food consumed, increased consumption of *rapadou* (processed molasses paste) for energy, increased dependence on remittances, *gardiennage*, taking loans at 20 percent interest, purchasing food on credit, and decreases in expenditures on clothes and goods for the house.

Particularly in Baie de Henne where 11 Cantine Populaire are located, increased consumption of Cantine food was mentioned as a viable and even primary strategy. Advance sales of uncaught fish is also a strategy. Also, food sharing networks within socioeconomic classes are important: some multi-household bulk purchases were reported, demonstrating a recognition of economies of scale not found elsewhere in the Northwest.

In Baie de Moustique, increased collection wild plants and birds was important. In Ti Paradis sales of unborn animals were reported alongside out-migration.

In Ti Paradis, out-migration is, in essence, the only possible change in livelihood strategy once wood resources for charcoal production are exhausted. The settlement itself was founded as a survival strategy based on charcoal production, and the surrounding land is too arid for cultivation.

In the other two localities, a few adjustments in livelihood strategies have occurred. Increased involvement in small-scale trade on the part of women is one tactic (with men taking up firewood collection in the household division of labor to allow the woman more time for trading). Increased indebtedness and sales of still unborn animals and uncaught fish are others.

#### **4. Food Consumption Patterns**

Changes in food consumption patterns are a function of both the available options for survival strategies and the existence and level of food assistance programs offered to the locality. For example, in Baie de Moustique where the supply of wild foods is still adequate, increased consumption of wild plants and birds has occurred. In Baie de Henne, in contrast, which has several Cantines Populaires, diets have shifted towards the Cantine food of bulgur and peas.

Protein levels for all three localities appear reasonable, due to the availability of fish along the coast. Diversity of diet is lower in Baie de Moustique than in Baie de Henne or Ti Paradis, though, most likely as a result of its relative isolation from transport routes.

Food is obtained almost entirely from the market in Ti Paradis, in large part from the market in Baie de Henne, and from both the market and own production in Baie de Moustique. More precise estimates are unavailable known.

Price information from Ti Paradis and Baie de Henne over the past 24 months reveals a 100 percent increase in the prices of most basic staple items. This inflation has had a significant effect on the populations in all three localities due to their large dependence on the market to meet their basic food needs.

As mentioned above, food sharing practices are widespread in Baie de Henne within socioeconomic classes, and have been integrated into the population's survival strategies. In Baie de Moustique, in contrast, food sharing practices have declined in past years. In Ti Paradis, it appears that sharing practices were never adopted by the population settling here.

#### **5. Child Care**

In the mother's absence, children are cared for by the father, neighbors, grandmother, or elder sibling according to information in Ti Paradis and Baie de Henne. Information is not available for Baie de Moustique.

Infant weaning age is 18 months in Ti Paradis, but is reportedly decreasing due to demands on women's time for charcoal sales and to women's poor health. Similarly, reported weaning age ranges from 12 to 24 months in Baie de Henne. Women are often weaning early because they must be away from home during extended periods to carry out trading activities. Supplementary foods in these localities are introduced anywhere from 15 to 90 days, and include banana, plantain, and wheat soya blend (WSB) porridge and grilled wheat flour.

#### **Main Causes of Food and Nutrition Insecurity**

As can be seen above, access to potable water is important for improving the health of the populations of Baie de Henne and Ti Paradis, as is sanitation infrastructure for Ti Paradis.

Food intake is related to six factors: a) high prices; b) shortage of work opportunities; c) lack of capital for initiating investments in trade and animal husbandry activities; d) lack of access to markets; e) drought; and f) a need for expanding irrigation canals in Baie de Henne and Ti Paradis.

## **6. CARE Haiti Food Programs**

The localities of Baie de Moustique and Ti Paradis each have one Cantine Populaire and Baie de Henne has eleven. Cantines opened in June 1993 in the former locality and a year earlier in the latter two. In addition, dry distribution programs are located in Ti Paradis and Baie de Henne.

Across the three locations, participation by all household members is allowed. In addition, in Baie de Henne and Ti Paradis, persons passing through the area can receive food at the Cantines. The Cantines reportedly operate regularly in all communities, although in the case of Baie de Moustique this has been limited by erratic food deliveries from Gonaïves, which have occurred only twice since the Cantine opened six months ago. The only negative comments against Cantine management were made in Baie de Henne, where certain Cantines were reported to serve herring rarely or to abuse Cantine participants verbally.

The poorer population in Baie de Henne resents placement of Cantines within the community: all eleven Cantines are located in the wealthier areas. Other general problems affecting the three localities include small ration size stemming from over attendance, disorder which endangers small children, and wheat intolerance (in Ti Paradis).

Although the households interviewed recognized the importance of the Cantine food for their families, a preference for the Dry Feeding program was expressed by nearly all households in Ti Paradis and Baie de Henne having had some exposure to it. The Dry Feeding Program is seen as better managed and allows households to prepare their food in the manner preferred. However, the populations expressed concern about irregular deliveries and ration sizes that do not correspond to household size.

## **F. NUTRITIONAL STATUS**

Nutritional results are presented as aggregate data for the 5 agro-ecological zones first, followed by specific zones. Data are presented in this fashion since there were no significant statistical differences in nutritional status by agro-ecological zone.

### **1. Calculation of Malnutrition Rates**

Z scores for each of the anthropometric indicators height for age, weight for age, and weight for height were calculated using Epi Info version 5 from the Center for Disease Control and Prevention (CDC). Calculations are based on the growth reference curves developed by the National Center for Health Statistics and CDC using data from the Fels Research Institute and US Health Examination Surveys. To facilitate the comparison of results from this population to others, values are expressed as Z scores, that is, standard deviation (SD) units. Mild to moderate malnutrition is defined as a Z score of -2 to -3, and severe malnutrition is defined as a Z score < -3. If the proportion of children with Z scores below -2 rises above 10-15% of the population, intervention is highly recommended.

### **2. Sex Distribution**

Anthropometric calculations were made on a total of 371 children. Approximately 48% were female and 52% were male (Table 1). The sex distribution did not differ between Agriculture/Ecological zones.

There were no sex differences in rates of malnutrition in the zones surveyed. Male and female children were equally malnourished.

### 3. Mean Height for Age, Weight for Age, Weight for Height Z Scores and Percent of Children Malnourished

Table 2 shows the mean Z score for each of the anthropometric measurements height for age, weight for age and weight for height for the 5 agriculture/ecological zones assessed.

Height for Age The mean height for age Z score ranged from -0.99 in the inland dry region to -1.57 in the mountain and wet plateau region. Although variation in the mean height for age Z scores were observed across agriculture/ecological zones, there were no statistically significant differences across zones. In general, fewer than normal children are growing in height at the normal rate. With a mean Z score of -1 to -2, these data suggest that stunting is a significant problem. Low height for age, or stunting is usually the result of chronic undernutrition, which occurs when there is a chronic calorie deficit or during recurrent periods of significant food shortage. Another contributor to poor linear growth of children is a high prevalence of low birth weight deliveries due to maternal malnutrition. Future assessments should examine the prevalence and the relationship of maternal malnutrition to the nutritional status of children in these communities.

Several different indicators of malnutrition are presented in Table 3. The percent of children that are mild to moderately malnourished ( $-3 < Z \text{ score} < -2$ ) based on height for age is 19.4%. The percent of children that are severely malnourished ( $Z \text{ score} < -3$ ) is 8.6%. Nearly a quarter of the children measured are suffering from mild to moderate growth deficit.

Weight for Age Similar to the height for age values, the mean weight for age Z score was between -1 and -2 SD (Table 2) from the median of the reference population, suggesting that a significant proportion of children are undernourished. Again, children in the inland dry zone appeared to be best off, and children in the mountain and plateau wet zone appeared most undernourished based on the weight for age indicator. However, there were no statistically significant differences between these zones. In general low weight for age is most affected by low height (poor linear growth). Other variables which contribute to low weight for age are current food shortage, that is consumption of a diet insufficient to meet caloric needs, and high rates of infection such as diarrheal and respiratory infections.

Approximately 16% of the children measured have not gained the expected weight for their age and are categorized as mild to moderately malnourished based on the weight for age indicator. Approximately 4.6% of the total children assessed are severely underweight for their age.

Weight for Height Weight for height is an indicator of how thin, or proportional a child is for her height. This nutritional indicator is a reflection of current nutritional status and reflects current or acute caloric deficits in the diet or recurrent and/or severe infections such as diarrhea and respiratory infections and measles. The overall mean weight for height Z score was approximately -0.4 (Table 2). Unlike the other nutrition indicators, children in the mountain and plateau wet zone appeared to be least undernourished based on their weight for height. Children in the plateau dry zone appeared most malnourished with a mean Z score of -0.62. As with the other indicators, there were no statistically significant differences across agriculture/ecological zones. Mean Z scores above -1 indicate that most of the children surveyed are proportionately small, and are not suffering from acute malnutrition.

However a small percentage of children appear to be wasted, that is are too thin for their height. The percentage of children falling into these different categories (wasted, stunted) is detailed in Table 3.

The percent of children that are mild-moderately malnourished based on weight for height is 3.2%. There are no severely malnourished (Z score < -3) children based on this indicator. These results suggest that of the zones surveyed, chronic undernutrition, or recurrent food shortages is a much more serious problem.

Wasted, Stunted, Wasted & Stunted Weight for age as an indicator of malnutrition has the limitation of not being able to distinguish children that have been malnourished in the past and are now recovering (chronic malnutrition), from those that are currently experiencing malnutrition (active, or acute malnutrition). A child that has been malnourished, but is recovering will have a weight deficit for its age but may have an appropriate weight for her smaller size (weight for height).

To better distinguish active malnutrition from chronic malnutrition, children were classified into three groups: wasted, stunted and wasted and stunted. More than a quarter of the children assessed are stunted according to this classification scheme, meaning these children have experienced chronic malnutrition. Only 1.3% of children are wasted. This is the percentage of children currently experiencing malnutrition for the first time. Approximately 1.9% are both wasted and stunted. This is the percentage of children that have experienced malnutrition in the past (chronic) and are also currently malnourished (active).

Regardless of the indicator chosen chronic under nutrition leading to malnutrition is a significant problem in all of the agriculture/ecological zones surveyed in Haiti.

Distribution of Malnutrition by Child Age Children in the age group 3 to 5.9 months had the lowest rate of both chronic and acute malnutrition as evidenced by the percentage of children with Z score under -2 for height for age, weight for age and weight for height (Table 4). The percent of children with faltering linear growth (height for age) increased with increasing age of the child. Whereas, the percent of children with low weight for age and low weight for height did not change once the age of 6 months was reached. These data indicate that consistent mild undernutrition accumulates over a child's life such that the proportion of children categorized as stunted increases with increasing age of the child. Weight gains for a particular height in general continues proportionately through the first 5 years of life in this population of children. Unlike growth deficits, no one age group appears to be more susceptible to deficits in weight gain in the first 5 years.

a. Dry Coastal Zone: A total of 64 children were assessed for nutritional status. The mean for all three nutrition indicators fell below the median of the reference population. In this zone, poor linear growth (Z score mean = -1.34) is the most severe problem (Table 2). Mean Z scores for weight for age (-1.17) and weight for height (-0.47) indicate that a small percentage of children in this zone are too thin for their height and are probably suffering acute caloric deficits at the present time. However, the largest problem appears to be chronic, undernutrition, which has led to poor linear growth in a large proportion of children.

The dry coastal zone is representative of the 5 zones surveyed in terms of percentages of children that are mild-moderate and severely malnourished (Table 3). Roughly 15% of children in this zone are mild-moderately malnourished based on the indicators height for age and weight for age, whereas 3-8% of children are severely malnourished based on these same indicators. A much smaller percentage of

children are too thin for their height (3.1%) and none were severely too thin for their height (weight for height).

None of the children are both wasted and stunted: both past and current undernutrition (Table 3). Three percent of children are wasted and as expected from the other indicators, 25% of children in this zone are stunted (chronic undernutrition).

b. Inland Dry: A total of 102 children were surveyed in this zone. The mean for all three nutrition indicators fell below the median of the reference population. In this zone, poor linear growth (Z score mean = -0.99) is the most severe problem (Table 2). However, the inland dry zone appears to have had less undernutrition, or chronic food shortages in the past compared with the 4 other zones surveyed. Mean Z scores for weight for age (-1.00) and weight for height (-0.46) indicate that a small percentage of children in this zone are too thin for their height and are probably suffering acute caloric deficits at the present time. However, as with the other zones, the largest problem appears to be chronic, undernutrition, which has led to poor linear growth in a large proportion of children.

Reflecting the mean and distribution of Z scores, approximately 15% of children assessed in this zone are mild-moderately malnourished based on their height for age and weight for age Z scores. Nearly 10% of the children have severe growth deficits for their age (height for age) and 4% have severe weight deficits for their height. As is true for the other zones, a small percentage of children (2%) are mild-moderately too thin for their height (weight for height) and none of the children are severely malnourished based on their weight for height.

In the inland dry zone, none of the children were classified as wasted: current undernutrition (Table 3). Greater than 21% of the children have chronic malnutrition and are classified as stunted. Although no children were wasted, 2% of children assessed were both wasted and stunted. These data indicate that a group of children that have in the past suffered undernutrition, are also currently suffering from undernutrition and need to be targeted for food supplementation.

c. Plateau Dry: A total of 56 children were assessed for nutritional status in this zone (Table 2). Both the mean for height for age and weight for age were more than one Z score below the median of the reference median population indicating that a significant proportion of children have not attained the linear growth potential for their age. The plateau dry zone had the lowest mean Z score for weight for height indicating that current undernutrition is a problem, as well as chronic undernutrition.

Relative to the other zones assessed, the plateau dry zone had the smallest percentage of children classified as mild-moderate malnourished based on height for age (10.7%) and weight for age (14.3%) (Table 3). However, this zone had the highest percentage of children who have been suffering from severe malnutrition based on these same two indicators. None of the children assessed were severely malnourished based on their weight for height.

Although the plateau dry zone had the lowest percentage of children classified as stunted (21.4%), chronic undernutrition and stunting remains a problem in this zone.

d. Mountain and Plateau Wet: A total of 75 children were surveyed in this zone (Table 2). Children in this zone had the lowest mean height for age Z score (-1.57). Interestingly, this zone had the healthiest mean weight for height Z score (-0.28). These data indicate that past undernutrition is

slowly being remedied, and that a smaller percentage of children in this zone are currently underfed as compared with the 4 other zones assessed.

As can be expected from the mean Z scores, the percentage of children with mild-moderate malnutrition based on height for age is 30.7% (Table 3). Eight percent of all children are severely malnourished based on height for age. None of the children are malnourished based on weight for height.

None of the children in this zone are either wasted, or wasted and stunted. Past undernutrition has taken its toll on this population of children, as evidenced by 38.7% children classified as stunted.

e. Irrigated: A total of 74 children were assessed in this zone for nutritional status. The mean for all three nutrition indicators fell below the median of the reference population. The mean height for age Z score was -1.11 and the mean weight for height Z score was -1.15. The mean Z score for weight for height was the second lowest of all 5 zones with a mean of -0.56.

In the irrigated zone, 16-24% of children assessed were considered mild-moderately malnourished based on the indicators height for age and weight for age. A relatively smaller percentage of children are severely malnourished with: 6.8% and 9.5%, height for age and weight for age respectively. Of all 5 zones, the irrigated zone had the highest percentage of children with mild-moderate malnutrition based on weight for height (8.1%) These data indicate that current undernutrition remains a concern for this zone.

The percentage of children classified as wasted, stunted and wasted and stunted are 1.4%, 24.3% and 6.8% respectively. The irrigated zone had the highest percentage of children classified as both wasted and stunted. As with the inland dry zone, these data indicate that a pocket of children who have suffered repeated undernutrition in the past, continue to be undernourished. These children need to be targeted in feeding programs.

#### 4. Child Health

Data were collected on presence of diarrheal infection at the time of assessment, history of measles vaccination, and participation in feeding center programs (Table 3). Overall 47.5% children surveyed had diarrhea at the time of the assessment. Approximately 12.8% had been immunized for measles, and approximately 59% participated in feeding center programs. There were no statistically significant differences across agriculture/ecological zones for these health indicators.

Although not statistically significant, participation in feeding centers did appear to differ in each of the 5 zones examined. A seemingly greater proportion of children participated in these centers in the dry coastal zone (84.4%) compared with the irrigated zone (30.6%). When an analysis was conducted to examine the risk of malnutrition based on participation in feeding centers, a statistically significant reduction in risk was observed (Table 5). A child's risk of being too thin for her height (weight for height Z score < -2) is reduced over 3 fold if that child participates in a feeding center program. Current participation does not appear to protect the child from being stunted (the effect of long term, past nutritional deficiencies), but can protect the child from currently being malnourished.

Generally diarrheal infection affects growth in two ways: children eat less during infections and children lose weight due to dehydration. Current diarrheal infection had a significant effect on a child's risk to malnutrition (Table 5). Children with diarrhea were at a statistically significant elevated risk (13 fold)

of having too low a weight for their height (weight for height Z score  $< -2$ ). One could suppose that repeated diarrheal infections are common, and that the high percentage of stunting among this population could be due to diarrheal infections, as well as chronic food shortages and undernutrition. Given the high incidence of diarrhea measured in this study, specific programs targeting prevention and management of diarrheal infections should be instituted in these zones. Specifically use of oral rehydration solutions should be emphasized. In addition, programs to increase the availability and use of clean water should be investigated.

Measles vaccination was not related to malnutrition in this population of children (Table 5). The lack of association may be due to the low vaccination rates found in these 5 zones. Regardless, measles is known as a major killer of children under age 5, and programs should be developed to increase the percentage of under 5 yr. olds vaccinated.

## **G. RECOMMENDATIONS**

In order to restore regional food security in the agro-ecological zones, regions that are currently receiving CARE food aid should be targeted as well for interventions directed at rebuilding their livelihood systems and improving access to food supplies for local populations.

The food and nutrition security of many of the communities are being negatively affected by the lack of basic infrastructural amenities (health facilities, clean water, roads). To deal effectively with these infrastructural problems, CARE should work closely with donor agencies to do an inventory of communities that lack these amenities and find solutions to this problem.

Food assistance is not only essential, but should also be augmented to meet the actual needs present in each agro-ecological zone. Dry distribution, with rations calculated to match family size, would best meet these needs and correct many of the current Cantine System's inadequacies and inequities.

In view of the long-term trends of decapitalization and depletion of natural resources in each of these three areas, as well as the goal of creating a situation where food aid would no longer be necessary, development interventions directed at precisely these trends should be implemented.

Interventions directed toward the health and improved breeding of livestock would have positive repercussions for any household's economy, simultaneously enhancing both its sources of livelihood and capital savings. More rational exploitation of dry lands, whether by the introduction of better adapted crops or particular kinds of pasturage, would help to improve agricultural production, as well as remove some of the pressure to cut trees for charcoal production. Tree cropping for firewood and charcoal production would be another more rational resource exploitation technique for these dry areas, one that would have a positive impact on weather patterns, livestock feeding, and soil conservation/improvement.

In fishing areas, interventions should be directed at enhancing and augmenting the equipment necessary for exploitation of an underutilized natural resource: the offshore waters. This entails better boats, motor power, better preservation techniques, and accessible prices for certain kinds of supplies. An improvement in the fishing sector would have ripple effects for the entire area through the marketing system. The general point here is to direct development interventions toward those natural resources that are being destroyed because people have no other options, or toward upgrading households' means of production so that their economic activities become more rational and less destructive.

The field work indicated that dry feeding effectively reaches children and other vulnerable members of the household because they are prioritized in normal Haitian household feeding practices. The program objective of improving the nutrition and health status of children under five years-old, pregnant lactating women and other at-risk groups, can best be achieved through household-focused interventions.

## **H. A MULTIDIMENSIONAL MONITORING SYSTEM**

The team's "Statement of Work" requested that a multidimensional information system be considered so that CARE, over time, could identify what food and nonfood interventions are needed and assess the impact of its existing interventions. The assessment team does feel that a monitoring program is essential and the outline for such a system is described below. It should be based on periodic measurement and analysis of environmental information, market prices, plant and animal health as well as crop development data, and socioeconomic information. Human nutritional information should also be collected and analyzed periodically to verify the trends and conclusions drawn from analysis of the other, more readily measured, variables given above. Data on any existing types of food-aid programs (Cantine Populaire, dry distribution, Cantine Scholaire, food for work, etc.) would also be input. The monitoring system should collect information representative of agroecological zones having the potential for significant differences in food aid needs. For the present, the zones used in the RRA are proposed.

Those variables proposed are the ones envisioned at this time as being most directly correlated with the need for food aid and its impact after planned delivery. The proposed system is flexible and factors found irrelevant can be eliminated, and newly identified, significant indicators can be easily added. To assure this flexibility, the information should be input to a Geographic Information System (GIS) where data summaries, tables, related statistics and maps (planimetric and thematic) may be readily generated.

It is also important that this monitoring system be developed in consultation with the other CARE projects (PLUS and RICHES) and the group of cooperating sponsors (USAID, CARE, CRS, ADRA (Adventist Development and Relief Agency) that have been working for the past year on developing a national "Early Warning System" for potential famine or other events which could have a severe, negative impact on the nation's food security if not addressed before the problem has fully developed. Whatever is proposed here should as much as possible be complementary or participatory in nature with the monitoring efforts being developed by others. This includes having GIS systems which will permit the import/export of data between systems (e.g., ATLAS with IDRISI).

### **1. The Selection of Variables**

The variables monitored should be highly correlated with either present or potential household food security. The base data for these periodically measured variables should also be relatively inexpensive to collect from readily available reports or from field measurements made by existing or new CARE staff. The level of sophistication of these measurements should be such that very little training is required to assure reliable data.

The variables fall into the following categories:

- 1) environmental,
- 2) market prices,
- 3) plant and animal health & crop development,
- 4) socioeconomic information,
- 5) human nutritional data and
- 6) food aid programs deliveries.

a. The Environmental Variables

Rainfall is the primary environmental variable proposed for measurement. This should be reported for each of the agroecological zones on a monthly basis. It is suggested that total rainfall, cumulative rainfall within rainy season, and average amount by storm be collected.

b. Market Prices

Market prices at a few important markets or mache of key foods should be collected monthly. This information can be used in conjunction with other variables to predict trends in income and purchasing power.

c. Animal Health and Crop Development

The potential influence on food for consumption and sale resulting from the occurrence or absence of diseases, insect infestations, or any other factors correlated directly with plant and animal yields should be measured. This would likely take the form of a scaler rating and would be somewhat judgmental in nature. For example, 0 might indicate that the present corn crop is experiencing no serious problems, three would indicate a 50% loss in potential yield due to drought, whereas a five rating would indicate the probable loss of the entire crop to an insect attack. A few indicator crops and the five to six major animal types could be easily evaluated.

Crop development would be measured as a function of the amount of biomass or photosynthetic activity taking place over specified garden areas in relation to the time since planting. Two types of information would need to be collected to do this. The approximate planting dates for selected sites within the agroecological zones would be obtained by CARE field staff. The other measures would be obtained from computer assisted calculations using a satellite based remote sensing system having the capability of sensing green, red and near infrared wave-lengths over a couple of weeks. The normalized difference vegetation index (NDVI) has been used extensively computed using red and near infrared wave-length returns from NOAA's satellite- borne advanced very high resolution radiometer has been used in other studies of crop development and is suggested here.

**d. Socioeconomic Information**

The social data would consist of periodic estimates of basic household resources (access to livestock, land, labor, household size and composition<sup>1</sup>. and the level of production and consumption within households. Special attention should be given to a clear understanding of household strategies that must be linked with monitoring indicators. Instead of focusing mainly on the amount of delivery to a community or a regional area or the projected amount consumed by beneficiary, interventions proposed to deal with food security emergencies must focus more on the amount of food getting to the intended beneficiaries. Based on the findings of the socioeconomic data, vulnerable groups within communities and agro-ecological zones will be determined. Another type of information to be collected concerns the relative number of farmers by agro-ecological zone selling or buying labor, and of the wage rates paid for labor (by squad, piecework, etc.). These estimates would be made by zone in a few selected communities having a history of using or providing labor, biannually during the two cropping seasons and when the buying/selling of labor is most common. Indices on types and availability of credit should also be considered.

**e. Human Nutritional Data**

Basic to judging food sufficiency, and determining whether changes in a feeding program are needed, is knowing the physical condition of the population. It is proposed that a group of representative children be selected from type B & C house types in a couple of locations within each agro-ecological zone and that their height for age, weight for height and other meaningful health indicators be recorded periodically. The same children would be remeasured, except for some fixed percentage which would be newly selected to accommodate attrition, and some random replacement which would assure representation of population changes, if the first group selected was not representative of the entire population. Morbidity and access to safe, potable water should also be considered.

---

**<sup>1</sup> Demographic Information at the Household Level**

(To be aggregated with other indicators)

Locality:

Household ID:

HH Member	Sex	Age	Education Level	Status	Migration	Labor		Participation in Feeding Programs
						In Agri.	Outside Agri.	

f. Food Aid Inputs

The amount of food aid delivered should be monitored by community and agro-ecological zone over given time periods. This should be reported by total amount, projected amount consumed per beneficiary and the percentage of the period over which the programmed food aid would meet the beneficiaries' food requirements. Most importantly, the Monitoring Unit must collect reliable data on the amount of food to the targeted beneficiaries, specially at the household level.

## V. CONCLUSIONS

The fragility of livelihood systems in the Northwest and upper Artibonite regions is striking. Digging up roots to serve as raw material for charcoal production is now a widespread practice, as available wood resources for this main fallback activity have already been exhausted.

Animal ownership, traditionally the rural inhabitant's "bank account," has declined as a result of both distress sales and disease-related deaths. Diseases have affected goats and chickens particularly adversely. This means that the poor majority of the region's population cannot keep animals most accessible to them in terms of initial purchase price and maintenance costs.

In a number of zones, especially the dry inland and plateau and mountain areas, a substantial portion of the population has abandoned traditional farming practices due to drought conditions and soil degradation over the last ten years. Thus, households rely on alternative sources of income which, increasingly, cannot sustain household members. In addition to the conditions that undermine charcoal production as a livelihood strategy, other strategies have also proved untenable. For example, artisanal and cash-crop production have faced long-term marketing difficulties, as well as short-term transportation problems due to high fuel costs and poor roads. Thus, a portion of the population continues to search for viable livelihood strategies in an area that offers few options.

Throughout the study area, farming systems are handicapped by the lack of crop diversity and appropriate seed. Available seed is not short-maturing varieties, which would be better suited to drought conditions. Irrigated land is the only type where present cultivation techniques have even a fighting chance to be viable, let alone sustainable. But irrigated land is also where the greatest amount of sharecropping occurs, often in arrangements with absentee landlords which disenfranchise local farmers.

Fishing in the region has also shifted away from the fishermen's locality of residence toward more migratory, deep sea fishing. The fishermen are unable to exploit offshore fishing resources because they do not have the appropriate kind of boats and gear. The coastal ecology has been damaged not only by a series of storms and oil spills that began in 1979, but also by overfishing. Fishermen are generally capital-poor, however, and thus lack access to necessary materials to pursue offshore fishing as a livelihood strategy.

Also affecting livelihood strategies is the increase in transport costs, which have more than tripled over the past two years.

Female-headed households, which account for an increasing portion of the region's households due to male out-migration, are particularly vulnerable to agroecological constraints and socioeconomic disruptions. Conditions of these households often change suddenly upon the death, abandonment, or migration of the woman's spouse or partner. In the case of death, these changes are worsened by high funerary ritual costs. In the case of migration, migrants are often unable or unwilling to send remittances. Female household heads were rarely found to be involved in the main income-generating activities: agriculture and charcoal production. Women are often involved in trading, however, capital necessary to make a go of it in commerce is difficult to obtain.

A number of wild plants that are not consumed in "normal" times are now standard fare in the diets of many households, in order to supplement the available food or ease hunger. Among the wild foods currently consumed by the region's households are *koupye*, cactus flower, *yanm dala* and *yanm chat*,

small crabs, and soursop leaf tea.

Independent of the type of food aid program CARE implements, the team strongly recommends a revised targeting and impact monitoring system to be executed by a Monitoring, Targeting, and Impact Evaluation (MTIE) Unit. In the context of CARE programs, MTIE would conduct baseline surveys so as to identify the most vulnerable households and areas in the Northwest, and monitor contextual and impact indicators. Integral to these responsibilities would be the establishment of criteria for the selection of households and/or communities to be targeted, as well as criteria for their exclusion. This baseline data would form the basis for regular food aid program monitoring and evaluation.

Targeting should prioritize the following:

1. Female-headed households;
2. Vulnerable areas, as defined by agroecological indicators;
3. Vulnerable households, as defined by socioeconomic indicators;
4. Each of these (households or zones) in relation to changes in seasonal vulnerability, as determined by agricultural production cycles, weather patterns, and reflected in both yields and price levels.

Beneficiary levels should be based on the concrete findings of monitoring studies. Large fluctuations in beneficiary numbers over the past few years have taxed CARE's ability to provide solid management support. Such large swings in beneficiary levels would not occur if CARE program decisions were based on more systematic and complete information.

The amount of food aid reaching the Northwest needs to be increased, taking into consideration the modifications of programs discussed below. This recommendation addresses current problems, such as high levels of malnutrition and reduced ration size due to excessive demand on the Cantines.

Given that beneficiary numbers in the Northwest doubled from 300,000 to 600,000 four months ago, as well as shortages of petrol and deterioration of transport infrastructure, bottlenecks in commodity transport have developed. Use of the Port of Gonaïves for direct shipment, presently being considered by CARE and USAID, might substantially contribute to removing transport obstacles.

The team assumes that CARE will maintain its program objective of improving nutrition and health status of children under five years of age, pregnant and lactating women, and other vulnerable groups. If so, the team believes this objective may best be achieved by interventions focused on households.

We strongly recommend that CARE initiate small-scale projects that address the problems of resource and asset depletion, and provide production inputs that help communities adjust to chronic drought conditions. Appropriate interventions were found to vary between agroecological zones, but, generally speaking, they might include seed banks stocking short-maturing varieties, tools-for-work, animal health activities, livestock-raising based on the local gardiennage system, and credit for women traders and fishermen based on the traditional "sold" revolving fund structure. Interventions such as support for the transfer of locally produced foods from areas of surplus to areas of deficit, an approach to which is

currently funded by Canada and implemented by CECI, should be examined for possible replication. The newly created MTIE Unit and the reconstituted Development Unit would play a major role in these interventions.

We recommend that CARE address specific infrastructure problems that impact food security conditions; namely, water, roads, and health services. We feel that public works projects should be explored, however, by proceeding slowly and taking into account past experiences and lessons learned from past efforts of this sort in Haiti.

## Annex 1

### CARE Haiti Historical Background

- 1959 The basic agreement between CARE and the Government of Haiti signed on February 14, 1959.
- 1959-1966 Activities focused around the provision of food to improve the nutritional well-being of Haitian children and mothers. In addition, many small institutions and schools provided with self-help assistance in the form of material and equipment. CARE-Haiti also provided PL-480 food delivery to school canteens and mother-child health centers throughout the country.
- 1966 In cooperation with the government of Haiti, the Haitian-American Community Help Organization (HACHO) formed. CARE and HACHO worked jointly in strengthening rural infrastructure in the northwest region.
- 1970s CARE broadened its programming to include efforts aimed at the health of pre-schoolers, the provision of potable water and income generation through crafts production.
- late '70s HACHO, as an institution, begins to phase-out.
- 1978 By 1978, 12 of Haiti's 30 major watersheds were completely deforested.
- 1980 48% of the urban population and only 8% of the rural population were considered to have access to some kind of improved water supply. The World Bank, EEC, InterAmerican Development Bank, USAID, UNICEF, WHO and GTZ and KFW begin to provide major funding for water supply activities. Projects are implemented through SNEP, POCHEP, contractors or NGOs.
- 1981 CARE's major involvement in the Northwest was through agroforestry programming.
- early 80s USAID project to limit African Swine Fever; all black pigs (the peasants' "bank account") slaughtered.
- 1982 Census done by the Haitian Institute of statistics which concluded that Haiti's population was 5,053,792, with an annual growth rate of 1.8% per year.
- 1986 Overthrow of the Duvalier regime; optimism about the future of Haiti. Many efforts to organize rural committees. Large numbers of "groupements" or farmers groups came out of hiding and arose to promote political organization, literacy, community development, work

- groups, etc. CARE-Haiti begins to shift its program focus to enhance the ability of communities to organize themselves as cohesive, positive forces for development.
- July '87 In what is referred to as the Jean Rabel massacre, over 1000 people were killed as a result of land conflicts between and among community-based groups (CBGs) and various groups of landowners. This had a dampening effect on the life and activities of many CBOs, especially in the Northwest.
- Sept '87 CARE's five-year Resources in Community Health Education Support project begins. This is community-based health project serves an estimated 100,000 people in thirty-four isolated rural communities without access to medical facilities.
- Nov '87 Failed elections and subsequent decline in foreign aid. GNP per capita estimated at \$360, the lowest in Latin America/Caribbean; in mountainous areas, annual income is estimated to not exceed \$100/capita. GDP declined between 1980 and 1987 by an average of 0.5 percent per year.
- late 80s CARE working through community groups and building community organization. The Community Water and Systems Development Project organized local water, fountain and latrine committees. The Food Aid Project began working on a small-scale with Parent-Teacher committees to explore the possibility of eventual phase-over of operations, The Local Resources Development and Farmers Resources Management projects worked with farmers groups. The RICHES project organized health committees through which it works.
- 1988 Sixty-five percent of the country's population dependent on agriculture as its main source of income, even though it has been estimated that the amount of arable land has declined by three percent each year from 1940s to the 1980s.
- early '88 CARE implements 3-year Local Resources Development Project to improve the livelihood of 1,000 farm families in the upper watersheds northwest of PaP. The projects main objective is the introduction of more sustainable and productive farming practices.
- 1988 CARE decides to phase-out of FFW activities to concentrate on school feeding activities. Small number of beneficiaries in program and management intensive nature of FFW were cited as reasons for phase-out.
- 1989 Study conducted by the Child Health Institute identifies diarrhea, respiratory infections and tetanus as the three principal causes of child mortality. Malnutrition is second cause.

- 1990 Ministry of Public Health data reports that the daily per capita calorie supply is estimated at 1,900 out of a requirement of 2,400 calories.
- 1990 Population Figures projected from the 1982 census are (by region): North - 668,100; Artibonite - 868,223; and Northwest - 347,773.
- 1990 AID and World Bank studies estimate wheat shortfall between 250,000 and 335,000 MT per year. Importation of between 24,000 and 34,000 MT of Title II imported through CRS, CARE and ADRA.
- Jan. '90 FARM project begins. Designed to improve the socio-economic well-being of 15,000 farmers in the Northwest Province through the increase in the sustained productivity of the natural resource base. The total population to benefit from PLUS is approximately 81,000 impoverished rural inhabitants.
- July '90 Implementation of the five-year DLOPEP project begins. The project assists 75,000 people in approximately 40 rural communities in the south and Grand-Anse Department in developing improved water supply and sanitation facilities and hygiene education programs.
- mid 90 Because of large funding reductions (less than half of previous year's level), the Food Aid Project beneficiary levels and geographic coverage are reduced from a level of 335,200 at end of 1989 to 135,000 (Primary schools - 118,279; preschools - 6,170; General Relief (32 urban relief centers in Gonaives city) - 5,530 and MCH - 4,038). The project serves pre-school and primary school children a hot lunch through the school canteen program. Community participation elements of the project have made little progress and were suspended as a result of funding cuts. CARE decides to focus on refining logistics, monitoring and management systems of the commodity delivery, storage and end-use checking systems.
- CARE-Haiti writes in its FY90-95 MYOP that because of:
- 1) Limited possibilities geographic integration of food in other sectoral programming,
  - 2) Fluctuations in funding,
  - 3) Development issues cannot be addressed through food aid programming in Haiti, the mission will phase out of the Food Aid project by the end of the MYP period.
- March '90 Avril government overthrown, CARE's warehouse seriously damaged and entire vehicle fleet destroyed. Trouillot appointed provisional president.
- Dec. '90 Aristide declared winner of Haitian presidency.
- Dec '90-  
Jan '91 Political disturbances. Roger Lafont unsuccessful coup attempt. Schools closed and no food deliveries took place.

- Feb. '91 Aristide inaugurated.
- April '91 Food deliveries resume.
- Sept. '91 Military coup d'etat of Jean-Bertrand Aristide.
- Oct. '91 In accordance with U.S. law (Section 513 of the Foreign Appropriations Act of 1991) and policy, the AID program in Haiti was suspended. An OAS-sponsored embargo went into effect shortly thereafter. USAID PL-480 program suspended.
- Nov. '91 Emergency feeding program implemented 11/91 to 1/92. The Gonaives General Relief program targeted up to 20,000 children under five years of age, pregnant and lactating women, the elderly and infirm residing in the poorest neighborhoods around Gonaives (expansion of the General Relief component of the Regular Program). Beneficiaries were served through urban Cantines in the slum areas surrounding Gonaives and through MCH centers.
- Feb. '92 An agreement brokered by the OAS between President Aristide and representatives of the Haitian Parliament was ruled unconstitutional by the de facto Supreme Court of Haiti and failed to receive the ratification of the sitting Haitian Parliament. The OAS-sponsored economic and diplomatic sanctions were maintained and supported by the United States, Canada, France and Venezuela primarily.
- Feb/Mar'92 USAID requests that CARE expand its emergency effort to include 140,000 beneficiaries in PaP. CARE used criteria set forth in the Gonaives General Relief Program as criteria for participation in the program.
- Jun-Aug'92 CARE program targets 304,000 (118,279 in Primary Schools, 6,170 in Pre-Schools, 5,530 for General Relief, 4,038 for MCH centers, 169,938 for Emergency Add-On/General Relief) children 0-12, pregnant and lactating women, the elderly and the chronically ill in Port-au-Prince, the Northwest and Artibonite.
- Aug. '92 In anticipation of a resolution to the political crisis, USAID-Haiti directs Cooperating Sponsors to phase-out emergency programs effective October 1, 1992.
- Oct-Dec '92 CARE plans to reduce beneficiary level from 304,000 to 139,000, and phase-out operations in Port-au-Prince. However, pre-famine conditions prevail in the Northwest and Artibonite. USAID reports that incidence of second and third degree malnutrition among children under five averages 30% in 1992. In the farwestern parts of the NW, third degree malnutrition is estimated at approx. 40%.

USAID authorizes the continued feeding of an additional 50,000 beneficiaries in CARE's regular feeding program through December 31, 1992. CARE's beneficiary level for its Regular Program totals 189,000.

- April '93 As conditions in Northwest and northern Artibonite area continue to deteriorate, USAID extends the end-date of the 50,000 beneficiary increase in CARE's Regular Program to September 30, 1993. Total beneficiary level becomes 189,000.
- May '93 Because of the danger of famine in certain sub-areas in the Northwest and northern Artibonite, due to poor crop yields below average rainfall and the continuing embargo, USAID authorizes CARE to increase beneficiary level by 111,000 to 300,000 by Sept. 30, 1993.
- May '93 Six-year drought continues; wide-scale deforestation and soil-erosion leads to decreased agricultural production; economic embargo reduces the purchasing power of the poor; incidence of third-degree malnutrition in NW high. CARE submits its FY94 MYOP Update and AER, which includes a Regular Feeding Program beneficiary total of 300,000 for FY94-95 (primary schools: 109,361; preschools: 4,066; and General Relief (community managed canteens): 186,573).
- June '93 On 6/24/93, USAID approves FY94 Regular Program, feeding 300,000 beneficiaries.
- June '93 Humanitarian Situation Monitoring Report for May shows a 130-200% greater incidence of Low Birth Weight. USAID pre-school monitoring reports shows the incidence of third degree malnutrition at 14.54%, compared to 12% for the same period
- June '93 The geographic scope and effectiveness of the OAS embargo was broadened through U.N. Security Council Resolution No. 841, which prohibited the delivery of petroleum and military supplies to Haiti.
- July '93 Proposal submitted to USAID for 12-week Emergency Dry-Feeding for distribution to 64,000 needy families (320,000 total beneficiaries).
- July 3 '93 U.N.-sponsored negotiations between President Aristide and Lt. General Raoul Cedras, resulted in an agreement, known as the "Governor's Island Accord", calling for the restoration of a constitutional democratic government in Haiti, which included a series of phased actions on the part of both Aristide and the de facto authorities, culminating in Aristide's return to power in Haiti on October 30th, 1993.
- Aug. '93 Vernon Conaway advises CARE in a letter of 08/05/93 that USAID-Haiti has endorsed via transmittal memo, CARE's FY94 MYOP Update, including 300,000 beneficiary level, and FY94 Section 202(e) request.

- Late Aug        Sanctions lifted, per Governor's Island accord, in anticipation of Aristide's return..
- Sept. '93        Emergency Dry Distribution begins on September 15, 1993, scheduled to reach its target of 64,000 families (320,000 individuals).
- Oct. 12 '93     USS Harlan County, carrying 200 American and Canadian trainers and engineers, is met in Port-au-Prince by small but unruly opposition and is unable to dock in Haiti.
- Oct. 13 '93     Minister of Justice Malary assassinated.
- Oct. 16 '93     UN, OAS and non-essential staff of many embassies and international organizations evacuated.
- Oct/Nov '93    Increase in repression, terrorism and political assassinations as well as General Cedras' failure to retire from his position, resulted in a virtual breakdown of the Accord. Because of concerns for Aristide's safety, October 30 return date for his return is postponed.
- Nov. '93        OAS/UN embargo reinstated, with more stringent monitoring measures in place through US, Canadian and Venezuelan, among others, navies patrolling Haitian waters. This stricter policing of embargo sanctions has had a direct and devastating impact on the supplies and prices of fuel, with negative consequences in all sectors of the economy.
- Oct/Nov '93    Regular Program continues, although only the General Relief and Dry Distribution programs are operating due to delays in school openings. Other problems also persist such as fuel shortages, political instability and inability of private truckers to meet contractual obligations.
- Dec. '93/  
Jan. '94        Despite the emergence of a parallel, "underground", fuel market, the entire country is increasingly paralyzed by dwindling supplies of fuel, restricted means of transportation, severely diminished electrical service, and consequent upward spiralling prices and inflation.

**Current Approved Beneficiary Level**

Category	No. of Beneficiaries
Primary Schools:	109,361
Preschools:	4,066
General Relief:	186,573
Dry Distribution:	320,000
<b>TOTAL</b>	<b>620,000</b>

Approved Title II FY94 Regular Program Commodity Level (both Cantines and School Feeding):

	<u>Metric Tons</u>
Soy-Fortified Bulgur Wheat:	12,570
Vegetable Oil:	1,050
Wheat Soy Blend:	5,365
Peas:	4,612
Total AER level:	23,592

## ANNEX 2

### Overview on Donor Organizations

#### I. UNITED STATES

The United States food assistance policy began in 1954 with the enactment of Public Law 480. U.S. food aid policy has evolved over the years from one with a primary emphasis on shipping agricultural surpluses to one in which enhancing food security in the developing world was cited as U.S. policy. The most recent legislation, the 1990 Agricultural Trade and Development Assistance Act, listed the following as priority uses for donated American agricultural commodities:

- o "To combat world hunger and malnutrition and their causes;
- o to promote broad-based, equitable, and sustainable development, including agricultural development;
- o to expand international trade;
- o to develop and expand export markets for United States agricultural commodities; and
- o to foster and encourage the development of private enterprise and democratic participation in developing countries".

Food aid is dispersed through three Titles of the Agricultural Trade and Development Assistance Act. Title I and Title III are primarily government to government programs. Title I is administered through the United States Department of Agriculture and provides agricultural commodities for sale to developing countries on concessional or credit terms for either dollars or local currency. Title III is administered through the Office of Food for Peace, AID/Washington and provides food for developing countries on a grant basis.

Title II provides food for Emergency and Private Assistance Programs; commodities are channeled on a grant basis to public and private voluntary agencies to:

- o "address famine or other urgent or extraordinary relief requirements;
- o combat malnutrition, especially in children and mothers;
- o carry out activities that attempt to alleviate the causes of hunger, mortality and morbidity;
- o promote economic and community development;
- o promote sound environmental practices; and
- o carry out feeding programs".

The current legislation provides for not less than 9,875,000 MT of agricultural commodities to be made available for distribution under Title II between FY91 and FY95. The Office of Food for Peace, AID/Washington administers commodities under Title II.

Section 416(b) of the 1949 Agricultural Act provided surplus food commodities acquired through the Commodity Credit Corporation's price support program for use in emergency and project food aid. Commodities are administered through the United States Department of Agriculture and can be channeled through recipient governments, PVOs and cooperatives. Although the guidance regulating Section 416 programs is not as explicit as those for Title II programs, because of its nature as a commodity surplus disposal program, the availability and variety of Section 416 commodities is irregular.

### **Haiti**

The United States has a four-part long-term development program for Haiti: 1) Democratization, 2) Economic Growth, 3) Promotion and Development of Human Resources, and 4) Agriculture and Environment. Because of the present political instability in the country, only the third and fourth are currently operational. The Promotion and Development of Human Resources initiative involves health and feeding programs implemented through PVOs. The Jobs Creation program, a labor intensive infrastructure rehabilitation and sanitation improvement effort, was initially designed as part of a development strategy and is now a part of humanitarian assistance efforts.

### Health

USAID-Haiti has five health assistance projects implemented through nine U.S. PVOs, 40 Haitian NGOs and two international organizations (PAHO and UNICEF). Projects include child survival, family planning, basic curative health care services, awareness and prevention of drug abuse, condom distribution and clinical and community-based family planning services.

### Agriculture

The Productive Land Use Systems project (PLUS) is being implemented by CARE, PADF and SECID. The project works in select areas in the Northwest through interventions such as erosion control, improved seeds, bio-intensive gardens, introduction of disease-resistant crop species and improved knowledge of farmers of market conditions.

### Food Aid

Haiti receives 80-100,000 MT of US donated commodities per year. The primary objective of the project is to reach increasing numbers of beneficiaries and not on nutritional status.

## **II. CANADA**

The Canadian International Development Agency (CIDA) food aid budget is dispersed through WFP, bilateral and non-governmental organizations for emergency and development activities. Food aid plays several roles within CIDA's programs:

- o Emergency response facility;
- o Support to multi-lateral efforts toward global food security;

- o An integrated component of bi-lateral country programs; and
- o Contributions to Canadian NGO development and emergency activities.

Food aid's share of the total Canadian ODA budget has fallen over the past couple of years, from a high eight years ago of 16% to the current level of 12%.

### Haiti

CIDA currently provides fish for distribution in CARE's Cantine Populaire project. In addition to its collaboration with CARE, CIDA also provides food for CECI projects in the northeast and southern parts of the country, essential medicines to WHO and PAHO, and funds a water project through UNICEF in the central plateau and northwest.

CECI works through a network of Canadians operating in Haiti, mostly through 600 Canadian missionary groups. Before the coup of 1991, the program worked with non-governmental and religious organizations in the north and northeast regions of the country, implementing grass-roots development projects. Now, CECI's project provides humanitarian assistance, 50% of which is locally-purchased food (through cooperatives and local farmers) and 50% Canadian imported foods.

Although CIDA seeks to gradually fund projects that go beyond emergency/humanitarian assistance and into development, most CIDA projects in Haiti are no longer operational because of Haiti's political climate.

CIDA seeks to eventually implement a four-tiered development strategy: 1) Humanitarian Assistance, 2) "interim phase" projects designed to bridge the gap between emergency situations and development activities, including institutional strengthening of local organizations, 3) bi-lateral programs, including macro-economic development projects, transportation and telecommunications, and 4) support for "good government" processes, including the provision of technical assistance and needed equipment and supplies.

### III. EUROPE

European Economic Community food aid began as a government disposal program to utilize surplus commodities, but EEC is becoming increasingly flexible in programming options for food aid projects, such as:

- 1) monetization
- 2) tri-angular transactions where a commodity may be purchased from a third party (i.e. rice from Asia) and for distribution to a developing country.
- 3) Local commodity purchases.

The docket for foods currently available through the EEC includes grains, such as wheat, oats, maize and sorghum are available as are butter, butter oil and spaghetti.

## **Haiti**

For 1991-1995, the EEC has set aside 120 million ECU aside for activities in Haiti. The allocation is based on a review of a country's population, standard of living and state of poverty. The majority of funds earmarked for Haiti have not been spent.

All project proposals must be reviewed by a committee in Brussels composed of representatives from the twelve EEC member states (the European Development Committee). The committee is responsible for all project financing decisions through a majority vote.

Like USAID, EEC is a donor, not an implementing agency. EEC funds BND's food project and approximately twenty European NGOs working in cooperation with local counterparts. Five million ECU (US\$6 million) was available for small-scale NGO projects such as water system development and latrine construction, but the aid was suspended after the coup d'etat of 1991.

**TABLE 1: Percent of female and male children surveyed in each agriculture/ecological zone.**

	<b>Female</b>	<b>Male</b>
<b>Total</b>	<b>48.3%</b>	<b>51.7%</b>
Dry Coastal	50.0	50.0
Inland Dry	54.9	45.1
Plateau Dry	30.4	69.6
Mount. & Plat Wet	52.0	48.0
Irrigated	47.3	52.7

**TABLE 2: Anthropometry results by agriculture/economic zone: Mean height for age, weight for age, and weight for height Z scores.**

		<b>Z Scores</b>					
		<b>Height for Age</b>		<b>Weight for Age</b>		<b>Weight for Height</b>	
<b>Agr/Eco Zone</b>	<b>OBS</b>	<b>Mean</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>
Dry Coastal	64	-1.34	1.16	-1.17	1.03	-0.47	0.87
Inland Dry	102	-0.99	1.54	-1.00	1.23	-0.46	0.81
Plateau Dry	56	-1.02	1.35	-1.17	1.03	-0.62	0.74
Mount & Plat Wet	75	-1.57	1.17	-1.18	1.05	-0.28	0.87
Irrigated	74	-1.11	1.67	-1.15	1.24	-0.56	0.89

No significant anthropometric differences between Agriculture/Ecological Zones ( $p < 0.05$ ).

TABLE 3: Nutrition and health indicators by agriculture/ecological zone.

	Dry Coastal	Inland Dry	Plateau Dry	Mount & Plat Wet	Irrigated	Total
<b>Nutrition<sup>a, b</sup> (% children)</b>						
<u>Mild, Moderate Malnutrition</u>						
Ht/Age, -3<Z score<-2	17.2%	13.7%	10.7%	30.7%	24.3%	19.4%
Wt/Age, -3<Z score<-2	14.1	17.7	14.3	17.3	16.2	16.2
Wt/Ht, -3<Z score<-2	3.1	2.0	3.6	0.0	8.1	3.2
<u>Severe Malnutrition</u>						
Ht/Age, Z score<-3	7.8%	9.8%	10.7%	8.0%	6.8%	8.6%
Wt/Age, Z score<-3	3.1	3.9	5.4	1.3	9.5	4.6
Wt/Ht, Z score<-3	0.0	0.0	0.0	0.0	0.0	0.0
<u>Type of Malnutrition</u>						
Wasted <sup>c</sup>	3.1%	0.0%	3.6%	0.0%	1.4%	1.3%
Stunted	25.0	21.6	21.4	38.7	24.3	26.1
Wasted and Stunted	0.0	2.0	0.0	0.0	6.8	1.9
Normal	71.2	76.5	75.0	61.3	67.6	70.6
<b>Health (% Children)</b>						
Current Diarrhea	53.1%	54.9%	30.4%	52.0%	47.3%	47.5%
Measles Immunized	14.3	14.9	10.7	10.7	12.3	12.8
Feeding Center Participation	84.4	55.9	84.9	40.0	30.6	58.6
<b>Household Economic Status (% HH)<sup>*</sup></b>						
Wealthy	4.7	10.8	7.3	20.0	18.9	12.7%
Mid-Income	14.1	28.4	20.0	30.7	18.9	23.2
Poor	81.3	60.8	72.7	49.3	62.2	64.1

a Ht/Age = height for age; Wt/Age = weight for age, Wt/Ht = weight for height

b Z score = SD units from the mean of the standard growth from the National Center for Health Statistics, U.S.A

c % Wasted = % children with Wt/Ht < -2 SD & Ht/Age > -2 SD; % Stunted = % children with Wt/Ht > -2 SD & Ht/Age < -2 SD, % Wasted & Stunted = % children with both Wt/Ht & Ht/Age < -2 SD.

\* Overall proportions significantly different, Chi Sq p<0.05.

**TABLE 4: Percent of children mild to moderately malnourished by age category: height for age, weight for age, and weight for height Z scores < -2.**

	<u>Height for age*</u>	<u>Weight for Age</u>	<u>Weight for Height</u>
3.0 - 5.9 mo.	6.7%	6.7%	0.0%
6.0 - 11.9 mo.	14.8	20.4	5.6
12.0 - 23.9 m.	29.1	20.4	5.8
24.0 - 35.9 mo.	25.9	22.2	1.2
36.0 - 47.9 mo.	31.8	18.2	1.5
48.0 - 59.0 mo.	45.1	27.5	2.0

\* Significant difference in height for age by age group (Chi Sq test  $\alpha < 0.05$ ).

**TABLE 5: Risk ratio and confidence intervals (C.I.) of having a Z score of <-2.0 for height for age, weight for age, or weight for height if child had diarrheal infection at the time of assessment, if the child participated in child feeding center program, or if the child had been immunized for measles: all Agriculture/Ecological zones combined (n=371).**

	<u>Height for Age</u>	<u>Weight for Age</u>	<u>Weight for Height</u>
<u>Current Diarrhea</u>			
Risk Ratio	1.06	1.30	12.59
C.I.	0.76 - 1.47	0.88 - 1.94	1.64 - 96.52 *
<u>Feeding Center Participation</u>			
Risk Ratio	1.27	1.13	0.26
C.I.	0.88 - 1.82	0.73 - 1.73	0.07 - 0.98 *
<u>Measles Vaccination</u>			
Risk Ratio	0.98	0.89	0.64
C.I.	0.60 - 1.62	0.45 - 1.77	0.10 - 4.29

\* Significant risk ratio,  $\alpha < 0.05$ .

## ANNEX 4

### Persons Interviewed

December 8

- 1) Norberto Umbros - Pan American Development Fund

December 9

- 2) Chris Conrad - Country Director, CARE-Haiti
- 3) Lance Downing - USAID Program Office
- 4) Gerda Previllon - Nutrition Coordinator, UNICEF
- 5) Alexa Gordello - Anthropologist, IICA
- 6) Glenn Mitchell- Adventist Development and Relief Agency
- 7) Greg Brady - PLUS Project Coordinator, CARE-Haiti

December 10

- 8) Jean-Marie Adrian and Valerie Stetson - Co-Directors, Save the Children Federation
- 9) Gary Philoctete - Assistant Country Director/Program, CARE-Haiti
- 10) Doug Clark - Food Aid Project Coordinator, CARE-Haiti

December 11

- 11) Carl Monde - Program Director, Programme d'Aide Humanitaire (P.A.H.), CECI

December 12

- 12) Ed Golan - Express Trucking
- 13) Jim Kelly - Monitoring and Food Program Manager, Catholic Relief Services

December 13

- 14) Kathy Mangales - HAVA
- 15) Abdul Wuhab - Chief of PADO/USAID
- 16) Lionel Poitevian - Environmental Officer, PADO/USAID
- 17) Dr. Margaritte Gideon - Health Office, USAID
- 18) Brad Barker - Health Officer, CDC
- 19) Terry Hardt - Food for Peace Officer, USAID
- 20) Vernon Conaway - Food Project Officer, USAID
- 21) John Currelly - Monitoring Officer, USAID
- 22) Richard Widmeyer - Director, Radio Metropole

**December 14**

- 23) Susan Igras - RICHES Project Coordinator, CARE-Haiti
- 24) L. Butreau - Agronome, Ministry of Agriculture
- 25) Renaud F.Moulinier - European Economic Community
- 26) Gerda Previllon - Nutrition Coordinator, UNICEF

**December 15**

- 26) Mr. Lamarre - CARE Field Staff
- 27) Field Supervisors from Region 3 and Region 4
- 28) Nicolas Jean Fulda - Field Representative (Gonaives)
- 29) Jean Banass Bernard - Supervisor (Region 4)
- 30) Mr. Dejan - Field Staff (Gonaives)
- 31) Marie-France Racette - Sub-Office Administrator, Gonaives
- 32) Monique - AICF, Gonaives
- 33) Philippes Pelletier - Director, Action International Contra la Faim

**December 17**

- 34) Carol Ann and George Truelove - Mare Rouge

**December 20**

- 36) Sheila O'Rourke - USAID Health Program
- 37) Terry Hardt - Food for Peace Officer, USAID

**ANNEX 5**  
**Rapid food Security Assessment Training Module**

**Workshop Agenda**

**DAY 1:**

08.30-08.45 **Opening Remarks and Participant Introductions**

08.45-09.45 **An Introduction to Food Security**

- a) **Conceptual issues: Nutritional security, Livelihood Security and household food security**
- b) **Production-Consumption Linkages**
- c) **Food Security Analysis**

09.45-10.00 **Break**

10.00-11.00 \* **Group Activity: Description of the food system in two agroecological zones in the northwest.**

11.00-12.00 \* **Plenary Discussions: Presentation of Working Groups's Findings, discussions and conclusions**

12.00-13.00 **Lunch**

13.00-15.00 \* **Coping Strategies: a) Risk-Minimizing Strategies; b) Loss Management Strategies, Changing Strategies -Trends**  
\* **Household Food Security and Environmental Degradation**  
\* **Indicators of Household Food Security**  
\* **Case Study and Presentation of Working Group Findings**

15.00-17.00 \* **Introduction to Rapid Rural Appraisals-General Characteristics:**

**RRA Methodology**  
**Sampling**  
**Unit of Analysis**  
**Relation between RRA and PRA**  
**Data Collection Techniques**

\* **Group Activity: Choose some members to act as key informants as use the RRA methodology to characterize some communities**

\* **Plenary Discussion and Presentation of working groups findings**

**Rapid food Security Assessment  
Training Module (cont.)**

**DAY 2**

- 08.00-09.00 \* Procedures For Conducting Rapid Food Security Assessments**
- a) Objectives
  - b) Composition of Survey Team
  - c) Use of Secondary Data
  - d) Constructing Topical Lists for guiding Interviews
  - e) Interview Guidelines
  - f) Target Area Selection
- 09.00-09.45 \* Group Activity: Develop an interview guide to elicit information from key informants**
- 09.45-10.00 Break**
- 10.00-10.45 \* Planetary Discussion: Presentation of Working Groups Findings**
- 10.45-12.45 \* The Emergency-Development Interface Promoting Sustainable Livelihoods in Areas prone to Droughts; Vulnerability Mapping Contingency Plans**
- 12.45-13.45 Lunch**
- 12.45-14.45 \* Alternative Uses of RRAs:**
- a) Exploratory RRAs
  - b) RRA used For Monitoring and Evaluation
- \* Information Relevant to Intervention Design**
- a) Types of Intervention
    - 1) Development Type Interventions
    - 2) Mitigation Type Interventions
    - 3) Relief Type Interventions
  - b) Institutional Assessment
- 14.45-16.45 \* Group Activity: Planning an RRA Exercise in the Northwest**
- a) RRA Procedure-scheduling
  - b) Developing Topical Guidelines
- 16.45-17.00 \* Closing**

## ANNEX 6

### DATA SOURCES AND BIBLIOGRAPHY

Alvarez, Murray, Socialization for Scarcity: Child Feeding Beliefs and Practices in Haitian Village, 1981.

Allman, James, Patterns of Sexual Union Formation in Rural Haiti, 1978.

American Council of Voluntary Agencies for Foreign Service, Inc., Development Assistance Programs of U.S. Non-Profit Organizations - Haiti, Technical Assistance Clearing House, April, 1981.

Allman, Profil de la Femme Haitienne (education, sante et nutrition, population, ressources en eau et education sanitaire, participation a la prise decision, participation a la vie culturelle), United Nations, May, 1984.

Backer, Elements D'Information Sur Le Mais et Le Sorgho, Roy & Associates, Association des Producteurs Agricoles, August, 1987.

Bassett, Scanlon, Rapid Nutrition Assessment, Northern Departments, Republic of Haiti, Center for Disease Control, September 1990.

Brinkerhoff, Fotzo, et al., Haiti: HACHO Rural Community Development, USAID, November, 1983.

Brown, The Republic of Haiti: A Cultural Summary, Department of Anthropology, Emory University, August 1981.

CARE-Haiti Multi-Year Operational Plan, various years 1990-95, CARE-Haiti.

CARE-Haiti Multi-Year Plan 1990-95, CARE, 1990.

Comment Determiner Le Poids et les Mensurations des Enfants, Evaluation de l'etat nutritionnel des jeunes enfant par voie d'enquetes aupres des menages, United Nations, New York, 1988.

Conrad, Discussion Paper: Food Aid Project Enhancement Strategy, CARE-Haiti, January, 1993.

Deaton, Siaway, et al., Food Aid Strategy for Haiti: Maximizing Development Effectiveness, USAID-Haiti, 1987.

Eicher, Zalla , Improving Agricultural Statistics and Rural Economic Surveys in Haiti, Department of Agricultural Economics, Michigan State University, December, 1978.

Evaluation of Food Assistance Projects, CARE-Haiti, October, 1985.

Farmer Needs Assessment Exploratory Surveys, SECID PLUS Project, June-July, 1993.

Frankenberger, Indicators and Data Collection Methods for Assessing Household Food Security, Office of Arid Land Studies, University of Arizona, July 1992.

Frankenberger, Rapid Food Security Assessment, Office of Foreign Disaster Assistance/University of Arizona, Office of Arid Land Studies, 1992.

Grant, The State of the World's Children, UNICEF, 1989.

Hutchinson, Hall, Baseline Vulnerability Assessment for Haiti, Office of Foreign Disaster Assistance/University of Arizona, Office of Arid Land Studies, 1993.

Jensen, Banskota, Analysis of Agricultural and Food Price Policy in Haiti. An Adaptive Policy Simulation Model. (Draft Report), Center for Agricultural and Rural Development, Iowa State University, November 1989.

Jensen, Johnson, et al., Nutrition in Haiti: Evidence from the Haiti Household Expenditure and Consumption Survey, Center for Agricultural and Rural Development, Iowa State University, June 1989.

Jensen, Johnson, et al., Food Consumption Profile of Haiti: Evidence from the Haiti Household Expenditure and Consumption Survey, Center for Agricultural and Rural Development, Iowa State University, December 1988.

Lerebours, Perry, et al., Preliminary Report Pre-School Children Nutritional Status Northwest Department, Republic of Haiti, Institut Haitien De l'Enfance in cooperation with The Agency for International Development/Haiti, Pan American Health Organization and Center for Disease Control and Prevention, August, 1993.

Maxwell, Frankenberger, Household Food Security: Concepts, Indicators, Measurements, A Technical Review, UNICEF, IFAD, 1992.

Moore, Claude, Assessment of the Social Context of CARE's Cantine Populaires in the Department of l'Artibonite and Nord Ouest, Report by the Consultants, August , 1993.

Prudent, Domercant, et al., Evaluation en Cours du Projet RICHES (Evaluation interne), CARE-Haiti, January, 1991.

Rapport: Enquete Nutritionnelle Dans le Nord-Ouest, CARE/Croix-Rouge, July-August, 1993.

Romanoff, Discussion of a Nutrition and Development Monitoring System for Haiti, October, 1993.

Sanctions in Haiti: Crisis in Humanitarian Action, Harvard School of Public Health, Harvard Center for Population and Development Studies, November, 1993.

Shabatrouz, Shabafrouz, Enquete sur la Participation des Femmes du Developement de la Plaine des Gonaives, Port-au-Prince, November, 1980.

University of Iowa, Appendix: Appendix of Selected Food Items in Haitian Households. Data from the Haiti Household Expenditure and Consumption Survey, June 1989.

USAID Monitoring Report, USAID Monitoring Unit, December 1993.

Van Oyen, Weight Gain Variation in Infants of an Impoverished Community: Bellanse, Haiti, International Journal of Epidemiology, International Epidemiology Association, 1991.

<b>Rapid Food Security Assessment Matrix</b>	<b>Plaine de l'Arbre</b>
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
<b>Agro-Ecological Zone</b>	Inland dry.
<b>Location</b>	Dept. Artibonite, Arondissement Gonaives, Commune Anse Rouge, Section One. Two hours on foot (4 km) from Anse Rouge. Founded a long time ago; very old.
<b>Livelihoods</b>	Farming, salt production.
<b>Population (number, household types)</b>	9,000, constituting 973-1,500 households. Many female-headed households due to migration and deaths of men.
<b>Major Crops Grown, Crop Calendar, and Trends</b>	Sorghum is about the only crop grown due to shortage of rainfall, and even sorghum crops have failed recently. Crops are used almost entirely for home consumption (seeds need to be purchased). Price increases due to the embargo are masking seasonal variations in crop prices. <u>Crop calendar:</u> Sorghum (gros) p Jan, h June; millet p March-April (if rain), h June-Sept. Worst months are Jan.-Aug. Better months are Sept.-Dec., at harvest.
<b>Social Organization (associations, food-sharing networks)</b>	<u>Local organizations:</u> <ul style="list-style-type: none"> <li>• Loose family associations for agricultural purposes.</li> <li>• <i>Kwadi</i> of two kinds. (1) <i>Bout</i> is ten people working together for water and food when there is time pressure. Each person must complete a certain amount of land. (2) <i>Mineur</i> is ten people working for food and water side by side when they have nothing else to do, i.e., when they have time to socialize.</li> </ul> <u>Outside organizations</u> seem to be attracted to the town. CARITAS used to be there. CARE brought food-for-work for catchment construction, and French Cooperation (CCF) looked for sub-surface water but did not find any. <ul style="list-style-type: none"> <li>• Two local organizations have stopped functioning: the Association of Petit Planters and the Conseil Communautaire.</li> </ul>
<b>Division of Labor</b>	
<b>men</b>	Prepare land, plant, and help harvest.
<b>women</b>	Help harvest and winnow.
<b>children</b>	Take care of animals

Rapid Food Security Assessment Matrix	Plaine de l'Arbre
Major Crises, and Coping Strategies	<p><u>Crises:</u></p> <ul style="list-style-type: none"> <li>• 1979-Cyclone followed by drought.</li> <li>• 1991-Embargo.</li> </ul> <p><u>Responses:</u></p> <ul style="list-style-type: none"> <li>• Salt production as laborers.</li> <li>• Purchase animals when funds are available, resell when hard times come.</li> <li>• Cantine Populaire and dry feeding</li> <li>• Charcoal production using roots</li> <li>• Gardiennage</li> <li>• Eating soil and <i>toche</i> seeds.</li> </ul>
Population Trends (out-migration)	<ul style="list-style-type: none"> <li>• Out-migration to the United States. Some return, but most do not.</li> <li>• Out-migration to Gonaives: Both men and women, about 30% of the population.</li> </ul>
Child Care in Mother's Absence ( <i>sevrage</i> (weaning), introduction of solid food)	<p><u>Childcare:</u> In better times, some used to hire childcare. Now, either the mother stays home or neighbors take care of the children.</p> <p><u>Feeding:</u> Breastfeeding is done on demand up to 24 months. Children begin to eat hard food, e.g., banana flour, at two to five months. They are given regular food, mashed, at ten months.</p> <p><u>Health:</u> Common illnesses are diarrhea, colds, fever and bronchitis. Remedies are traditional herbs for diarrhea, and medicines no longer available at the dispensary because of the embargo. The mother knows a baby is sick when its weight drops, when it cries, and when it does not play. She knows it is well when it plays, is fat, and seems happy.</p>
Community Participation in Food Aid	<ul style="list-style-type: none"> <li>• Cantine Populaire and dry distribution.</li> <li>• Dry distribution draws from a large area and supports 4000 families (of 9000). There is one depot for the three-month program that just finished. The four marmites last as little as four days due to large family size and family sharing patterns (ration is shared with needy neighbors). Last distribution was 1/13/94.</li> <li>• Cantine Populaire since April 1991. There were five, but two were closed because of diversion. The three remaining Cantines have 550 beneficiaries registered, but are serving about 1050 people. Food was served six times per week over the last month.</li> <li>• People prefer dry distribution to wet because it allows choice of preparation, because mothers can control the rations, and because dry distribution is more orderly than the Cantine.</li> <li>• People thought that the two Cantines that were shut down should just have been moved within the community.</li> </ul>
Community Problems and Needs	<p><u>Women's perceptions:</u></p> <ul style="list-style-type: none"> <li>• Lack of water</li> <li>• Lack of access to food</li> <li>• Lack of technical assistance to grow better crops</li> <li>• Lack of access to tools.</li> </ul> <p><u>Men's perceptions:</u></p> <ul style="list-style-type: none"> <li>• Lack of water</li> <li>• Bad roads</li> <li>• Poor access to markets.</li> </ul>

Rapid Food Security Assessment Matrix	Plaine de l'Arbre
<b>ACCESS TO INFRASTRUCTURE</b>	
health facilities	Government health clinic, no doctor, used to have auxiliary nurse. Nutrition center (Profamil) open and functioning. Traditional healers: <i>Charlatan, matron, famsaj, and medecin feuille</i> . Ten gdes for consultation at the government clinic; medicines are subsidized. Two gdes for consultation with traditional healers.
schools	1 state school, 8 private primary schools, 1 private secondary school. 2,500 students total. Fees gdes 40, uniforms gdes 60, shoes gdes 25, supplies gdes 500. In general, most children cannot afford the costs involved.
markets	Nearest market in Anse Rouge (4 km), Mondays and Thursdays.
roads/transport	Roads are good in town but bad outside of town. CARE vehicles are the main user of the roads.
water sources	<ul style="list-style-type: none"> <li>• Water piped from nearby mountain to a local fountain every 3-5 days for three hours each day. Water is distributed by the chef de section. There is a spring one hour away which is so crowded that one often has to wait five hours.</li> <li>• USAID Small Development Activities assisted in the construction of water catchment areas for crops.</li> </ul>
government structure	Civil authority is chef de section and CASEC "leader."
<b>ACCESS TO NATURAL RESOURCES</b>	
livestock	Livestock numbers for the group are: 20 cattle (plus 30 in gardiennage); 150 goats; 60 donkeys; 15-20 pigs; and 30 chickens (many have died).
wood	Use wood for cooking, not charcoal. For charcoaling, wood is very scarce and of poor quality. Roots and other plants are now being used.
wild food	Small crabs from holes near the sea, yam chat and yam kodian, seeds from trees like <i>toche</i> and <i>bois blanc</i> , and <i>Terre Blanc</i> . Some wild foods are known to make people ill, but are still consumed.
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
agriculture	None
forestry	None
veterinary	None
health	Pawol Aksyon nutrition center is one month old; it gives children vitamins, minerals and food supplements. Profamil provides health services.
credit	No formal credit Informal credit given to "good risks" for one week's food in market.

Rapid Food Security Assessment Matrix	Plaine de l'Arbre	
	Male-Headed (3 households)	Female-Headed (no households)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Marital Status	2 married, 1 plasage	
Age of HH Head	36-44	
Family Composition (adults, children, other dependents)	2 adults, 6-12 children.	
Religion	2 Catholic, 1 Adventist	
Length of Residence	Long time	
Occupations of HH Members	3 farmers, 2 in salt production, one CASEC.	
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	3 - 10 parcels each. Sizes unknown to 1/6 1/16 <i>iemp</i> (7 carreaux). 0-30 minutes from the house, and owned from 9 years to an indefinite time. Sharecrop, inherit, purchase land.	
Access to Farm Equipment	Hoes, machetes (2), picks (1), axe (1), shovel (1). Tools are shared by families.	
<b>III. LIVELIHOOD STRATEGIES</b>		
<b>Crops</b>		
crops grown	Sorghum only. <i>Kwadi</i> and family labor groups are used in agriculture. People used to hire labor, but this is rare now.	

Rapid Food Security Assessment Matrix	Plaine de l'Arbre	
	Male-Headed (3 households)	Female-Headed (no households)
use of production (marketed, consumed)	No harvest for 0-5 years. One field gave 17 marmites last year. When there are crops, they are consumed, except a reserve for seed (one household reserved half a marmite for seed). For one household, 17 marmites lasted 2.5 months.	
constraints	No rain, insects and worms that attack seeds and young plants, lack of insecticides.	
Access to Livestock (types, numbers, selling patterns, mortality rates)		
goats/sheep	Goats: Three owned, eight died in the past year. Gardiennage used.	
cows	One owned by one HH. None sold. Three died in the past year.	
cochons (pigs)	One owned by each of two HHs. None sold, none died.	
donkeys	Three owned by one HH. None sold, none died.	
chickens	Two chickens owned. Thirty died in the past year (belonging to one HH).	
off-farm employment	<ul style="list-style-type: none"> <li>• Salt production. A peasant works for the owner, receiving 5 gdes/day plus 3 marmites of poor-quality salt for every 100 marmites of salt produced. (At the market, one marmite of salt sells for 0.50 gdes.)</li> <li>• Intermittent road work, which pays 15 gdes/day for two weeks per year.</li> <li>• Making and selling rocks and gravel for house construction every once in a while.</li> </ul>	
remittances	Gifts from wealthier members of the community. Also see "Migration" below.	
firewood or charcoal sales	Very little and poor quality.	
trading	<i>Ti commerce</i> . For example, 15 gdes worth of mangoes may be purchased and sold one at a time.	

Rapid Food Security Assessment Matrix	Plaine de l'Arbre	
	Male-Headed (3 households)	Female-Headed (no households)
<b>IV. COPING STRATEGIES</b>		
Adjustment to Meals (number, amount, diversity)	Reducing from 3 to 1 meal per day.	
Food Substitution	Less protein, more carbohydrates and starches.	
Borrowing	Borrowing from neighbors with early harvests, repaying when the crop comes in.	
Credit	<ul style="list-style-type: none"> <li>• Loans from friends, acquaintances, others (rare). Often high (25%) interest rates.</li> <li>• Weekly credit at the market, without interest.</li> </ul>	
Migration	Go to work in Artibonite, sending money home. Return when the rains come. Both seasonal and permanent migration.	
Wild Foods/Unusual Foods	Increased consumption.	
Food Aid	Increased reliance. In communities where there is a Cantine Populaire but no school feeding, parents sometimes do not send their children to school so that the children can receive food from the Cantine.	
"Gardiennage"	Looking after other people's animals. Not successful lately because of decrease (death) of animals due to lack of food and water.	
Other	<ul style="list-style-type: none"> <li>• Close coordination of revenue generation with food stock. For example, starting charcoal production four days before the sorghum stock is finished.</li> <li>• Selling unborn animals, e.g. goats 30 gdes before term vs. 50-60 gdes at term.</li> <li>• Children eat at neighbors' houses when food is not available at home.</li> <li>• Decrease other non-food expenses, e.g., traditional medicines rather than other medical care, or removing children from school temporarily.</li> </ul>	
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY DISTRIBUTION</b>		
Number of Beneficiaries	4,000 families, of 9,000 in the area, participate in dry distribution.	

Rapid Food Security Assessment Matrix	Plaine de l'Arbre	
	Male-Headed (3 households)	Female-Headed (no households)
Involvement in Program	<p><u>Dry distribution:</u> Often, families receiving food will give a portion to those not registered. Bulgur is combined with other local ingredients in home cooking. People prefer rice, but bulgur is acceptable.</p> <p><u>Cantine Populaire:</u> Children 1-18 participate, eating at the Cantine site rather than bringing the ration home. The Cantine is close (5 minutes) to participants.</p> <p><u>School feeding:</u> 5-6 school feeding centers are in town, but are not operating now. They should open mid-January.</p>	
Regularity	Cantine operated six days a week last month. Dry food was distributed once every two weeks for three months.	
Participants' perception of impact, strengths & weaknesses of food aid programs	<ul style="list-style-type: none"> <li>• The community depends heavily on the three CARE programs: dry distribution, Cantine Populaire, and school feeding.</li> <li>• The programs seem to be well-managed and operating well.</li> <li>• Ration cards make it easy to control distributions. They can take place over three days and distributors do not become so tired.</li> <li>• Families can take the rations home.</li> <li>• Some people sell part of their rations to buy other foods. Four marmites of Igur can buy four marmites of sorghum or one marmite of beans. The market value of bulgur is approximately 10 gdes per marmite.</li> </ul>	

Rapid Food Security Assessment Matrix	Brunette
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
Agro-Ecological Zone	Inland Dry
Location	Dept. Artibonite, Commune Pont-Tamarin, 1a Section. About 8 km from Gonaives. Brunette is located on a dry plain, with alluvial soil, 20-30% low vegetation coverage (Cactus and mesquite), 10-20 m altitude and 400-500 mm annual rainfall. It has been settled longer than the oldest respondent could remember.
Livelihoods	Farming, charcoal production and trade, and agricultural labor.
Population (number, household types)	1,500-2,000, consisting of 200-225 families. 10% female-headed households, 5% of households not presently in the community.
Major Crops Grown, Crop Calendar, and Trends	One main cropping season: May-Sept. Main crops: millet, sorghum, and melon (p May-June, h Aug.-Sept.) and maize (on irrigated land, p May, h Aug.-Sept.). A shortage of rainfall over the past years has reduced crop harvests.
Social Organization (associations, food-sharing networks)	<i>Kwadi</i> , a group organized to sell labor; <i>soldes</i> , women's credit groups; and AICF (Action Internationale Contre la Faim - a French NGO) Committee, which runs a village boutique set up last year with funds from monetized maize.
Division of Labor	
men	Land preparation, plowing, planting, weeding and harvesting.
women	Planting, weeding, harvesting, water and wood collection, and cooking and domestic tasks.
children	Collecting water and wood, harvesting, and taking animals out to pasture.
Major Crises	<ul style="list-style-type: none"> <li>• 1974-Drought and hunger. People cut wood for charcoal production, collected wild foods for consumption.</li> <li>• 1975-Flood.</li> <li>• 1979-Cyclone David and drought. Houses destroyed and some deaths. Some fled temporarily to escape debts owed to the BNDAL (the National Bank for Agricultural Development).</li> <li>• 1983-Large drought.</li> <li>• 1986-Closing of BNDAL, leading to the end of cotton production which had been purchased by BNDAL.</li> <li>• 1991-Closing of IDAI (Institute for Agricultural Development and Investment), resulting in an electricity shortage that halted irrigation on many fields. This problem still has not been resolved.</li> <li>• 1986-present-Chronic drought, seriously reducing production. People have resorted to charcoal trade (a lack of locally available wood has put an end to local charcoal production), consumption of rice-husk residue (normally fed to pigs), cutting and sale of cactus for use as firewood, and consumption of boiled maize with "<i>rapadu</i>", a processed molasses paste, for energy.</li> </ul>

Rapid Food Security Assessment Matrix	Brunette
Other Income Generating Activities	Small-scale animal trade (selling in Gonaives), trading in charcoal and essential items, carpentry, tailoring, natural-medicine healing, and hairdressing.
Child Care in Mother's Absence ( <i>sevra</i> ge (weaning), introduction of supplementary foods)	Grandmother if she lives in the area, otherwise elder sibling. Weaning at 15-24 months. Introduction of supplementary foods at 15 days to six months (plantain, rice porridge).
Community Participation in Food Aid	One Cantine Populaire with 300 beneficiaries was started in 1992, but has not had stocks since last December. There are also an AICF Nutritional Rehabilitation Center, a Cantine Scholaire which has not operated since October, and a dry distribution program in the neighboring locality of Terrace, for which 100 Brunette households were selected. The Cantine Populaire program is not well-liked. People feel that the <i>responsable</i> abuses his position, that children are humiliated and that the elderly are excluded.
Community Problems and Needs	<ul style="list-style-type: none"> <li>• Chronic drought.</li> <li>• Lack of food for children.</li> <li>• Exorbitant prices of essential items.</li> <li>• Too many children for existing resources.</li> </ul>
<b>ACCESS TO INFRASTRUCTURE</b>	
health facilities	One dispensary. Hospitals in Gonaives. Consultations cost 1 gde.
schools	Two private primary schools (one Catholic and one Baptist).
markets	The nearest market is in Gonaives, 8 km away. People also use the market in Bayonnais, 12 km away.
roads/transport	The locality is accessed by a dirt road, which is impassable in the rainy season. Commercial trucks do not pass regularly through the area.
storage	Only a few compounds in the area have food stores.
water sources	Two spring caps and two wells, 10-15 minutes away. Only one of these sources provides safe drinking water.
government structure	Police adjunct.
<b>ACCESS TO NATURAL RESOURCES</b>	
land	Land area cultivated by residents falls into two categories: dry, unirrigated land inside the locality, and rented or sharecropped irrigated land in a neighboring locality. A good deal of the dry land is presently lying fallow; with chronic drought and resultant low production levels, the owners are trying to earn income in other ways.
livestock	Goats, pigs, sheep, pigeons and cattle. Some of the people have no animals, as they have had to sell them or have lost them to disease in the past few years. <i>Gardiennage</i> is important in the locality. Animal prices are highest in December and lowest in September/October.

<b>Rapid Food Security Assessment Matrix</b>	<b>Brunette</b>
wood	Wood is collected 15 minutes to three hours away, depending on whether branches or pieces of hard wood are to be used for cooking.
fish resources	None.
wild food	Guinea fowl, cactus fruit, zombi cucumber, epinard blanc, coupier and bondieubay.
trends	Serious deforestation, due to excess cutting for charcoal production in recent years.
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
agriculture	None.
inputs	Seeds come principally from the market. A short-maturing variety of sorghum is used frequently. No insecticides or fertilizers are used because of high prices relative to perceived effectiveness.
veterinary	A private veterinarian lives one hour away.
health	AICF Nutritional Rehabilitation Center.
credit	No formal credit. Women's credit groups, <i>soldes</i> , organize a rotating fund to help women establish trading activities. There are also intra-family loans and credit from Gonaives for charcoal trade (20% per month).

Rapid Food Security Assessment Matrix	Brunette	
	Male-Headed (4 households)	Female-Headed (2 households)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Household Type	Type A: 1. Type B: 1. Type C: 1.	Type C: 2.
Marital Status	Half married, half plasage.	One married to a migrant, one abandoned.
Age of HH Head	29-85	25-28
Family Composition (adults, children, other dependents)	3 adults, 3.3 children (avg ).	1 adult, 3.5 children (avg.).
Education of HH Members	Adults all illiterate. All school-age children are enrolled.	All adults are illiterate. 40% of school-age children are enrolled.
Religion	Two Catholic, one Baptist.	One Catholic, one Protestant.
Length of Residence	All households interviewed are originally from Brunette.	All households interviewed are originally from Brunette.
Occupations of HH Members	Farmers, charcoal producers and traders, and agricultural laborers.	Depend on family and neighbors' assistance.
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	Renting and ownership. Only the two Type B HHs are presently cultivating, as the Type C HH recently sold its plot to pay the cost of the man's voyage to work on a project in Grand Turk, and the Type A HH has given up cultivation and turned to charcoal production and trade. The two Type B HHs involved in agriculture have no land and three parcels respectively, with a size ranging from 3/8 to 3/4 carreau, 10-50 minutes from the house, and used for 10-50 years.	None.
Access to Farm Equipment	Households active in farming and charcoal production have 1-2 basic tools – hoes and machetes.	None.

Rapid Food Security Assessment Matrix	Brunette	
	Male-Headed (4 households)	Female-Headed (2 households)
<b>III. LIVELIHOOD STRATEGIES</b>		
<b>Crops</b>		
crops grown	Maize, sorghum, millet, eggplant, caya, hot pepper, spinach and watermelon.	None.
use of production (marketed, consumed)	Non-irrigated land: 50-70% consumed, 30-50% sold. Irrigated land: 20% consumed, 80% sold.	
constraints	Chronic drought, insects (cheni and maroca infestation), and lack of money.	
solutions	Irrigation system, pesticides.	
<b>Access to Livestock (types, numbers, selling patterns, mortality rates)</b>		
goats/sheep	Types A and B: Owned 0-2 goats, sold 0-12 goats. The Type C HH recently sold all animals to pay for the voyage to Grand Turk.	Type C: Owned 0-1 goats, sold 0-6 goats, 0-1 goats died.
cows	Owned 0-1.	None.
cochons (pigs)	Owned 0-2. 0-22 died. Type C HH sold 2.	0-1 sold last year.
donkeys	Owned 0-1. Type C HH sold one.	None.
chickens	Owned 0-1.	3-10 died last year.
<b>Other Income-Generating Activities</b>		
off-farm employment		
migration	Short- and long-term migration to cities as petty labor and market traders	Long-term migration to Port-au-Prince to work as a mason.
firewood or charcoal sales		
trading		
<b>IV. COPING STRATEGIES</b>		
Adjustment to Meals (number, amount, diversity)	Two to one or no meals.	Two to one or no meals, and decrease quantity.

<b>Rapid Food Security Assessment Matrix</b>	<b>Brunette</b>	
	<b>Male-Headed (4 households)</b>	<b>Female-Headed (2 households)</b>
Food Substitution	Decrease protein intake.	
Sale of Assets	Animals.	
Borrowing	Two-thirds of households interviewed reported intra-family remittances going from parents to adult children, while one-sixth reported child-to-parent assistance.	Heavy dependence on grandmothers.
Credit	Informal credit from market and women's groups.	Informal credit from women's and market groups.
Migration	Preparing migration to Grand Turk.	Husband working in Port-au-Prince for two years.
Wild Foods/Unusual Foods	Buying, drying okra.	
Food Aid	Yes	Yes
"Gardiennage"	Important in the locality. See "Livestock" above.	
Other	Trading animals, searching for available irrigated land in other localities, decreasing clothing expenses, and searching for more women's work in trading.	Reducing clothes purchases and withdrawing children from school.
<b>V. FOOD CONSUMPTION PATTERNS</b>		
Composition of Diet (staples, protein foods, energy foods)	Maize meal, rice, sorghum, bulgur, bean puree, meat sauce, plantains, oil, potatoes, sweet potatoes, breadfruit, melons, bread, orange and lime juice, and mangoes.	Maize meal and flour, beans, okra, rice, bread, tomatoes and yams.
Sources of Food	Heavy dependence on the market, particularly for protein sources and some cereals. Own production of some vegetables and cereals used for consumption	Cantine and provisions and loans from family and neighbors are important.
Problems of Food Availability (market access, price, income, production shortfall)	Poor harvests, not enough money, and a near doubling of prices in the past year.	Lack of money and high prices.
Food Conservation	Some food storage, mostly in sacks above the rafters of houses. Seeds are stored in calabashes with pesticide.	
Food Processing		

Rapid Food Security Assessment Matrix	Brunette	
	Male-Headed (4 households)	Female-Headed (2 households)
Traditional Food Sharing Practices (including ceremonies and festivals)	Informal sharing among neighbors and relatives, including both cooked food and recently harvested crops.	Same as at left.
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY DISTRIBUTION</b>		
Number of Beneficiaries	Three of the four HHs participate in the Cantine Populaire, and the Type A HH participates in dry distribution.	Both households participate.
Involvement in Program	All pregnant and lactating mothers are eligible for the Cantine Populaire, as are all children living with their parents, regardless of age (23- and 25-year-olds are participating). Most persons return to their own homes to eat. The fourth household, an elderly couple, chooses not to participate because the <i>responsable</i> has humiliated them with verbal abuse when they attended.	
Regularity	Cantine Populaire normally functions three to four times a week, not six. Some problems of water and wood collection.	
Participants' perception of impact, strengths & weaknesses of food aid programs	<ul style="list-style-type: none"> <li>• Helps ease children's hunger.</li> <li>• Quantities too small to have a significant impact on children's health or to ease hunger for the rest of the day.</li> <li>• At times, less well-connected children return from the Cantine empty-handed due to insufficient quantities.</li> <li>• Some intimidation of beneficiaries and corruption by the <i>responsable</i>.</li> </ul>	Cantine is important, as it makes a noon meal available for children who might not have any on certain days. The Cantine food is particularly appreciated during the most severe crisis periods.
Recommendations for improvement	<ul style="list-style-type: none"> <li>• Need a better managed program, "given the needs of the zone."</li> <li>• Need more Cantines and a regular supply of food.</li> <li>• Dry distribution is a solution to Cantines' problems of irregularity.</li> </ul>	<ul style="list-style-type: none"> <li>• Larger ration sizes per beneficiary.</li> <li>• With dry distribution, the regularity of the feeding would improve, since food supply would not be cut on days with rain, etc.</li> </ul>

<b>Rapid Food Security Assessment Matrix</b>	<b>Mapou Rollin</b>
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
<b>Agro-Ecological Zone</b>	Inland dry
<b>Location</b>	Dept. Artibonite, Arrondissement Gonaives, Commune Ennery, 2nd Section Passe Reine. Located about 12 km from the Communal seat and 16 km from Gonaives, north on National Highway #1. Mapou Rollin consists of a small, fertile, irrigated river bottom and a large (probably more than 1,000 carreaux), very dry inland plain. The village (twinned to another, Bois Blanc) is on the dry plain and has been there longer than the oldest respondent could remember (84 years).
<b>Livelihoods</b>	Farming and charcoal production.
<b>Population (number, household types)</b>	Two villages (Mapou Rollin and Bois Blanc): 1,700 people, 150-170 families. Very few female-headed households reported. This is said to be due to farming and family responsibilities being too much for one person. Women will usually either attach themselves to another male or sell and leave. Few households migrate. Some have sold land to help finance a "boat person," but these attempts usually fail, resulting in increased misery for the remaining family.
<b>Major Crops Grown, Crop Calendar, and Trends</b>	Year-round planting in small irrigated river bottom, squash and plantain harvested from May to July. The plain has been very dry lately; the rains have been deteriorating over the years. One crop per year of these crops: Maize (p May, h Sept.); beans (p Dec., h Feb.); sorghum (chandelle) (p May, h Aug.); and sorghum (gros) (p June, h Jan.).
<b>Social Organization (associations, food-sharing networks)</b>	None.
<b>Major Crises, and Coping Strategies</b>	<ul style="list-style-type: none"> <li>• Constant drought. The area has lots of springs and good quality flat land, but the springs are not capped. The people have neither the means nor the technical assistance to irrigate with spring water.</li> <li>• 1991-Embargo. Commercial activities severely reduced. For instance, a taxi to Gonaives (12 km) rose from 4 gdes to 20 gdes. Financing of any type not available. Complaints that merchants are not accepting ripped or torn currency due to lack of trust that the Central Bank will replace them when presented for destruction. Other examples of prices before/after embargo, all in gdes: Large marmite of sorghum, 2/9; young cattle, 400/1,500; piglets 150-250/350; goats 35-40/350; chickens 7-8/30-35.</li> <li>• 1992-1993 (June and July) - Flood in lowland and drought in uplands. Flood was probably caused by deforestation upstream, rendering the area susceptible to recurrences.</li> </ul>
<b>Other Income Generating Activities</b>	<ul style="list-style-type: none"> <li>• Sell one animal or borrow against livestock to rent land.</li> <li>• Pray.</li> <li>• Men migrate for work, but many return unsuccessful.</li> <li>• Steal and sell stock.</li> <li>• Men produce charcoal, although almost no trees are available.</li> <li>• Fruit trees in the irrigated valley are not cut.</li> <li>• Women engage in very small-scale commercial activities.</li> <li>• Possible increase in drinking and mental illness.</li> <li>• Sell part of mango crop in advance.</li> </ul>

<b>Rapid Food Security Assessment Matrix</b>	<b>Mapou Rollin</b>
Child Care in Mother's Absence ( <i>sevrage</i> (weaning), introduction of solid food)	Father and neighbors. Breastfeeding on demand, continuing for 18 months. Introduce special weaning foods on the third day for two months, such as rice or plantain flour. They grind what the family eats for the child.
Community Participation in Food Aid	<ul style="list-style-type: none"> <li>• Cantine Populaire on the edge of Mapou Rollin, 2.5 months of operation.</li> <li>• Little participation due to overcrowding. Authorized beneficiary level is 300, but 400 to 800 actually eat at the Cantine.</li> <li>• Trucks come once a month and they have sufficient stocks until the end of January (15 days).</li> <li>• CP is perceived as good but requires more physical control to eliminate pushing and fighting.</li> <li>• Would like a dry distribution as well, because it would allow people to take the food home and prepare it as they like.</li> </ul>
Community Problems and Needs	<ul style="list-style-type: none"> <li>• Malnutrition.</li> <li>• Drought and lack of irrigation.</li> <li>• Health.</li> <li>• Lack of education.</li> </ul>
<b>ACCESS TO INFRASTRUCTURE</b>	
health facilities	There are no health facilities in Mapou Rollin. The nearest facilities are in Gonaives (16 km).
schools	One state school. Cost unknown.
markets	Nearest markets are in Passe Reine (Mon, Thu) 13 min. away, Ennery (Wed. Sat) 12 km away (gde 20 return), and Poteau (Mon, Fri) 60 minutes away.
roads/transport	Close to National Highway # 1, so access is excellent, trucks pass on a regular basis.
storage	Food stock stored (while they last) in granaries (few exist), seeds stored in gourds (hold approx. 10 pounds) plugged with a corn cob. The seed (actually just saved food-quality grain) was not treated but seemed to be in good shape after several months of storage.
water sources	Several springs but no way to divert water for irrigation.
<b>ACCESS TO NATURAL RESOURCES</b>	
land	Land appears to mostly owned by the user, with some sharecropped and some rented. Most farmers have worked their plots for two years or more.
livestock	Cattle 150-400, pigs 200+, goats 500, chickens 1,000.
wood	Charcoal making does take place, but the wood is far away in the mountains. No easy access. Not available in commercial quantities or quality.

<b>Rapid Food Security Assessment Matrix</b>	<b>Mapou Rollin</b>
fish resources	None
wild food	No wild game, wild foods include green mango, tamarind (eaten with or without clay), almonds, and guava.
trends	Increasing drought. Embargo has had a much greater impact than have the seasonal price fluctuations.
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
agriculture	None
forestry	None
veterinary	None since embargo.
health	Not in the community.
credit	Limited. Three-day produce credit available to allow resale No interest.

Rapid Food Security Assessment Matrix	Mapou Rollin	
	Male-Headed (5 households)	Female-Headed (1 households)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Household Type		
Marital Status	Married = 4	Widow
Age of HH Head	29 - 48	
Family Composition (adults, children, other dependents)	Adults = 2 Children = 2-8	Adult = 1 Children = 5
Education of HH Members	None to 3eme, plus one with some night-school (reading).	CEP.
Religion	Voudou = 1, Protestant = 2	
Length of Residence	All their lives.	All their lives.
Occupations of HH Members	Charcoal production and farming	
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	0-6 parcels, 2-32 carreaux. 0-3 km from house Used more than two years. Sharecroppers (2 fields), owners (8 fields), rented (1 field). Own labor, and shared between HHs. Also combite labor (food and money, reciprocated).	None.
Access to Farm Equipment	Picks, hoes, machetes	
<b>III. LIVELIHOOD STRATEGIES</b>		
Crops		
crops grown	Sorghum/millet (5 fields), Congo Peas (1), maize (5), Sweet potatoes (1), Beans (2), Plantain (1).	

Rapid Food Security Assessment Matrix	Mapou Rollin	
	Male-Headed (5 households)	Female-Headed (1 households)
constraints	<ul style="list-style-type: none"> <li>• Water: No irrigation and no way to tap springs for irrigation. Land is good.</li> <li>• Lack of money to buy agricultural inputs</li> <li>• Lack of food during agricultural season (causing a lack of energy for work)</li> <li>• Lack of technical assistance for improved production.</li> </ul>	
Access to Livestock (types, numbers, selling patterns, mortality rates)		
goats/sheep	Own 0-3	None
cows	Own 1 (1 HH)	None
cochons (pigs)	None	None
donkeys	Own 1 (1 HH)	None
chickens	0-3	None
Other Income-Generating Activities		
off-farm employment	Selling day labor in Artibonite (1 HH) until the rain comes and allows planting at home. One HH migrates to Gonaives. Other males go to the Dominican Republic, often permanently.	Make clothes for other villagers.
migration	Gonaives, Dominican Republic	
remittances	None	
firewood or charcoal sales	Charcoal production (n=1)	
trading	Small, short-term loans from community members. Use money to buy bananas and resell them over three days.	

Rapid Food Security Assessment Matrix	Mapou Rollin	
	Male-Headed (5 households)	Female-Headed (1 households)
<b>IV. COPING STRATEGIES</b>		
Adjustment to Meals (number, amount, diversity)	2 to 1 meal per day, sometimes 0 meals per day	Same as at left
Food Substitution	No longer eat rice, meat, milk, eggs, and sometimes not even beans with the sorghum. Eat more flour, send children to CP (unsuccessfully, as they are not welcome), and old people go to CP too during hard times.	
Sale of Assets	Sell animals only as a last resort.	
Borrowing	Short-term credit from small merchants for good for resale. Use proceeds to buy food.	
Credit	Loans from family and neighbors, short-term food loans from small merchants. Credit from pawning jewelry and even agricultural tools (interest 10-20%/month).	
Migration	Gonaives, Dominican Republic, and other regions.	
Wild Foods/Unusual Foods	Eat foods normally fed to pigs (e.g. gabrielle shoots, kolezo leaves, berien leaves, aiguille herb, tamarind, guava, almonds, green mango, clay.	
Food Aid	Not registered and not welcome at CP in neighboring community.	
"Gardiennage"	Yes (1 HH)	
Other	<ul style="list-style-type: none"> <li>• Decrease non-food expenditures. Reduce medical expenses by using herbal and traditional medicines such as water and guava leaves for diarrhea instead of ORS, and births at home instead of in hospitals/clinics.</li> <li>• Increase length of time breastfeeding beyond the regular 18 months.</li> <li>• Food sharing with neighbors, extended family (up to 34 people from one pot). Children do not go to other houses for food, however.</li> </ul>	
<b>V. FOOD CONSUMPTION PATTERNS</b>		
Composition of Diet (staples, protein foods, energy foods)	Reduced number, variety, and quality of foodstuffs. Food distributed first to adult males, then grandmother, then children, and last to mother.	
Sources of Food	Mostly home consumption, very little variation, very little sharing or borrowing between households.	

<b>Rapid Food Security Assessment Matrix</b>	<b>Mapou Rollin</b>	
	<b>Male-Headed (5 households)</b>	<b>Female-Headed (1 households)</b>
<b>Problems of Food Availability (market access, price, income, production shortfall)</b>	<ul style="list-style-type: none"> <li>• Lack of money</li> <li>• High prices</li> <li>• Low production levels</li> <li>• Little charcoal for cooking or selling</li> <li>• Insufficient feeding centers</li> <li>• Drought (if they had enough rainfall, the embargo would not affect them).</li> </ul>	
<b>Traditional Food Sharing Practices (including ceremonies and festivals)</b>	Very little.	
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY DISTRIBUTION</b>		
<b>Number of Beneficiaries</b>	N/A	
<b>Involvement in Program</b>	Cantine is in neighboring village, very little participation, cantine is too far, cantine is too crowded, people are not registered, people pushing, element of shame attached to participation in CP. Felt that the Cantine was designed for the other block, not for them.	
<b>Regularity</b>	Not regular.	
<b>Recommendations for improvement</b>	<ul style="list-style-type: none"> <li>• Increase the number of cantines</li> <li>• Divide the resources into several areas</li> <li>• Time meals more appropriately.</li> </ul>	

Rapid Food Security Assessment Matrix	Baie de Henne
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
Agro-Ecological Zone	Coastal Dry
Location	Dept: Nord-Ouest; Arrondissement: Mole St. Nicholas; Commune: Baie de Henne. 41 km from Mole St Nicholas. Baie de Henne is located on the coast, with alluvium, sandy soil, and 90% vegetation coverage in irrigated areas and none in non-irrigated areas. Annual rainfall est. 400 mm. The commune was founded in 1889; some settlement existed before then.
Population (number, household types)	2,500, with 420-500 households. Female-headed households est. 25%; the men's group reported that the number of female-headed households is quite high because many women have children with men who are not really their "husbands." About 1-2% of households are currently not present in the community.
Major Crops Grown, Crop Calendar, and Trends	Main cropping seasons: April-May and October-December. Main crops: maize (p April-May, h July-Aug.); millet and sorghum (p July-August, h Oct.-Nov.); green beans and lima beans (p Dec., h March-April); congo beans (p Dec.-Jan., h Dec.-Jan.); and plantain and banana (p June, Aug., Dec., h June, Aug., Dec.). A shortage of rainfall in recent years has reduced the crops harvested.
Social Organization (associations, food-sharing networks)	Agricultural cooperative, women's group for road rehabilitation (organized by the mayor), and <i>kwadi</i> , a group organized to sell and trade members' labor (locally 3 gdes/day women, 7 gdes/day men; in L'Estere Dere 4 gdes/day women, 6 gdes/day men).
<b>Division of Labor</b>	
men	Fishing, agricultural tasks, and wood collection (since markets are far away and women are responsible for the trading activities, men must take on some of the women's tasks).
women	Planting, land preparation, harvest, domestic tasks, marketing. Can sell labor for agriculture (0.50 - 1 gdes per casier d'irrigation) and charcoal production (3 gdes/day for women, 7 gdes/day for men).
children	Collect water and wood, take animals out to feed.
Major Crises	<ul style="list-style-type: none"> <li>• 1954-Cyclone Hazel. Destroyed houses, killed animals. Population cut wood for charcoal production to earn extra income.</li> <li>• 1963-Cyclone Flora. Destroyed houses, killed all persons in a passenger boat en route to Anse Rouge.</li> <li>• 1979-Cyclone David. Destroyed houses, damaged coastline and coral reefs, heavily hurt coastal fishing. Fishing has since shifted to the deep sea for migratory fish (main seasons July-Aug. for Karang and Oct.-Nov. for Poisson Negre).</li> <li>• 1981-African Swine Slaughter. Carried out to prevent spread of epidemic, but repopulation project ineffective. Particularly important to this locality due to traditional pig trade between Northwest and main cities Gonaives/Port-au-Prince.</li> <li>• 1990-Chronic Drought. Caused decrease in irrigated land area, and change from plantain to maize and peas.</li> </ul>

<b>Rapid Food Security Assessment Matrix</b>	<b>Baie de Henne</b>
<b>ACCESS TO INFRASTRUCTURE</b>	
health facilities	One dispensary with one doctor and one aide. However, due to frequent staff absences, dispensary frequently does not function.
schools	Four primary schools (one public and three Baptist). Costs: 843-980 gdes/year.
markets	Market access somewhat problematic. Open air sales in Baie de Henne; next closest markets are Anse Rouge, Gonaives, Bombard and Mar Rouge. Over three hours travel to each; Anse Rouge and Gonaives normally accessed by sea.
roads/transport	Regular transport boats between Port-au-Prince, Gonaives, Anse Rouge, St. Mark and Baie de Henne. Rocky, dirt road, nearly impassable during rain. No regular commercial truck traffic; before the gas shortages, trucks would come once a week.
storage	Cereals are stored above rafters in houses. No systems for pulse storage, which is why all production is sold.
water sources	River and seven wells, 10-15 minutes away, but no safe drinking water. There is a system for pumped potable water, but the pump is broken, and when it does work the water has a high salinity.
government structure	Military post with a sergeant, major, corporal and adjuncts; police sub-post; two judges; chef de section; and mayor.
<b>ACCESS TO NATURAL RESOURCES</b>	
land	Approximately 77 carreaux are cultivated through a production cooperative which operates on irrigated, state land. There is no arable land for the locality outside this area. Membership in the cooperative is limited to the wealthier segments of the population. Also, no land is currently available in the irrigated commune area for new farmers -- it would be necessary for someone to die or to give up their membership for another person to obtain a plot.
livestock	Goats, burros, sheep, pigs, cattle and chickens. Diseases and droughts have caused many deaths recently, and high prices have prevented replacement.
wood	Cactus and "petit bois" collected for cooking. Hard wood purchased by wealthier households; hard wood collection time est. six hours.
fish resources	Small fishing boats, traps, nets. Shortage of traps last year due to fall in trade with traditional trap producers in L'Estere Dere. Types of fish: Karang, Poisson Negre, lobster. Price est. transport boat \$24,000; "canot" or small fishing boat \$500; traps \$10-15.
wild food	Lianpanier, sweet cucumber, epinard blanc, coupier, laman, olives.
trends	Erosion and destruction of coral reefs by cyclones. Reduction of irrigated land due to drought. Deforestation serious, due to excess cutting for charcoal production in recent years.
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
agriculture	Government Agriculture employee manages the Cooperative. Previously CARE agro-forestry project.

<b>Rapid Food Security Assessment Matrix</b>	<b>Baie de Henne</b>
inputs	Cereal and pulse seeds come mainly from the market in Bombard. No fertilizers used, just manure, but quantity insufficient. Insecticide often not used due to high cost.
veterinary	Problematic. Closest veterinarian lives in Bombard and rarely comes to the area.
health	None.
credit	No formal credit. Women's credit groups, "soldes," organize a rotating fund to help women establish trading activities.
Other Income Generating Activities	Fishing, charcoal production, charcoal and merchandise transport and trade, salt production, agricultural work.
Child Care in Mother's Absence ("sevraje" (weaning), introduction of solid food)	Neighbors, grandparents, fathers and siblings. Weaning at 12-24 months (12 months for women who needed to leave for trading). Introduction of solid foods 90 days (plantain, WSB, grilled wheat flour).
Community Participation in Food Aid	Eleven Cantines Populaires (CP), three Cantines Scholaires, and one dry distribution program. CPs have been functioning since mid-1992. There are no member lists; essentially, everyone in the community was reported to be a participant in the Cantines. Cantines are quite clearly controlled by the better-off. The Cantines "responsables" (managers) are said frequently to humiliate participants, sometimes to fail to prepare food for over a week at a time, and at times to refuse to serve more than one member per household. In addition, the Canadian herring is rarely served in the Cantine. Dry distribution was preferred by most of the population, except the Cantine responsables, as a way to avoid regular humiliation.
Community Problems and Needs	<ul style="list-style-type: none"> <li>• Lack of potable water</li> <li>• Lack of market access</li> <li>• Road conditions</li> <li>• Health care for serious conditions</li> <li>• Lack of electricity (problem for fish conservation)</li> <li>• Drought and lack of water for irrigation</li> <li>• Need to rehabilitate canal structures</li> <li>• Sanitation infrastructure.</li> </ul>

Rapid Food Security Assessment Matrix	Baie de Henne	
	Male-Headed (6 households)	Female-Headed (1 household)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Household Type	Type A: 2. Type B: 2. Type C: 2.	Type C: 1.
Marital Status	Type A, Type B: all married. Type C: plasage.	Abandoned from plasage.
Age of HH Head	28-46	28
Family Composition (adults, children, other dependents)	3 adults, 4.5 children (avg.). No other dependents.	1 adult, 4 children.
Education of HH Members	Adult literacy 50% overall, 25% in Type C HHs. 63% of school-age children enrolled; those not enrolled are children of poor relatives living with a wealthier family member.	Adult illiterate. Only school-age child is enrolled.
Religion	4 Catholic, 2 Baptist.	Baptist.
Length of Residence	Types A and B: All were born in Baie de Henne. Type C: 5 months - 8 years.	Born in Baie de Henne.
Occupations of HH Members	Type A: Mayor, farmer, fisher, transport boat owner, charcoal and essential items traders (medium-scale). Type B: Farmer, fisher, charcoal producer and trader, and merchandise trader (small-scale). Type C: Fisher, cola seller, boat laborer, and charcoal producer.	Domestic servant.
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	Cooperative land, inherited. Type A: 1 parcel each, 1/4 and 1/2 carreaux. 10-15 minutes away. Used for 8 years. Type B: 7 parcels, 7 carreaux. 3 hours away. Used for 6 years. Type C: None.	None.
Access to Farm Equipment	Types A and B: Own 1-2 hoes and machetes. Type C: rent or borrow tools to cut charcoal.	

Rapid Food Security Assessment Matrix	Baie de Henne	
	Male-Headed (6 households)	Female-Headed (1 household)
<b>III. LIVELIHOOD STRATEGIES</b>		
<b>Crops</b>		
crops grown	Maize, peas, plantain, sugar cane.	
use of production (marketed, consumed)	Type A: 30 marm. peas and 40 marm. maize. All consumed for one HH, all sold for the other (normally 20% seed, 75% sold, 5% consumed – doesn't eat much maize). Type B: 5 marm. peas, 4 marm. maize. All consumed, but shares a great deal with relatives and neighbors.	
constraints	Type A: Lack of water for irrigation, lack of functioning irrigation canals, decrease in soil fertility, insufficient manure for fertilizer, high prices and irregular supply of pesticide. Type B: Drought, animal diseases, access to pasture.	
solutions	Type A: Request the irrigation system director to divert less water above the locality (i.e., near Petite Riviere).	
<b>Access to Livestock (types, numbers, selling patterns, mortality rates)</b>		
goats/sheep	Type A: Owned 12-300 goats, 0-12 sheep; sold 0-48 goats; 3-4 goats died. Type B: 3-25 goats died. Type C: Sold 0-3 goats; 0-4 goats died.	
cows	Type A: Owned 0-1, sold 0-8. Types B and C: None.	
cochons (pigs)	Type A: Owned 0-1, 0-4 died. Types B and C: Owned 0-1.	
donkeys	Type A: Owned 1-3, 0-1 died. Types B and C: Owned 0-3.	
chickens	Type A: Owned 2-30, 15-18 died. Type B: Owned none, 5-6 died. Type C: Owned none, 0-5 died.	
<b>Other Income-Generating Activities</b>		
remittances	Type B: Receives money from brother in New York.	
firewood or charcoal sales		
<b>IV. COPING STRATEGIES</b>		

Rapid Food Security Assessment Matrix	Baie de Henne	
	Male-Headed (6 households)	Female-Headed (1 household)
Adjustment to Meals (number, amount, diversity)	Type B: Reduced meals from two to one per day. Type C: Reduced meals from two to one to none per day, and reduced quantity of food purchased and consumed.	
Food Substitution	Eat more wild foods, and eat <i>rapadu</i> (processed molasses paste) for energy.	Eats at the Cantine Populaire.
Borrowing	Type B: Receives money and goods from parents, both HHs eat more meals at parents'.	Receives gifts from pastor and others in the locality.
Credit	Type B: Loans at 20%/month. Type C: Purchases trade items on credit in Gonaives (no interest).	
Food Aid	Type A: CP and dry distribution. Type B: Dry distribution. Type C: 1 HH dry and wet distribution, other wet distribution only.	Cantine Populaire.
Other	Type B: Decrease clothing and housewares expenditures. Wife goes to Gonaives to buy essential items to resell; husband collects firewood for charcoal production. Type C: Neighbors share food; charcoal production; selling fish before catching them.	Has gone three times to Guantanamo, as knows will receive some food there.
<b>V. FOOD CONSUMPTION PATTERNS</b>		
Composition of Diet (staples, protein foods, energy foods)	Types A and B: Bread, coffee, bulgur, WSB with sugar, flour, ice, cornmeal, sorghum, beans, herring, other local fish, bouillon, meat, breadfruit, plantain. Type C: Bread, coffee, sugar, cornmeal, fish, bulgur, hard candy, flour, plantain, banana.	WSB, cornmeal, Cantine meals, mangoes, cooked banana, ripe banana
Sources of Food	Types A and B: Cantine, dry feeding, market, gift from parents for two HHs. For the other two HHs, the market provides 65-100% of food supply, and own production the rest. Type C: Cantine, dry feeding, market.	Cantine, market (with money given as a gift by neighbors).
Problems of Food Availability (market access, price, income, production shortfall)	Animal illnesses, lack of income sources, lack of availability of certain products, high prices, lack of wood supply, lack of fishing traps, difficulty of fishing and hence of eating during storms and irregular wind patterns, difficult access to land, and lack of arable land.	Lack of money for food.
Traditional Food Sharing Practices (including ceremonies and festivals)	For all HH types, exchange among neighbors, sharing of fish and plantain stalks among neighbors (economies of scale realized more than in other commodities, i.e., even purchase in bulk).	
Food Preferences	Rice, plantain, bean sauce, meat.	

Rapid Food Security Assessment Matrix	Baie de Henne	
	Male-Headed (6 households)	Female-Headed (1 household)
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY DISTRIBUTION</b>		
Number of Beneficiaries	2 HHs participate in dry distribution.	Cantine Populaire but not dry distribution.
Involvement in Program	All can participate, including persons passing through the locality. However, actual participants vary from HH to HH, ranging from just the children to the whole HH except the father to the whole HH. In one Cantine, distribution is limited on some days to one member per HH.	
Regularity	Regularity of functioning varies from Cantine to Cantine.	
Participants' perception of strengths & weaknesses of food aid programs	<ul style="list-style-type: none"> <li>• Help save children's lives.</li> <li>• Diarrhea from wheat intolerance.</li> <li>• Cantines are not placed in the poorer sections of the community, and thus the poor are humiliated when they go into the other <i>quartiers</i> (neighborhoods).</li> <li>• Herring is rarely served.</li> <li>• Children are injured in line.</li> <li>• The management is often abusive.</li> </ul>	
Recommendations for improvement	<ul style="list-style-type: none"> <li>• Dry distribution is preferred, since it is seen as better-managed and the whole family can eat together in the house.</li> <li>• Place some Cantines in poorer <i>quartiers</i> to avoid humiliation and class antagonism.</li> <li>• Change some Cantines' management.</li> </ul>	

Rapid Food Security Assessment Matrix	Baie de Moustiques
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
Agro-Ecological Zone	Coastal dry
Livelihoods	Agriculture, livestock, fishing.
Population (number, household types)	Around 5,000; 300 female-headed households.
Major Crops Grown, Crop Calendar, and Trends	Two seasons. First season Sept. - March. Main crops: beans, petit mil, maize. Second season April - Aug. Main crop: maize. Dead season (soudure) Nov. - Jan.
Social Organization (associations, food-sharing networks)	Water management committee, Baie Moustique Development Association, Emergency Committee, Fishermen's Association ( <i>tontine</i> ).
Major Crises, and Coping Strategies	<ul style="list-style-type: none"> <li>• 1954-Cyclone Azele</li> <li>• 1963-Cyclone Flora</li> <li>• 1979-Cyclone David</li> <li>• 1980-Allen; since that year there has been chronic drought.</li> <li>• 1988-Gilbert</li> <li>• Sudden large flood at night.</li> </ul>
Other Income Generating Activities	Petty commerce, livestock, "day labor."
Community Participation in Food Aid	Cantines Populaires. No dry distribution.
Community Problems and Needs	<p><u>Short-term</u>: Food and health.</p> <p><u>Mid-term</u>: Lack of capital for commerce and livestock.</p> <p><u>Long-term</u>: Education, irrigation, school construction, credit.</p> <p><u>Complaint</u> about cash-for-work program: Had to wait until the end of the month to be paid.</p>
<b>ACCESS TO INFRASTRUCTURE</b>	
health facilities	A public health center with an "auxilliare" but with little medicine. 1 gourde per consultation.
schools	3 primary schools: 1 public, 2 private (Protestant). Cost. \$10/year public, \$12/year private Cost of school supplies: \$60-70 per child.

<b>Rapid Food Security Assessment Matrix</b>	<b>Baie de Moustiques</b>
markets	No local market. Nearest are in Post Metier (2-hour walk), La Koma (3.5-hour walk), Beaux-Champs (more than 3-hour walk) and Port de Paix (biggest in the area).
roads/transport	Difficult, especially during the rainy season.
storage	None
water sources	24-hour water piped in since September 1993.
<b>ACCESS TO NATURAL RESOURCES</b>	
land	Private ownership, much sharecropping, no irrigated land, most fields in dry areas.
livestock	Sheep, goats, cattle, donkeys, horses, and chickens.
wood	Since 1950's, area very arid and deforested. No wood sources left, not even cactus roots. Nearest wood source is three days away.
fish resources	Poor in-shore fishing. Nearest good fishing grounds at least 3-6 hours by sail. No access to sailboats. Use <i>toplyé</i> , small sea-going rafts. Two small nets.
wild food	Secondary marine animals not normally consumed.
trends	Depletion of resources.

<b>Rapid Food Security Assessment Matrix</b>	<b>Baie de Moustiques</b>
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
<b>agriculture</b>	<b>None.</b>
<b>forestry</b>	<b>None.</b>
<b>inputs</b>	<b>None.</b>
<b>veterinary</b>	<b>None.</b>
<b>health</b>	<b>None.</b>
<b>credit</b>	<b>None.</b>

Rapid Food Security Assessment Matrix	Baie de Moustiques	
	Male-Headed (4 households)	Female-Headed (1 household)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Age of HH Head	Range: 25-37. Mean: 31.	60
Family Composition (adults, children, other dependents)	2-5 adults (avg. 3), 3-6 children (avg. 4).	4 adults, 2 children.
Education of HH Members	1 has some, 2 none. Children: 2.5 years.	Adults none, children 6 years.
Religion	1 Catholic, 2 Protestants.	Catholic
Occupations of HH Members	Farmers	Farmer, petty commerce.
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	Number of Plots: 2-3, avg. 2.3. Plot size: 1/4 - 1/16 carreaux, avg. 3/4. Distance from house: 1-4 km, avg. 2.5 km. Form of acquisition: 2 inheritance, 1 sharecropped. Length of cropping: 2-12 yrs., avg. 8.3 yrs.	3 plots. Size: 1/4 - 1/2 carreaux, avg. 1/3 carreaux. Distance from house: 1-2 km, avg. 1.6 km. All 3 plots sharecropped. Length of cropping: 3-12 yrs., avg. 9 yrs.
<b>III. LIVELIHOOD STRATEGIES</b>		
<b>Crops</b>		
crops grown	Maize, sweet potato, peanuts, manioc, plantain, beans, pumpkin.	Same as at left.
<b>Access to Livestock (types, numbers, selling patterns, mortality rates)</b>		
goats/sheep	None owned, 7 died last year, none sold.	Five obtained through "gardiennage." Eight died last year, none sold.
cows	None owned, 1 died last year, none sold.	None.
cochons (pigs)	None.	None.

Rapid Food Security Assessment Matrix	Baie de Moustiques	
	Male-Headed (4 households)	Female-Headed (1 household)
donkeys	None.	5 owned through gardiennage, 4 died last year, none sold.
chickens	Only one HH had 2. Eight died, none sold.	None owned, 25 died, none sold.
<b>Other Income-Generating Activities</b>		
off-farm employment	Canal work (one HH).	Canal work.
remittances	1 household	
firewood or charcoal sales	None.	Yes.
trading	1 household.	None.
other	Two out of three get some income from fishing. Fishing gear includes: 0-1 fishing boats; 0-1 <i>torpils</i> ; 0-1 <i>filets</i> (damaged); and 0-13 <i>nas</i> (fish traps: 12 of these damaged). Two HHs do line fishing.	No boat, no <i>torpil</i> , no <i>filets</i> , two damaged <i>nas</i> . No line. Goes as part of a crew.
<b>IV. COPING STRATEGIES</b>		
Adjustment to Meals (number, amount, diversity)	From two meals to one.	Same as at left.
Food Substitution	Wild food and food aid products.	Same as at left.
Sale of Assets	No	No
Borrowing	No	No
Credit	1 household	
Migration	1 household receives remittances.	No.
Wild Foods/Unusual Foods	Yes.	Yes, including birds.
Food Aid	All	All
"Gardiennage"	No	Yes
<b>V. FOOD CONSUMPTION PATTERNS</b>		

<b>Rapid Food Security Assessment Matrix</b>	<b>Baie de Moustiques</b>	
	<b>Male-Headed (4 households)</b>	<b>Female-Headed (1 household)</b>
<b>Composition of Diet (staples, protein foods, energy foods)</b>	Maize, millet, flour, beans, and fish occasionally.	Same as at left.
<b>Sources of Food</b>	Fish, millet, and beans are produced. Cereals are purchased.	Same as at left.
<b>Problems of Food Availability (market access, price, income, production shortfall)</b>	<ul style="list-style-type: none"> <li>• Lack of sufficient agricultural production</li> <li>• High prices</li> <li>• No work</li> <li>• No access to means of production.</li> </ul>	Same as at left.
<b>Food Conservation</b>	None.	None.
<b>Food Processing</b>	None.	None.
<b>Traditional Food Sharing Practices (including ceremonies and festivals)</b>	A thing of the past.	Same as at left.
<b>Food Preferences</b>	Paucity precludes preference.	Same as at left.
<b>Perception of Own Food Security</b>	Enough production.	Same as at left.

Rapid Food Security Assessment Matrix	Baie de Moustiques	
	Male-Headed (4 households)	Female-Headed (1 household)
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY DISTRIBUTION</b>		
Number of Beneficiaries	All household members participate.	
Regularity	Not regular. Cantines started in June 1993 and there have been only two deliveries since then.	Same as at left.
Participants' perception of impact, strengths & weaknesses of food aid programs	<ul style="list-style-type: none"> <li>• Without food aid, many people would suffer.</li> <li>• Ration size is too small.</li> <li>• There are not enough Cantines.</li> <li>• The Cantines are not well organized.</li> <li>• The Cantines are dangerous for small kids.</li> </ul>	Same as at left.

<b>Rapid Food Security Assessment Matrix</b>	<b>L'Estere Dere</b>
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
<b>Agro-Ecological Zone</b>	Mountainous Wet
<b>Location</b>	Dept. Nord-Ouest, Commune Baie de Henne, 3rd and 4th Section. Located about 26 km from Baie de Henne. L'Estere Dere is a high (900 m altitude), windwept, mountainous area with 700-800 mm annual rainfall, and calcarious soil with some clay and sand. The settlement has existed longer than the oldest respondent could remember.
<b>Livelihoods</b>	Farming, salt trade, charcoal production.
<b>Population (number, household types)</b>	1,800-2,000, consisting of 300-400 families. The number of female heads of households and households not presently in the community are unknown.
<b>Major Crops Grown, Crop Calendar, and Trends</b>	Two main cropping seasons: April-June and Sept.-Nov. Near L'Estere, the main crops are: Maize (p April-May, h Oct.-Nov.); manioc; sweet potato (p April, h July); green beans (p April-May, h June-July); congo beans (p April-May, h Dec.-Jan.); and peanuts (cultivated on a river-bottom at Petite Riviere (near Anse Rouge), a few hours from L'Estere: p May, h Dec.). Due to the lack and irregularity of rainfall over the past years, the cropping cycle is reported to have doubled in length, and harvests to have deteriorated significantly.
<b>Social Organization (associations, food-sharing networks)</b>	<i>Colonne</i> , groups of ten people who trade labor, and <i>kwadi</i> , groups organized to sell labor. Price: 2-3 gdes per <i>bout</i> (small piece of land).
<b>Division of Labor</b>	
<b>men</b>	Agricultural tasks, collect water and wood (since markets are far away, they must take on some of the women's tasks).
<b>women</b>	Planting, land preparation, harvest, domestic tasks, marketing.
<b>children</b>	Collect water and wood, feed animals.

<b>Rapid Food Security Assessment Matrix</b>	<b>L'Estere Dere</b>
<b>Major Crises, and Coping Strategies</b>	<p>The area is highly vulnerable to high wind speeds during storms. Almost yearly, houses are destroyed and animals killed. During a storm three days before the team's arrival, four houses were destroyed and nearly 100 animals killed as a result of hypothermia. Major past crises:</p> <ul style="list-style-type: none"> <li>• 1954-Cyclone Hazel. Destroyed houses, animals, and crops. Much migration to St. Mark and Pt. de Paix, and consumption of wild foods.</li> <li>• 1975-Large-scale drought and hunger.</li> <li>• 1979-Cyclone David and earthquake. Houses destroyed, some deaths.</li> <li>• 1987-Cyclone Gilbert and Jean Rabel Massacre. Population from Lacomme attacked the mountain population, killing an estimated 157 persons and burning several houses. Response included seasonal migration for agricultural labor (i.e., threshing sorghum) to Mare Rouge and Bombard, travel to other areas to buy plants and animals after cyclones.</li> <li>• 1991-Embargo. Has caused steady increase in prices.</li> <li>• 1986-present-Chronic drought. Shortage of rainfall and irregular rainfall patterns have seriously affected production levels. Responses: Salt production in Anse Rouge for those without money, salt trade between Anse Rouge and Mar Rouge for those with money. Use of a molasses paste, salt, and soursop tea to diminish hunger. Consumption of roasted pumpkin and <i>boisblanc</i> seeds. Migration of youth to St. Mark, etc., as servants, porters, and traders.</li> </ul>
<b>Other Income Generating Activities</b>	<p>Furniture maker, carpenter, salt trade, tailor, schoolteacher, fishing trap production, natural medicine healer, charcoal production and trade, food trade, hairdresser.</p>
<b>Child Care in Mother's Absence (<i>sevrage</i> (weaning), introduction of solid food)</b>	<p>Fathers and siblings. Weaning at 18-24 months. Introduce supplementary foods at 15-30 days (plantain, oat, or rice porridge, and grilled wheat flour). Mother allocates food based on size of children. Special infant foods are porridges of plantain, peas, and wheat.</p>
<b>Community Participation in Food Aid</b>	<ul style="list-style-type: none"> <li>• Two Cantines Populaires at L'Estere Dere have been functioning since mid-1992 and mid-1993. Dry distribution takes place at Petite Riviere irregularly, at 4-5 week intervals. Essentially everyone in the community was reported to be an official participant.</li> <li>• The women's group reported that the Cantines function regularly, and feel that they play a crucial role in ensuring the community's food supply. A certain degree of jealousy on the part of nearby communities was expressed by people from these communities who came for the meeting when they heard that CARE personnel were in the area.</li> <li>• There is some disagreement as to whether wet or dry feeding is preferred. Some people like wet distribution because it allows children to have a meal while their parents are busy working in the fields or markets. Some would like a dry distribution as well, because it allows them to take the food home and prepare it as they like.</li> </ul>
<b>Community Problems and Needs</b>	<ul style="list-style-type: none"> <li>• Damage from storms and violent winds.</li> <li>• Drought.</li> <li>• Animal diseases.</li> <li>• Lack of certain essential items (fruit, sugar, maize).</li> <li>• Lack of certain plants which have died out due to drought.</li> <li>• Market access.</li> <li>• Poisoning from wild foods (mangue verte and yanmdala)</li> </ul>

Rapid Food Security Assessment Matrix	L'Estere Dere
<b>ACCESS TO INFRASTRUCTURE</b>	
health facilities	None in L'Estere Dere. The nearest is in Godette, one hour away by foot. Other centers used include La Reserve, Temps Perdu, Petite Riviere, Mar Rouge, Baie de Heine, and Anse Rouge. Hospitals used by the population are located in Gonaives and La Ponte. Consultations cost 1 gourde.
schools	Four private primary schools (one Catholic, one Adventist, and two Baptist). 200-600 gourdes per child for fees, uniforms and materials.
markets	Market access is problematic. The nearest markets are: Godette (very small), one hour away; Jean Rabel, 3-4 hours away; Mar Rouge, 3 hours away; and Anse Rouge, 5 hours away.
roads/transport	The locality is accessed by a dirt road, with a quite steep grade over some stretches. No commercial trucks pass through the area, given its relative isolation and low production levels.
storage	Food stores are not observed in the area. In recent years, production has been too little to allow storage.
water sources	Four sources (capped springs and wells), 10-15 minutes away. But there are too many people for these sources (waiting time is sometimes up to six hours), and there is some danger of children falling into an open pit at one of the wells.
government structure	Chef de section, 2 kasek, 11 adjoints de section.
<b>ACCESS TO NATURAL RESOURCES</b>	
land	Cultivated land is mostly owned or rented by user, with some also sharecropped.
livestock	Mainly burros, sheep, and goats. Few animals due to deaths from storms and diseases (particularly among goats and chickens).
wood	Hard wood is four hours away along the coast, and not available in commercial quantities or quality. What trees remain in the area are needed as windbreaks and are protected by law. Households use tree branches and parts of bamboo for cooking.
fish resources	None.
wild food	Sweet cucumber, impatiens, epinard blanc, laman, lamanier, coupier, champions (djon-djon), bondieubay, feuilles de piments, grains de giroux, and guava. No wild game.
trends	Erosion and deforestation serious, land slides, disappearance of certain species of trees (guava and <i>pomme rose</i> ).
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
agriculture	Previously, CARE agro-forestry and seed-distribution project.
forestry	See above.

<b>Rapid Food Security Assessment Matrix</b>	<b>L'Estere Dere</b>
<i>inputs</i>	<i>Seeds come principally from the market because of recent, consecutive droughts, but are expensive. Manure is the only fertilizer used.</i>
<i>veterinary</i>	<i>None in the zone, even private, which is problematic. Closest is in Godette.</i>
<i>health</i>	<i>None.</i>
<i>credit</i>	<i>No formal credit. Informal credit among family and friends, unless they fear that the money will not be repaid. Some collateral is used (e.g., chickens). Small traders give credit in kind for 10-15 days without interest.</i>
<i>other</i>	<i>Food-for-work (FONDEV) for road rehabilitation is only beginning to employ people in the locality. Some tools were distributed, but work has not yet begun.</i>

Rapid Food Security Assessment Matrix	L'Estere Dere	
	Male-Headed (6 households)	Female-Headed (1 household)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Household Type	Type A: 2. Type B: 2. Type C: 2.	Type C: 1.
Marital Status	All married.	Plasage.
Age of HH Head	32-50	20
Family Composition (adults, children, other dependents)	2 adults, 5 children (avg.). No other dependents.	1 adult, 1 child.
Education of HH Members	Type A: All adults literate. Types B and C: 8% of adults literate. School-age children enrolled: All for Type A, 33% for Types B and C.	Adult illiterate. Child too young to attend school.
Religion	50% Catholic, 33% Baptist, 17% Evangelical.	Catholic.
Length of Residence	All were born in or married into the community.	Same as at left.
Occupations of HH Members	Farmer, schoolteacher, salt trader, mason, bread seller, charcoal producer and trader.	Food and essential items trader.
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	Average 2 parcels, range 1-3. Size range 3/8-1 carreau. Land 5 min. to 2 hours away from house for most crops, 2.5 - 5 hours for peanuts. Length of use varies between one and 20 years, with peanut cultivation being a relatively recent phenomenon. Nearly all land is owned, with some rented and one garden cultivated through sharecropping.	1 parcel, 1/2 carreau, 5 min. from house, used for 4 years. Land inherited.
Access to Farm Equipment	Most households have one hoe and one machete, although one Type C family borrows tools from neighbors.	One hoe and one machete.
Access to Farm Labor	One Type C household sells and trades labor, and one Type B household trades labor.	Purchases labor for land preparation.

Rapid Food Security Assessment Matrix	L'Estere Dere	
	Male-Headed (6 households)	Female-Headed (1 household)
<b>III. LIVELIHOOD STRATEGIES</b>		
<b>Crops</b>		
crops grown	Sweet potato, maize, peanuts, sorghum, green bean, congo bean, sugar cane, manioc.	Sweet potato.
use of production (marketed, consumed)	66% consumed, 20% sold, 13% seeds for food staple crops. All peanuts sold, but production has been almost eliminated by the drought in the past two years. Length of production for auto-consumption: Type A, 2-6 months; Type B, 0 months; Type C, 3 months.	66% consumed, 33% sold. Length of production for auto-consumption 2 months.
constraints	Drought, wind, seeds and fertilizer, land erosion, lack of money to buy seeds, insects and rodents, animal diseases (one house lost 23 goats last year), inaccessibility of pesticides (price and market availability).	Drought, lack of money to purchase labor, high price of seeds.
solutions	<u>Present actions:</u> Use coffee bean husks as insecticide for storage, buy plants or animals with money from charcoal production, seasonal migration, chicken <i>gardinnage</i> (but lost all 20 under his protection). <u>Proposals:</u> Seed bank, improve diversity of plants, improve soil conservation.	Borrows money from friends, asks for seeds from family.
<b>Access to Livestock (types, numbers, selling patterns, mortality rates)</b>		
goats/sheep	Type A: 0-5 goats died. Type B: 0-4 goats died, 0-1 sheep died. Type C: 0-25 goats died.	One goat owned, two goats sold.
donkeys	Types A and B: 0-1 owned. Type B: 0-1 sold.	
chickens	Type A: 6-25 died. Type B: 0-5 owned, 0-4 died. Type C: 0-26 died.	6 died.
<b>Other Income-Generating Activities</b>		
migration	Seasonal migration to St. Mark as mason and servant.	
remittances	Remittances from \$15-80/year and some second-hand clothes. Type B: Remittances from daughter.	Husband works in St. Mark as a tailor and sends \$150/year plus clothes.
<b>IV. COPING STRATEGIES</b>		
Adjustment to Meals (number, amount, diversity)	Type A: Reduce food quantities, and reduce meals from three to two per day. Types B and C: Reduce from two to one or sometimes no meals per day.	Reduce meals from two to one or sometimes none per day, and decrease protein consumption.

Rapid Food Security Assessment Matrix	L'Estere Dere	
	Male-Headed (6 households)	Female-Headed (1 household)
Food Substitution	Type B: Eat bulgur instead of flour. Substitute sour orange juice and peppers for oil in cooking. Type C: Eat boiled and grilled mango.	
Sale of Assets	Type B: Sell peanut seeds reserved for planting.	
Borrowing	Type A: Receive money from father (\$15 or more). Type B: Borrow from neighbors.	Borrows from parents or friends, and receives gifts of seeds from mother.
Credit	Type B: Takes loans to buy fruit and other foods for 1-3 weeks.	Credit in foodstuffs for 3-8 days.
Migration	Type B: Seasonal migration for father, permanent migration for daughter.	Migration of husband.
Wild Foods/Unusual Foods	Type B: Eat wild foods. Type C: Eat more wild foods.	Eat more wild foods (avocado, leaves, guava).
Food Aid	Types B and C: Heavy dependence on food aid -- it is the mid-day meal for the whole family.	
"Gardiennage"	See "Solutions" above.	
Other	Enter salt trade; request siblings to send clothes from St. Mark; decrease clothing expenses; send children to school without paying. Type B: Collect sour oranges for sale; sell animals before birth; withdraw children from school; reduce spending on clothes and household items.	Spend less on clothes, go without shoes.
<b>V. FOOD CONSUMPTION PATTERNS</b>		
Composition of Diet (staples, protein foods, energy foods)	<u>Protein</u> : Peas, congo beans; Type B household eats meat -- goat or beef -- once every five months. <u>Energy foods</u> : Sugar, bread, bulgur, sugar cane, maize meal, sorghum, vegetables, oranges, oil, sugar water, wild food leaves, wheat flour, coffee, tea, manioc bread, rice (rare).	<u>Protein</u> : Sweet potato, peas, herring (sometimes). <u>Energy foods</u> : oil, bulgur, sorghum.
Sources of Food	The market is the most important food source; own production is of secondary importance. Also, the Cantine is very important for Types A and C.	Own production, market, and Cantine.
Problems of Food Availability (market access, price, income, production shortfall)	Production shortfalls; prices too high; drought; lack of seeds, money, water and wood. It takes more time to cook with the branches commonly used as firewood.	Same as at left.

Rapid Food Security Assessment Matrix	L'Estere Dere	
	Male-Headed (6 households)	Female-Headed (1 household)
Food Conservation	Store maize in sacks kept near the rafters of the house. Store beans in coffee husks, but this has not prevented infestation. Peanuts are stored in palm fronds.	Same as at left.
Traditional Food Sharing Practices	Type B: Send a plate of cooked food to neighbors.	Same as at left.
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY DISTRIBUTION</b>		
Number of Beneficiaries	84% of families have participated in the Cantines since they were established. 66% participate in dry distribution.	Participates in Cantine.
Involvement in Program	All family members.	Mother (not pregnant or lactating) participates, but the son does not due to wheat intolerance.
Regularity	Regular Cantine operation and attendance.	Same as at left.
Participants' perception of impact, strengths & weaknesses of food aid programs	<ul style="list-style-type: none"> <li>• Type A: 30% of one household's consumption is from the Cantine.</li> <li>• Type B: 40% of one household's consumption is from the Cantine.</li> <li>• Type C: 40% and 70% of households' consumption is from the Cantine. Without the Cantine, they would have to get this food from the market (which would be costly and difficult for them). The Cantine program also allows them to reduce consumption of wild foods that sometimes have toxic effects on children.</li> <li>• Jealousies of neighboring localities.</li> <li>• Small rations due to overfeeding.</li> <li>• Well-organized.</li> <li>• One household reported that the distribution provides food for eight days, not the 15 days planned, since the household size is larger than the standard five persons planned for.</li> </ul>	<ul style="list-style-type: none"> <li>• 20% of estimated food consumption.</li> <li>• Wheat intolerance.</li> <li>• Small ration size due to overfeeding.</li> </ul>
Recommendations for improvement	<ul style="list-style-type: none"> <li>• Prolong dry distribution.</li> <li>• Open Cantines in neighboring communities, or expand existing Cantines.</li> </ul>	

Rapid Food Security Assessment Matrix	Cafe Paul
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
Agro-Ecological Zone	Dry Plateau
Location	Dept. Nord-Ouest, Arrondissement Jean Rabel, Commune Cafe Paul. 13 km from Jean Rabel. Cafe Paul is located between two dry hills, separated by some ridges, with clay soil, 5-8% vegetation coverage (primarily cactus and fruit trees). Annual rainfall est. 400-600 mm. Altitude 70-80 m. The settlement has existed as long as the community can remember.
Livelihoods	Farming and various town occupations.
Population (number, household types)	600-700 persons, comprising 70-90 households. 14 female-headed households. 29 households presently not in the community.
Major Crops Grown, Crop Calendar, and Trends	Two main cropping seasons: April-May and Nov.-Dec. The main crops include: maize (p April and Nov., h July and Feb.); millet, sorghum, green beans (p Nov., h Feb.); congo beans (p Jan.-Feb., h Sept.-Oct.); lima beans (p April, h July); and plantain (p April, July, h April, July).
Social Organization (associations, food-sharing networks)	<i>Kwadi</i> (two forms: payment in kind and in labor) and <i>combit</i> (women's church groups for singing and prayer).
<b>Division of Labor</b>	
men	Agricultural tasks and collecting wood.
women	Planting and harvesting, domestic tasks, marketing.
children	Collecting water and wood, taking animals out to feed, planting and harvesting.
Major Crises	<ul style="list-style-type: none"> <li>• 1979-Cyclone David. Destroyed houses and crops, uprooted trees, killed animals. Population increased wood-cutting for charcoal production to earn extra income, but over time it has become increasingly difficult to obtain wood, and people now make a day-long trip to the coast to collect it.</li> <li>• 1981-African Swine Slaughter. Donor agency carried out project to prevent the spread of the epidemic, but repopulation project was not effectively carried out. Community considers this one of the worst crises.</li> <li>• 1987-Jean Rabel Massacre. Some persons were killed, population went into hiding, animals killed, houses destroyed.</li> <li>• 1990-present-Chronic drought. Particularly severe since 1991.</li> <li>• 1991-present-Embargo. Has led to continual price increases and decreased work opportunities. Migration to Nassau and Miami has risen as a result of this and the drought. The relatives who stayed behind are increasingly dependent on remittances.</li> </ul>
Other Income Generating Activities	Trading, charcoal production and trade, agricultural labor (5 gdes/day), domestic labor, masonry.

<b>Rapid Food Security Assessment Matrix</b>	<b>Cafe Paul</b>
Child Care in Mother's Absence ( <i>sevrage</i> (weaning), introduction of solid food)	Neighbors, father and siblings. Weaning at 18-24 months. Introduction of solid foods at 2-3 months.
Community Participation in Food Aid	The community's Cantine Populaire was started in fall 1992. Essentially, everyone in the community can participate in the Cantine if they wish; however, many adults (the elderly, and pregnant and lactating women included), feel humiliated to carry plates of food to their homes. The Cantine operates on a regular basis except following rain, when the wood becomes too wet to cook with, or following a death in the community. The organization of the Cantine is reported to be good; however, rations are said to be small because many more people are served than was planned for. The Cantine employs a system of two-week rotations of cooks, who receive both rations and some containers of dry food in exchange for their labor. Dry distribution would be preferred by most of the population, in order to avoid humiliation.
Community Problems and Needs	<ul style="list-style-type: none"> <li>• Lack of water for irrigation.</li> <li>• Lack of money.</li> <li>• Lack of food availability.</li> <li>• Lack of clothes.</li> </ul>
<b>ACCESS TO INFRASTRUCTURE</b>	
health facilities	The nearest health centers are an hour away in Gros Bassin and La Coma. Costs range from 1-5 gdes. per consultation.
schools	Four private primary schools and one secondary school (all Baptist). Costs range from 300-750 gdes. (primary) and 1,300-1,400 gdes. (secondary) per year.
markets	Markets are in La Coma and Barbepagnole, one hour away, and a larger market in Jean Rabel, two hours away.
roads/transport	The locality is accessed by a dirt road, which is difficult to use during rain. Commercial trucks used to pass through the area to purchase crops, but have stopped since production levels fell in 1991.
storage	Some compounds have grain stores, but most grain is stored above the rafters inside the house.
water sources	One capped spring pump in the center of the locality, but the flow is weak during dry periods, and waiting times sometimes reach three hours. Because people enter the cistern, the water contains impurities, resulting in skin diseases and other illnesses.
government structure	Police adjunct.
<b>ACCESS TO NATURAL RESOURCES</b>	
land	Land under cultivation is primarily owned, rented, or sharecropped, with some squatting and <i>gerance</i> (land worked exclusively by wage labor). Approx. 10% landless.
livestock	Goats, burros, sheep, pigs, cattle, horses, and chickens

<b>Rapid Food Security Assessment Matrix</b>	<b>Cafe Paul</b>
wood	Fuel used for cooking consists of dried branches, rubbish, and sugar cane husks, due to the receding tree cover over the past few years. Sometimes hard wood is brought from the outside and sold.
fish resources	None.
wild food	Only obtained in the rainy season: leafy vegetables and tamarind.
trends	Deforestation serious, due to excess cutting for charcoal production in recent years. Increasing irregularity of rainfall.
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
agriculture	FONDEV relief program distributes seeds and tools. An Evangelical Baptist Church project has begun constructing an irrigation system.
forestry	
inputs	Seeds come both from stock and market purchases of nationally-produced seed. Sevin is used as a pesticide by some; however, it is expensive, is not readily available, and is of questionable effectiveness. Pumps for spraying are also lacking.
veterinary	Private veterinarian.
health	None.
credit	No formal credit system, and the informal credit system is quite limited. Both the women's and the men's groups reported a shortage of informal credit, even among families, due to a general cash shortage in the area. The closest source of credit is Jean Rabel, where some people could obtain short-term credit to purchase merchandise.

Rapid Food Security Assessment Matrix	Cafe Paul	
	Male-Headed (3 households)	Female-Headed (4 households)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Household Type	Type A: 1. Type B: 1. Type C: 1.	Type B: 1. Type C: 3.
Marital Status	Type A, Type B: married. Type C: plassege.	Married, widowed, and abandoned.
Age of HH Head	30-50	28-48
Family Composition (adults, children, other dependents)	6 adults, 7 children (avg.). No other dependents.	2.6 adults, 3.3 children (avg.). One HH has 5 adults.
Education of HH Members	Adult literacy: From 55% (Type A) to none (Type C). Enrollment of school-age children: From 100% (Type A) to 40% (Type C).	Adult literacy: 75% (Type B); 33% (Type C). Enrollment of school-age children: 90%.
Religion	Baptist.	Half Catholic and half Baptist.
Length of Residence	Types A and B: More than 20 years. Type C: 6 years.	3 months - 33 years.
Occupations of HH Members	Type A: Farmer, carpenter, baker, trader. Type B: Farmer, clothes cleaner, construction worker. Type C: Artisan, agricultural laborer, and farmer.	Clothes washer, charcoal producer, agricultural laborer.
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	Owned, sharecropped, and gift in exchange for work performed. Type A: 5 parcels, 2.5 carreaux. 10-30 minutes away. Used for more than 20 years. Type B: 6 parcels, 4 carreaux. 30 minutes - 6 hours away. Used for more than 20 years. Type C: 5 parcels, 1.3 carreaux. 5 minutes - 3 hours away. Used for 6 years.	Owned. One woman (Type C) has two plots, 3/8 carreaux. 10 minutes from house. Used 4-13 years.
Access to Farm Equipment	Each household has a hoe and a machete.	One hoe and one machete owned by the one household with land.
Access to Farm Labor	Types A and B: Purchase. Type C: Sells.	Type C: Purchases.

Rapid Food Security Assessment Matrix	Cafe Paul	
	Male-Headed (3 households)	Female-Headed (4 households)
<b>III. LIVELIHOOD STRATEGIES</b>		
<b>Crops</b>		
crops grown	Maize, congo beans, yams, sorghum, plantain, sugar cane.	Maize.
use of production (marketed, consumed)	<u>Use of crop:</u> Type A: 70% sale, 10% consumption, 20% seed. Type B: 65% sale, 20% consumption, 15% seed. Type C: 50% sale, 50% consumption. <u>Consumption stock lasts:</u> Type A: 7 months. Types B and C: 3 months.	Use of crop: 20% sale, 80% consumption. Consumption stock lasts 15-90 days.
constraints	Insects and rodents; lack of, high price of and ineffectiveness of insecticide (Sevin); drought; and lack of seeds.	Lack of money to buy inputs and labor, drought, insects, and high price of insecticides.
solutions	Rain and money.	Same as at left.
<b>Access to Livestock (types, numbers, selling patterns, mortality rates)</b>		
goats/sheep	Type A: owned 1 sheep, sold 7 goats. Type B: owned 1 sheep, 3 sheep died.	--
cows	Type A: sold 1. Type B: owned 1, sold 1, 1 died.	--
donkeys	Type B: owned 1, sold 2. Type C: 3 died.	1 owned.
chickens	Type A: owned 30, 23 died. Type B: owned 2, sold 7, 25 died.	Owened 7, sold 2.
<b>Other Income-Generating Activities</b>		
remittances	Remittances from domestic workers in Port-au-Prince and from relatives abroad. For Types B and C, also from agricultural laborers in Gonaives (\$20/year) and seasonal agricultural work in localities around Jean Rabel to the north (5 gdes/day).	Remittances from Port-au-Prince.
<b>IV. COPING STRATEGIES</b>		
Adjustment to Meals (number, amount, diversity)	Type A: Decrease meal frequency from three to two per day. Type B: Decrease meal frequency from three to two to one or none per day. Type C: Decrease meal frequency from two to one to none per day	Decrease meal frequency from two to one per day, and reduce quantity of food consumed. Consume less protein Cook one meal to last the whole day due to the shortage of cooking fuel and food; in effect, this reduces both the diversity and the quantity of food consumed.

<b>Rapid Food Security Assessment Matrix</b>	<b>Cafe Paul</b>	
	<b>Male-Headed (3 households)</b>	<b>Female-Headed (4 households)</b>
<b>Food Substitution</b>	When food is not available, people eat grilled green mangoes or place salt on their tongues to kill the hunger pangs. People eat more wild foods. Type B: During crises eat maize meal with no sauce, boiled green mango, and tamarind.	Eat at the Cantine Populaire, and eat more maize meal without pulses or meat sauce. When food is not available, people eat grilled green mangoes or place salt on their tongues to kill the hunger pangs.
<b>Borrowing</b>	Type C: Receive gifts from friends, and share food with neighbors.	Eat frequently with grandparents.
<b>Credit</b>	Credit in merchandise is taken by persons having guarantees for repayment. Animals are also bought on credit. Type A: Buy merchandise on credit. Type C: Buy trade items on credit in Gonaives, no interest.	Credit in merchandise is taken by persons having guarantees for repayment. Animals are also bought on credit. Diversification of credit sources (Type C). One Type B HH takes small credit to begin trade.
<b>Migration</b>	See "Remittances," above.	
<b>Wild Foods/Unusual Foods</b>	Eat more wild foods.	
<b>Food Aid</b>	For some in the community, the Cantine Populaire has become increasingly important.	Eat at the Cantine Populaire. For some in the community, the Cantine has become increasingly important.
<b>Other</b>	Type A: Spend less on house furnishings. Type B: Take up work washing clothes, trading charcoal, and helping with house construction.	Eliminate clothes purchases.

Rapid Food Security Assessment Matrix	Cafe Paul	
	Male-Headed (3 households)	Female-Headed (4 households)
<b>V. FOOD CONSUMPTION PATTERNS</b>		
Composition of Diet (staples, protein foods, energy foods)	Type A: Bread, sugar water, manioc bread, maize porridge, rice, cornmeal, sorghum, beans, herring, soup, tea, breadfruit, banana, plantain. Type B: Same, but during crises eat maize meal with no sauce, boiled green mango, and tamarind. Type C: Bread, sugar water, maize, sorghum, beans, vegetables, wild foods, Cantine Populaire food.	Type C: Cantine meals, maize meal, beans, plantain, wild foods.
Sources of Food	Types B and C: Own production and market. Type C: Market and Cantine.	Type C: Parents, market, Cantine (for 5% and 67% of food consumption, respectively, in two households). One HH shares with neighbors, and one purchases food on credit.
Problems of Food Availability (market access, price, income, production shortfall)	Lack of money, high prices, and lack of cooking fuel for all households.	Same as at left, and also lack of credit.
Traditional Food Sharing Practices (including ceremonies and festivals)	Limited exchange among neighbors. Before the crisis, this played a greater role.	
Food Preferences	Rice, plantain, bean sauce, meat, and fruit.	
Perception of Own Food Security		
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY DISTRIBUTION</b>		
Number of Beneficiaries		
Involvement in Program	The households decide who participates. Type A, protegees; Type B, children and breast-feeding mother; and Type C, the whole family.	In Type C HHs, children and pregnant mother. But in one HH, no one attends, due to injuries children received earlier.
Regularity	Cantine functions regularly, but sometimes people do not receive food because (1) too many people come for the quantities prepared, and the food runs out or (2) there is disorder and people have to leave without receiving food.	

<b>Rapid Food Security Assessment Matrix</b>	<b>Cafe Paul</b>	
	<b>Male-Headed (3 households)</b>	<b>Female-Headed (4 households)</b>
<b>Participants' perception of impact, strengths &amp; weaknesses of food aid programs</b>	<ul style="list-style-type: none"> <li>• Helps decrease malnutrition in children.</li> <li>• Substitutes for what would otherwise have to be purchased in the market.</li> <li>• Quantities are too small to have a favorable impact on children's health.</li> <li>• It is humiliating for adults to have to carry plates of food, so they attend little and hence there is little impact.</li> <li>• Over-attendance leads to too little food and too long a wait, disorder and occasional injuries to participants.</li> <li>• It is questionable whether the Cantine is the appropriate mechanism for targeting segments of the adult population.</li> </ul>	Same as at left.
<b>Recommendations for improvement</b>	<ul style="list-style-type: none"> <li>• Increase distribution.</li> <li>• Change to dry distribution. This would avoid humiliating adults, would allow households to prepare food as they prefer, and would save time for mothers.</li> </ul>	Same as at left.

<b>Rapid Food Security Assessment Matrix</b>	<b>Carrefour Vidy</b>
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
<b>Agro-Ecological Zone</b>	Mountain and Plateau Wet
<b>Location</b>	Kafu Vidy, Northwest Department, Arrondissement Mole St. Nicholas, Section Two, Guinaudee, Jean Rabel.
<b>Population (number, household types)</b>	2010-3500 persons, comprising 165-330 households. 60-150 female-headed = 35-45% of entire population
<b>Major Crops Grown, Crop Calendar, and Trends</b>	The main crops include: manioc (p Jan.-May, h one year later); sweet potato (patate) (p Aug.-Sept., h Jun-Jul.); maize (p Mar.-May, h Jun.-Sept.); beans (pois) (p Mar.-May h Jun.-Sept.); cane; sorghum; congo beans. Planting needs: 6-7 marmites beans; 3-6 marmites corn; 2-4 marmites lima beans.
<b>Social Organization (associations, food-sharing networks)</b>	<i>Kwadi</i> , a reciprocated labor-sharing of tilling, no food or drink, among ten friends, and "Ti Group 10," which is basically the same although they also try to collect and share food when possible.
<b>Division of Labor</b>	
men	
women	<ul style="list-style-type: none"> <li>• In female-headed households, women performed all types of work in the field. Plots were smaller and women usually borrowed tools.</li> <li>• In male-headed households, women helped with the harvest.</li> </ul>
<b>Major Crises</b>	<ul style="list-style-type: none"> <li>• 1954 - Hurricane Hazel, October 12. People stayed with neighbors and re-built homes.</li> <li>• 1969 and 1977 - 10 months without rain. Population ate wild foods. Some people went to Tortue, Port au Prince, or St. Marc and returned when the rains came.</li> <li>• 1982-83 - "Killing of Pigs." Pigs were not replaced, rather there was a shift toward goats, removing pigs from system.</li> <li>• 1987 - Jean Rabel Massacre, 29 July. Trouble over land reform. Population became scared, they prayed and fasted (it worked).</li> <li>• 1988, October - present - Hurricane and flooding. Population changed the composition of their diet, started "ti commerce," and later charcoal production using CARE project trees.</li> <li>• 1993, Feb. - Animals killed in a big rain. Dead chickens replaced by bio-intensive gardening.</li> <li>• 1993, Oct/Nov - present - Many animal deaths (birds, Newcastle, goats, anthrax) have resulted in removal of children from school, and working in the Dominican Republic. Handicraft production but transportation is expensive. The only wood available for charcoal production is agro-forestry trees.</li> </ul>
<b>Population Trends (out-migration)</b>	<ul style="list-style-type: none"> <li>• Many human deaths</li> <li>• Migration to Artibonite and Port-au-Prince</li> <li>• Increase in female-headed households</li> </ul>
<b>Other Income Generating Activities</b>	Manufacture of panier for salt transport; sale of crops; selling male labor; sale of animals has declined.

<b>Rapid Food Security Assessment Matrix</b>	<b>Carrefour Vidy</b>
<b>Child Care in Mother's Absence (<i>sevra</i> (weaning), introduction of solid food)</b>	<p>Children are left with neighbors when parents are working or fetching water. Children begin to eat hard food (e.g. rice flour/WSB) at 2-3 months; manioc flour (water, sugar roasted) at 3 months, "AKA 1000" (Farine CARE) at 4 months. At two years old, children are able to eat Cantine food. When mother present, breastfed on demand through 12 months.</p>
<b>Community Participation in Food Aid</b>	<ul style="list-style-type: none"> <li>• Programs available through CARE include Cantine Populaire, School Feeding, and Dry Feeding in Gombo, which is accessed by some people.</li> <li>• Cantine Populaire started between April and July 1993 and operates six days / week. 200-250 beneficiaries are registered, however 400 persons eat. The Cantine endured three months without a food delivery, but is now well-managed by a popularly-selected committee and so well-attended that crowding and shoving seems to be the major complaint. Persons report that there are happy faces when the Cantine is in operation, and no one feels humiliated by the Cantine process. Beneficiaries bring wood, pots, and condiments; they are not very organized but the arrangement works okay. The Cantine allows for the provision of food to children when there is no food at home, although cooking at home is preferred because of the crowds. Most people like the taste of the Cantine food, which even kids at 7-8 months can eat. Children are served first at the Cantine, followed by pregnant women and then the elderly. It is difficult for older people to go to the Cantine, and some people take food home (e.g. to share with the elderly) but sometimes it is all eaten en route.</li> <li>• There are two School Feeding centers in the area, but the children of parents interviewed did not have access.</li> <li>• A few people from one side of town participate in the Dry Feeding in Gombo.</li> </ul>
<b>Community Problems and Needs</b>	<p>In order of importance:</p> <ul style="list-style-type: none"> <li>• Lack of water for farming</li> <li>• Lack of health: Major health problems are malaria, tetanus, typhoid, and much TB. Measles was a big problem in August 1993. Women's health is impaired by headaches, fever, and problems related to abdomen, teeth, and pregnancy. Men die from diseases; 'they work hard and die.' Children's health problems include diarrhea, fever, and worms.</li> <li>• Lack of food</li> <li>• Lack of money</li> <li>• Lack of technical assistance for agriculture (CARE is there).</li> <li>• Lack of fuel (kerosene).</li> </ul>
<b>ACCESS TO INFRASTRUCTURE</b>	
<b>health facilities</b>	<ul style="list-style-type: none"> <li>• There is no clinic, although a health agent (aux. nurse) who works in Gombo lives in Vidy.</li> <li>• The nearest clinic is 1.5 hours away by foot (15 minutes by car) in Gombo. Consultations are 0.50 gdes, and medicine is very expensive.</li> <li>• A priest at a church 35 minutes away provides some assistance.</li> <li>• Very inexpensive traditional medicines (Bokor, med. feullie, etc.) are available 30 minutes away.</li> </ul>
<b>schools</b>	<ul style="list-style-type: none"> <li>• Eight private schools. Costs range from 15-18 gdes/month plus 7 gdes inscription fee.</li> <li>• Children are removed from school if they cannot pay. None of the women in the group had any schooling.</li> </ul>
<b>markets</b>	<p>Market is in Gombo, 1.5 hours away by foot</p>
<b>roads/transport</b>	<p>The roads are good, unless it rains. One truck services the area weekly.</p>

<b>Rapid Food Security Assessment Matrix</b>	<b>Carrefour Vidy</b>
water sources	Two springs, 30-60 minutes away, with dirty water, fighting, and crowding. Some roof-fed cisterns.
government structure	
<b>ACCESS TO NATURAL RESOURCES</b>	
land	Land tenure problems: Absenteeism and "bad feelings" (close to Jean Rabel). Under-used resources on these lands are denied to residents.
livestock	<ul style="list-style-type: none"> <li>• Very few chickens (a lot have died); 15-20 cattle (a lot have died from floods and warble); one goat or sheep per family unless stolen or killed by wild dogs; a lot of donkeys (some died in flood).</li> <li>• Population used to invest money earned from the sale of animals. Now the money goes for food.</li> <li>• Goats have become more available in local markets.</li> </ul>
wood	People use wood at home, and sell charcoal made from coconut husks and twigs because roots are no longer available for this purpose.
fish resources	None.
wild food	Yam chats/codin but very few left; green mangoes boiled and barbecued (boiled green mangoes made people sick); kolored (peanut-like seed) swells children's stomachs; corosol eaten unripe and boiled; tomato shoots; wild leaves; 'zeb zegwi'; 'fey zoliu'; 'tij joumou.'
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
agriculture	No government services. CARE provides some agricultural training. FONDEV repaired agricultural roads but did not employ much local labor.
forestry	No government services.
inputs	<ul style="list-style-type: none"> <li>• Seeds must be purchased; they are expensive, of only feed-quality, and come from irrigated areas such as St. Marc so they are not adapted to mountain sites, and they become wet in transport.</li> <li>• Insecticides are neither affordable or effective. Fertilizers are not used.</li> </ul>
veterinary	No government services. A local veterinarian is ineffective, possibly a charlatan.
health	Interaide provides primary health care with mothers.
credit	No formal credit since BCA closed.

Rapid Food Security Assessment Matrix	Carrefour Vidy	
	Male-Headed (3 households)	Female-Headed (1 household)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Household Type		Type C: 1.
Marital Status	Married	Living together, man presently away
Age of HH Head	26-41	Maybe 35
Family Composition (adults, children, other dependents)	2 adults, 2-8 children. Up to 13 people eating together.	1 adult, 9 children (4 living in the household).
Education of HH Members	0-3ieme Secondaire	No education.
Religion	Catholic	Possibly Catholic
Length of Residence	4 yrs. or more	Possibly 7 yrs.
Occupations of HH Members	1 primary school teacher, 1 farmer, 1 outmigration/laborer	No work; day-to-day survival
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	<ul style="list-style-type: none"> <li>• 1-5 parcels each, 1-16 carreaux. 0-30 minutes away. Used for 2 years or more.</li> <li>• Type A: Purchased</li> <li>• Type B: Inheritance</li> <li>• Type C: Demo/tie, Jousissance (Squat)</li> </ul>	Type C: Inheritance. 1 garden, 1 carreaux. 0 minutes away. Used for 7 years.
Access to Farm Equipment	One HH had a hoe. Two HH had a machete None had a pick. All households can borrow tools from others.	None.
<b>III. LIVELIHOOD STRATEGIES</b>		
Crops		
crops grown	Manioc, corn, sweet potatoes, all beans, a little cane, plantains, oranges, lima beans, sorghum/millet, congo peas.	Sweet potato, congo peas, bananas.

Rapid Food Security Assessment Matrix	Carrefour Vidy	
	Male-Headed (3 households)	Female-Headed (1 household)
use of production (marketed, consumed)	Yield difficult to determine but very low. Almost all is consumed by the household. Type B: Very small amounts are sold.	Not much yield. All is consumed by the household.
constraints	<ul style="list-style-type: none"> <li>• Lack of rain and variability of seasons</li> <li>• Price and availability of seeds</li> <li>• Health constraints on ability to work the land</li> </ul>	Lack of knowledge of farming practices.
Access to Livestock (types, numbers, selling patterns, mortality rates)		
goats/sheep	Owned 0-1 sheep, none sold, 0-7 died; owned 0-6 goats, sold 0-5, 3-5 died.	None.
cows	Owned 0-1, none sold, 0-3 died.	None.
cochons (pigs)	None owned, none sold, 0-1 died.	None.
donkeys	Owned 0-1, none sold, 0-1 died.	None.
chickens	Owned from 4 to more than 12, sold from none to a lot, 7-many died.	None.
Other Income-Generating Activities		
off-farm employment	See "Migration" below.	
migration	<ul style="list-style-type: none"> <li>• Migrant laborers engage in domestic housekeeping, clothes washing, and field work, including tomato field work in Santo Domingo. Duration of migrant labor is 1-12 months.</li> <li>• Presently absent but planning to return: 2 men in mainland Haiti, 1 man in the Dominican Republic, 1 woman at Tortue.</li> </ul>	None.
remittances	None.	None yet, but man she is living with may provide.
firewood or charcoal sales	Persons have not been able to find wood since 1992.	Lights cooking fire with straw from her roof.
trading	'Ti commerce' (selling manioc or other produce on credit)	None.
<b>IV. COPING STRATEGIES</b>		
Adjustment to Meals (number, amount, diversity)	Decrease meal frequency from three meals/day to eating as food is available. Skipping meals When there are three meals/day, mid-day food is kept for the evening.	Ate when food was available.

<b>Rapid Food Security Assessment Matrix</b>	<b>Carrefour Vidy</b>	
	<b>Male-Headed (3 households)</b>	<b>Female-Headed (1 household)</b>
<b>Food Substitution</b>	Change diet from rice, meat, and bananas to bulgur and WSB. Purchase "farine CARE" at 10 gde/marm. and bulgur at 15 gde/marm. Balanced CARE food with greens and beans.	Ate from Dry Feeding program.
<b>Sale of Assets</b>	Animals sold, but never tools.	None.
<b>Borrowing</b>	<ul style="list-style-type: none"> <li>• 1 interest-free loan from father.</li> <li>• Type C: 1 borrowed money at a high rate of interest from Anse Rouge.</li> </ul>	None.
<b>Credit</b>	8 day credit at the market.	None.
<b>Migration</b>	Work away from home for wages.	None.
<b>Wild Foods/Unusual Foods</b>	All households consumed wild foods.	Type C: Made soup by squeezing wild foods through cloth, but this took too long as was not worth the effort. Ate oranges (probably 'La Carre').
<b>Food Aid</b>	Type A: very humiliating	Type C: Dry Feeding program.
<b>Other</b>	<ul style="list-style-type: none"> <li>• Reduce health expenditures by using traditional medicines and healers.</li> <li>• Breast-feed babies for 24 months rather than 18 months.</li> <li>• Type A: Food-sharing for children with neighbors.</li> </ul>	Use roofing straw for cooking food. Give up children. Retreat to "Bondyebon" (refusal or inability to deal with the future).
<b>V. FOOD CONSUMPTION PATTERNS</b>		
<b>Composition of Diet (staples, protein foods, energy foods)</b>	See "Food Substitution" above.	Doesn't consume proteins.
<b>Sources of Food</b>	Primarily own production. Some purchased, gifts, and wild foods.	Dry Feeding. Potato from neighbors if she has no other food. Wild foods and whatever she can get off her land.
<b>Problems of Food Availability (market access, price, income, production shortfall)</b>	<ul style="list-style-type: none"> <li>• Production shortages</li> <li>• High prices</li> <li>• Not enough money</li> </ul>	Little productive capacity.
<b>Traditional Food Sharing Practices (including ceremonies and festivals)</b>	In one HH, the woman decides the order of food distribution: 1) husband, 2) aunt, 3) children, 4) brother, 5) small children, 6) neighbors, and 7) woman.	N/A

Rapid Food Security Assessment Matrix	Carrefour Vidy	
	Male-Headed (3 households)	Female-Headed (1 household)
Food Preferences	Eat whatever food is available.	Eat whatever food is available.
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY FEEDING</b>		
Number of Beneficiaries		
Involvement in Program	<ul style="list-style-type: none"> <li>• One family participated, all family members went to the Cantine. Type A: Only goes when they need food.</li> <li>• Two families participated in Dry Feeding in Gombo.</li> </ul>	Dry Feeding.
Regularity	Three families did not participate regularly.	Whenever given, every two weeks.
Participants' perception of impact, strengths & weaknesses of food aid programs	<ul style="list-style-type: none"> <li>• Type B: 4 marmites from Dry Feeding lasts only four days because of sharing.</li> <li>• When there is no other food, the food helps people. It is good especially for the children's diet. Type B: did not like the wheat ("leger" in the stomach) but it is better than nothing.</li> <li>• It is not worth going unless food distribution is guaranteed. Even those who are registered do not necessarily get food when there is no wood, the cooks are not good, the food is not properly cooked, or there is overcrowding and pushing.</li> <li>• No means of communicating with Cantine management.</li> <li>• The food has no condiments or spices.</li> </ul>	<ul style="list-style-type: none"> <li>• Dry Feeding gives 2 marmites to children's host. The other 2 marmites last four days.</li> <li>• Cantine is too far away without guarantee of food.</li> </ul>
Recommendations for improvement	<ul style="list-style-type: none"> <li>• Food should be delivered to old people rather than obliging them to collect the food themselves.</li> </ul>	

<b>Rapid Food Security Assessment Matrix</b>	<b>Bananier Cola</b>
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
<b>Agro-Ecological Zone</b>	Irrigated plain
<b>Location</b>	U-shaped valleys with flat bottomlands separated by low hills. 500-600 mm annual rainfall. Fruit trees, plantain and annual crops interspersed in the valley bottoms with cactus, mesquite, acacia and other arid land plants on the hills. 10-20% vegetation cover.
<b>Livelihoods</b>	Farming, petit commerce, laboring, charcoal production and sales, artisanry, masonry, teaching, carpentry.
<b>Population (number, household types)</b>	2,600 - 3,000. 260 households. 12-20 female-headed households. Several persons were reported to have left the area to go to other parts of Haiti and to other countries (Miami, Bahamas, Grand Turk, Dominican Republic).
<b>Major Crops Grown, Crop Calendar, and Trends</b>	<ul style="list-style-type: none"> <li>• Plantain, maize, sorghum, common beans, cowpeas, lima beans, congo beans.</li> <li>• Two agricultural seasons: November-December and April-January.</li> <li>• Chronic drought since 1986.</li> </ul>
<b>Social Organization (associations, food-sharing networks)</b>	<ul style="list-style-type: none"> <li>• <i>Kwadi</i> or <i>esquad</i>, a group of paid laborers working together.</li> <li>• <i>Combite</i>, a group of laborers receiving pay and food.</li> <li>• <i>Collone</i>, a group of volunteers, possibly sharing reciprocal labor without pay. Type A houses buy labor, Type B buy and sell, and Type C sell.</li> </ul>
<b>Major Crises, and Coping Strategies</b>	<ul style="list-style-type: none"> <li>• 1951-Flooding</li> <li>• 1958-Hurricane Hazel; an emergency relief food-for-work program developed.</li> <li>• 1980-Hurricane</li> <li>• 1985-Flooding</li> <li>• 1987-Extreme drought</li> <li>• 1990 to present-Chronic drought</li> <li>• 1991 to present-Embargo.</li> <li>• People responded to these crises by cutting trees, digging up stumps to make charcoal, and using the wooden poles from shelters (<i>tonelles</i>) to sell as firewood or to make charcoal. Since 1968, emigration has become common; it has intensified since 1991.</li> </ul>
<b>Population Trends (out-migration)</b>	Since 1968, emigration has become common; it has intensified since 1991.
<b>Other Income Generating Activities</b>	<ul style="list-style-type: none"> <li>• Occasional agricultural labor, locally and in neighboring zones (\$1 per day for <i>kwadi</i>).</li> <li>• Charcoal production.</li> <li>• Petty commerce.</li> <li>• Buy and resell animals.</li> </ul>

Rapid Food Security Assessment Matrix	Banancier Cola
Child Care in Mother's Absence ( <i>sevrage</i> (weaning), introduction of solid food)	Family and neighbors, weaning at an average age of 2 years.
Community Participation in Food Aid	<ul style="list-style-type: none"> <li>• One Cantine Populaire, June 1993 - present: 300 participants.</li> <li>• One Cantine Scholaire: 100 participants.</li> <li>• One nutrition center, est. 1991: 40 participants.</li> </ul>
Community Problems and Needs	<p><u>General problems:</u></p> <ul style="list-style-type: none"> <li>• Lack of water for irrigation.</li> <li>• Insect attacks on plants, and animal diseases; lack of insecticides and animal medicines.</li> <li>• Few income-generating activities.</li> <li>• Lack of money to buy basics such as clothing, or any merchandise.</li> </ul> <p><u>Food aid program problems:</u></p> <ul style="list-style-type: none"> <li>• Not enough Cantines, and no dry food distribution program.</li> <li>• Not all potential beneficiaries are fed. Some people see this as a form of discrimination</li> <li>• Some parents feel that security at the Cantines is inadequate, and that the crowding may injure someone.</li> <li>• There was an insinuation that one of the Cantine leaders was selling food.</li> </ul> <p><u>Needs:</u></p> <ul style="list-style-type: none"> <li>• More Cantines, to feed all of the approved types of beneficiaries.</li> <li>• A dry food distribution program, so that food may be prepared for all family members in the family's accustomed way.</li> </ul>
<b>ACCESS TO INFRASTRUCTURE</b>	
health facilities	Dispensary with nurse 3 km away. 5 gourde consultation fee (non-obligatory).
schools	2 primary schools: 1 Baptist, 1 Adventist Tuition: \$20 year. Supplies and uniforms: \$30-100 per year, depending on grade level.
markets	<ul style="list-style-type: none"> <li>• 3 markets, all outside of Banancier, 45-90 minute walk one-way (Post Metier 45 min., Port-de-Paix, Beauchamps).</li> <li>• Prices of staple cereals have increased from 25% to 150% in the past year.</li> <li>• Animal prices have risen constantly over the past year.</li> </ul>
roads/transport	Good access except after rains, when the road is often impassable. One commercial truck per week loads local farm produce or charcoal.
storage	What few cereals are harvested and are not immediately sold are stored in sacks if for home consumption, stored in gourds (calabashes) if for use as seeds.
water sources	Good drinking water at two fountains within 5-15 minute walk, carried by women and children.
government structure	

<b>Rapid Food Security Assessment Matrix</b>	<b>Bananier Cola</b>
land	Substantial absentee ownership. 50-70% of the local population has no title to land.
livestock	Relatively few. Some cows, goats, horses, mules, donkeys, sheep, turkeys, guinea fowl, and chickens.
wood	Limited small trees and branches. Some harvesting of small trees in area by children, can take 1-2 hours per day, some roots or pieces of above-ground wood are also harvested by adults near Post Metier for fuelwood and making charcoal, after payment to the landowner.
fish resources	None.
wild food	Sweet cucumber, benzolive, "lanman," "liane panier," white spinach, wild yams (Yam Kordé), cactus (tosh), <i>bondieubay</i> , <i>coupier</i> , citrus, mangoes, breadfruit, breadnut, wild goyave, avocado.
trends	Plant supply diminishing.
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
agriculture	CARE/PLUS provides extension services.
forestry	Same as above.
inputs	ASODLO, a USAID-sponsored project to repair irrigation canals and cisterns.
veterinary	None
health	A dispensary about 3 km. away.
credit	<ul style="list-style-type: none"> <li>• None now, used to have BCA for loans.</li> <li>• Informal credit using land titles as collateral with normally 20-100% interest, uncompounded no matter how long the term of the loan.</li> <li>• Loans of tools (e.g., an ax) for 30% of the charcoal produced with it.</li> <li>• Women's <i>solde</i> credit association not functioning due to lack of cash. Formerly, each member contributed a small amount of cash to a pool to purchase some commodity (charcoal, grain, etc.), which would then be resold.</li> </ul>

Rapid Food Security Assessment Matrix	Banancier Cola	
	Male-Headed (5 households)	Female-Headed (1 household)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Household Type		Type C.
Marital Status	5 Married	Plasance, husband away, working in Port-de-Paix.
Age of HH Head		25
Family Composition (adults, children, other dependents)	Type A: 1 adult male, 2 adult females (avg. and range). Type B: 1 adult male, 1 adult female (avg. and range). Type C: 1 adult male, 3 adult females (avg.). Range 1-5 females.	1 adult female.
Education of HH Members	Type A: 50% of adults read and write, 100% of children attend school. Type B: 50% of adults read and write, 67% of children attend school. Type C: None of the adults read or write, 100% of children attend school.	Adult does not read or write. All children attend school.
Religion	Type A: Baptist/Catholic. Type B: Adventist. Type C: Catholic.	Catholic.
Length of Residence	Type A: 3.5 yrs. Type B: 6.5 yrs. Type C: 8 yrs (avg.).	Since birth (25 years).
Occupations of HH Members	Type A: School teacher, farmer, petit commerce, charcoal sales Type B: Farmer, mason, carpenter, farm laborer, charcoal maker Type C: Farmer, artisan, laborer, petit commerce.	No work.
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	Type A: Average 4 parcels, average 1 carreaux, 45 minutes away. Owner, rental, and free use. Type B: Average 3 parcels, average 0.8 carreaux, 15 minutes away. Owner, rental and sharecrop. Type C: Average 3 parcels, average 1.5 carreaux, 90 minutes away. Sharecrop.	None.
Access to Farm Equipment	Type A: 1.5 hoes and machetes (avg.). Type B: 1.5 hoes and machetes (avg.). Type C: None.	None.

Rapid Food Security Assessment Matrix	Banancier Cola	
	Male-Headed (5 households)	Female-Headed (1 household)
<b>III. LIVELIHOOD STRATEGIES</b>		
<b>Crops</b>		
crops grown	Type A: Sorghum, maize, plantain, beans, vegetables. Type B: Sorghum, maize, plantain.	Sorghum, maize.
use of production (marketed, consumed)	Type A: 0-75% sold, a few days to six months' production for auto-consumption. Type B: 30-45% sold, 7 days to three months' production for auto-consumption. Type C: None sold. No production for auto-consumption.	
constraints	Drought, insects, insecticide too expensive or unavailable, seeds too expensive.	
solutions	Migrate for work, buy insecticides	
<b>Access to Livestock (types, numbers, selling patterns, mortality rates)</b>		
goats/sheep	Type A: Own 0.5, 2 died. Type B: Own 0.5, sold 3. Type C: None.	
cows	Type B: Sold 1.	
cochons (pigs)	Type A: 1 died.	
donkeys	Type A: Own 0.5. Type B: 2 died. Type C: 2 died.	
chickens	Type A: 9.5, 22.5 died. Type B: 12.5 died. Type C: 25 died.	
<b>Other Income-Generating Activities</b>		
off-farm employment	Type A: Buys labor. Type B: Sells and swaps labor. Type C: Sells labor.	
migration	Yes, to find work.	
remittances	Money sent by migrant laborers for Types B & C households.	
firewood or charcoal sales	Type B: Yes, wood and charcoal production.	
trading	Yes, buying of agricultural produce and charcoal in another community, trips to Gonaives to sell same commodities.	

Rapid Food Security Assessment Matrix	Bananier Cola	
	Male-Headed (5 households)	Female-Headed (1 household)
other	Type A: Petit commerce, sale of vegetables, loans from family. Type B: Petit commerce, gardiennage, renting tools, loans from neighbors, sale of clothes, sale of vegetables. Type C: Artisanry, loans.	Loans from mother.
<b>IV. COPING STRATEGIES</b>		
Adjustment to Meals (number, amount, diversity)	Normal: Type A: 2 meals per day. Types B & C: 0 - 2 meals per day. During times of stress, reduce the number of meals per day.	Normally, 0 - 2 meals per day. During times of stress, reduce the number of meals per day.
Food Substitution	Type A: Reduce protein consumption, ate wild plants. Type B: Ate wild fruits. Type C: Put salt on tongue.	
Sale of Assets	Type B: Sold clothing.	
Borrowing	Yes. See "Credit" in Group Interview.	Yes. See "Credit" in Group Interview.
Credit	See above.	See above.
Migration	Type B: Yes, to find work.	
Wild Foods/Unusual Foods	Sweet cucumber, <i>coupier</i> , <i>bondieubay</i> , <i>d'olive</i> , <i>liane</i> , white spinach, guave.	Same as at left.
Food Aid	Cantine nearby, yet some people are excluded. Of those who participate, dry and wet feeding make up 15-25 % of food consumed by the entire family.	
"Gardiennage"	Type B.	
<b>V. FOOD CONSUMPTION PATTERNS</b>		
Composition of Diet (staples, protein foods, energy foods)	Type A: Maize meal, rice, beans, herring, citrus, fish. Type B: Maize meal, rice, beans, boiled or broiled mangoes, meat, fruit. Type C: Maize meal, sorghum, herring, peas.	Maize meal, wild plants, sorghum, peas, fruits, breadfruit, cooked mangoes.
Sources of Food	Nearly all Type A & B households bought most of their food at the market. Type C households bought all of their food at the market.	All purchased at the market.

<b>Rapid Food Security Assessment Matrix</b>	<b>Bananier Cola</b>	
	<b>Male-Headed (5 households)</b>	<b>Female-Headed (1 household)</b>
<b>Problems of Food Availability (market access, price, income, production shortfall)</b>	Increasing food prices over the past few years, crop failures due to drought, lack of capital.	
<b>Food Preferences</b>	Plantain, meat, rice, eggs, bananas.	
<b>Perception of Own Food Security</b>	All view it as precarious.	
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY DISTRIBUTION</b>		
<b>Involvement in Program</b>	There is one active Cantine, and some have participated in the dry feeding program in a nearby village. Children are favored in the Cantine Populaire.	
<b>Participants' perception of impact, strengths &amp; weaknesses of food aid programs</b>	<ul style="list-style-type: none"> <li>• The food aid supplied is inadequate for the number of qualified beneficiaries in the area.</li> <li>• Some of the families excluded from the distribution are within sight of the Cantine and view their exclusion as a form of discrimination by the neighborhood.</li> </ul>	
<b>Recommendations for improvement</b>	<ul style="list-style-type: none"> <li>• Increase the number of Cantines.</li> <li>• Replace some Cantine <i>responsables</i>.</li> <li>• Implement more dry feeding.</li> </ul>	

Rapid Food Security Assessment Matrix	Vieux Poste	
	Male-Headed (5 households)	Female-Headed (2 households)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Marital Status	4 married, 2 plasage	1 widow
Age of HH Head	36-61	49
Family Composition (adults, children, other dependents)	2-8 adults, average 5. 0-7 dependents, average 5.	3 adults, 4 children.
Education of HH Members	4 household heads with no formal education; 2 have been to school. Children 0-13	HH head: no formal education. Children 2-3 years.
Religion	1 Catholic, 1 Catholic/Voudou, 2 Protestant.	Catholic/Voudou.
Length of Residence	They are all from the P.C., except for one HH which moved here 20 years ago.	From the P.C.
Occupations of HH Members	Farmers	Farmer, charcoal producer
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	1-6 parcels, average 3. 2/16-15 carreaux, average 7 8. 0-10 km. from home, avg. 2 km. 52% of land inherited, 47% bought, 1% squatted. Used 3-42 years.	2 parcels, 1-1.5 carreaux, avg. 2.5. 0-5 km. from home, avg. 2.5. 50% of the land is purchased and 50% is inherited.
Access to Farm Equipment	Hoes, machetes, shovel.	Machetes
<b>III. LIVELIHOOD STRATEGIES</b>		
Crops		
crops grown	Millet, maize, manioc, pistachio, pois, pumpkin, plantain, sweet potato.	Maize, banana, millet, pois.

Rapid Food Security Assessment Matrix	Vieux Poste	
	Male-Headed (5 households)	Female-Headed (2 households)
use of production (marketed, consumed)	People tend to consume production rather than selling it.	Same as at left.
constraints	Lack of water, insects, labor, no means of production, conservation of crops.	
solutions		
<b>Access to Livestock (types, numbers, selling patterns, mortality rates)</b>		
goats/sheep	Own 0-48, avg. 15. Sold 0-20. 0-1 died.	1 goat in gardiennage. Lost 2 goats.
cows	Own 0-4, avg. 1.2. Sold 0-1. 0-1 died.	Own none. Sold six cows two years ago for funeral expenses.
cochons (pigs)	Own none.	None.
donkeys	Own 0-3, avg. 1. Sold 0-2. 0-2 died.	Own none. Burik shared among women. Sold three burik two years ago to pay funeral expenses.
chickens	Own 0-7, avg. 1. Sold 0-2. 3-100 died.	Own none, doesn't know how many died.
<b>Other Income-Generating Activities</b>		
off-farm employment	3 HH	Yes
migration	1 HH	No
remittances	No	No
firewood or charcoal sales	4 HH. 2 use cactus roots.	Yes. Use cactus roots.
trading	Yes	Used to, but now no capital.
other	<ul style="list-style-type: none"> <li>• Some people raise pigeons. The main constraint is the lack of veterinary services; many animals are affected by diseases.</li> <li>• One HH works with the Baptist project.</li> <li>• Laundry.</li> <li>• Constraint: Lack of basic materials for artisans to work with.</li> </ul>	None.
<b>IV. COPING STRATEGIES</b>		

Rapid Food Security Assessment Matrix	Vieux Poste	
	Male-Headed (5 households)	Female-Headed (2 households)
Adjustment to Meals (number, amount, diversity)	Yes	Yes
Food Substitution	Yes	Yes
Sale of Assets	Yes, especially animals.	Nothing to sell.
Borrowing	5 HH	Yes
Credit	1 HH, with interest	No
Migration	1 HH	No
Wild Foods/Unusual Foods	Yes	Yes
Food Aid	5 HH	Yes
"Gardiennage"	2 HH	Yes
<b>V. FOOD CONSUMPTION PATTERNS</b>		
Composition of Diet (staples, protein foods, energy foods)	Millet, maize, flour, sweet potato, leaf vegetable.	Petit mil, maize, rice, leafy vegetable, manioc, wheat. No pois.
Sources of Food	Own production 4 HH; all purchase; wild plants 1 HH; borrowing 3 HH.	Purchase, and gather wild plants.
Problems of Food Availability (market access, price, income, production shortfall)	Low production, low income, high prices (especially of imported food), lack of capital, not enough food in Cantines.	Same as at left.
Food Conservation	No granaries.	Same as at left.
Food Preferences		
Perception of Own Food Security		

<b>Rapid Food Security Assessment Matrix</b>	<b>Vieux Poste</b>	
	<b>Male-Headed (5 households)</b>	<b>Female-Headed (2 households)</b>
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY DISTRIBUTION</b>		
<b>Number of Beneficiaries</b>	All household members benefit from the Cantine (except 1 household).	All members.
<b>Involvement in Program</b>	No	
<b>Regularity</b>	No	
<b>Participants' perception of impact, strengths &amp; weaknesses of food aid programs</b>	Not enough food, small rations, favoritism, poor hygiene.	Same as at left.
<b>Recommendations for improvement</b>	<ul style="list-style-type: none"> <li>• More Cantines</li> <li>• Combination of dry distribution with Cantines</li> <li>• Better organization</li> <li>• More discipline</li> <li>• Increase dry distribution; it does not last more than a week.</li> </ul>	

Rapid Food Security Assessment Matrix	Bord de Mer
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
Agro-Ecological Zone	Irrigated zone
Population (number, household types)	1500 households; 35-50% women-headed households
Major Crops Grown, Crop Calendar, and Trends	Two major seasons. Main season Nov-April, with <i>peas, maize and pistache</i> . However, they have not planted those fields for the last 5 years. Only 10% of households have irrigated land, but these 10% plant all year round. Landed people hire agricultural laborers on a daily basis to work their land.
Social Organization (associations, food-sharing networks)	<i>Groupe de Developpement de Jeunes</i> since 1991.
Major Crises, and Coping Strategies	<p><u>Crises:</u></p> <ul style="list-style-type: none"> <li>• 1954-Cyclone Zele</li> <li>• 1971-Flood (houses and gardens destroyed). Since then, chronic drought.</li> <li>• 1987-Massacre de Jean Rabelle-Forty households were destroyed. There is a general fear in the population.</li> </ul> <p><u>Strategies:</u></p> <ul style="list-style-type: none"> <li>• Intensification of charcoal production. <i>Dessouchage</i> of roots for charcoal began in 1978.</li> <li>• Emigration to the United States since 1978. This costs \$3,500, and thus only those with the means can adopt this strategy.</li> </ul>
Other Income Generating Activities	Fishing, day labor, sale of gravel, masons, cabinet-makers, etc.
Child Care in Mother's Absence ( <i>sevrage</i> (weaning), introduction of solid food)	Grand Parents, older children & neighbors
Community Participation in Food Aid	2 Cantines Populaires since December 1992.
Community Problems and Needs	<ul style="list-style-type: none"> <li>• Agriculture: Drought, lack of seeds, insects. Getting water for irrigation is the number one priority of the community.</li> <li>• Fishing: Lack of means of production, not even available in Port-au-Prince.</li> <li>• Petty Commerce: Small benefit when done within the community; not enough capital.</li> <li>• Illness and access to hospitals (bad roads and no transport).</li> </ul>

Rapid Food Security Assessment Matrix	Bord de Mer
<b>ACCESS TO INFRASTRUCTURE</b>	
health facilities	One health center with one <i>auxilliare</i> . Not enough medicine; nearest hospital is in Jean Rabelle and charges 1 gde for consultation. Common problems: <i>cholérine</i> diarrhea, fever, malaria, tuberculosis, yellow fever.
schools	5 schools: 3 Protestant, 1 <i>communautaire</i> , 1 public. \$50-60 dollars per child per year for the private school.
markets	No market in town. Nearest market in Jean Rabelle (5 km); La Coma (15 km).
roads/transport	Poor roads, especially during rains.
storage	None
water sources	Drinking-water pipe since 1985.
<b>ACCESS TO NATURAL RESOURCES</b>	
livestock	Goats, sheep, burik, mules, pigs, guinea-fowl, chickens.
wood	Depleted around the locality. It takes more than 6 days to get to the nearest collection point, and it takes three weeks' gathering to make 2 sacks of charcoal. There are no regulations to prevent people from cutting down the trees. The <i>de moitie</i> tenure system applies to those areas.
fish resources	Conons, torpillier, no nets since 1990. 90% of households depend on fishing. Best period for fishing is June-September.
wild food	Wild cats ( <i>chat morron</i> ). Products from wild plants depleted.
trends	Fewer resources each year.
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
agriculture	No
forestry	Two years ago, some tree planting, but the experiment failed.
inputs	No
veterinary	Private service done by "pasteur" but lack of medicine. Problem: diarrhea

<b>Rapid Food Security Assessment Matrix</b>	<b>Bord de Mer</b>
health	No
credit	No

Rapid Food Security Assessment Matrix	Bord de Mer	
	Male-Headed (3 households)	Female-Headed (2 households)
<b>SPECIFIC HOUSEHOLD INTERVIEWS</b>		
<b>I. DEMOGRAPHIC INFORMATION</b>		
Household Type		
Marital Status	Married	2 widowed
Age of HH Head	40-54. Average 45.	38-47, average 42.
Family Composition (adults, children, other dependents)	3-5 adults, avg. 4. 1-5 children, avg. 3.	3-4 adults, avg. 2. 3-8 children, avg. 6.
Education of HH Members	Range: 0-10	1-7
Religion	2 Catholic, 1 Protestant.	Baptist.
Length of Residence		
Occupations of HH Members	1 fisherman, 1 fisherman & farmer, 1 retired employee who is now a farmer.	Petty commerce (mainly fish).
<b>II. ACCESS TO RESOURCES</b>		
Access to Land	One household owns one carreau of irrigated land. It is inherited and the owner sharecrops the field, 500 m from the house. The dry land has not been cultivated since 1978; it is now used for livestock and charcoal production. It is 1-10 km from the house; tenure is ownership, sharecropping, and <i>de l'etat</i> status.	No irrigated land. Unirrigated land 5 km from the house, sharecropped.
Access to Farm Equipment	Only one household owns a hoe and machetes. The other two HHs have no equipment.	No equipment.
<b>III. LIVELIHOOD STRATEGIES</b>		
Crops		
crops grown	On irrigated land, plantain, bananas, manioc and maize.	Same as at left.

Rapid Food Security Assessment Matrix	Bord de Mer	
	Male-Headed (3 households)	Female-Headed (2 households)
use of production (marketed, consumed)	<i>Agriculture:</i> One household reported a harvest on irrigated land, and that it consumed all of it. <i>Fish:</i> Only the surplus of the production is purchased. Most of the time it is consumed by the HH.	No agricultural or fish production.
constraints	Lack of means of production.	Lack of means of production, of labor and of knowledge.
<b>Access to Livestock (types, numbers, selling patterns, mortality rates)</b>		
goats/sheep	0-9 goats/sheep owned. 0-2 sold. 3-9 died.	None owned. None sold. Six died last year.
cows	None owned. One HH sold one.	None.
cochons (pigs)	None.	None.
donkeys	Own two. One died.	Own none. One died.
chickens	Own 0-3. 0-12 died.	Own two now. 30 died last year.
<b>Other Income-Generating Activities</b>		
off-farm employment	Petty commerce for all the households.	No, because lack money.
remittances	Only one.	None.
firewood or charcoal sales	None	
other	<ul style="list-style-type: none"> <li>• Fishing. One HH has one canoe, one bad net, no <i>nas</i>. Another HH is part of a group that has one unfinished canoe, five <i>nas</i>, and one <i>filet</i>. The group shares the catch. One <i>ligne</i>.</li> <li>• One HH has a <i>pension</i>.</li> </ul>	None.
<b>IV. COPING STRATEGIES</b>		
Adjustment to Meals (number, amount, diversity)	Three to two for one household; 2 to 0 for the rest of the households. Sometimes only the children eat.	From one to none.
Food Substitution	None	
Sale of Assets	Sale of livestock for 2 households.	None.

Rapid Food Security Assessment Matrix	Bord de Mer	
	Male-Headed (3 households)	Female-Headed (2 households)
Borrowing	None.	None.
Credit	1 household obtains food on credit.	None.
Migration	1 household.	None.
Wild Foods/Unusual Foods	None.	None.
Food Aid	Two households sometimes depend on Cantine Populaire.	Depends entirely on Cantine Populaire.
"Gardiennage"	None.	None.
<b>V. FOOD CONSUMPTION PATTERNS</b>		
Composition of Diet (staples, protein foods, energy foods)	Fish: All houses fish and purchase fish. Meat: Only one household purchased. Peas: Two households purchased. <i>Petit Mil</i> : One household purchased. Maize and rice: All purchased.	Fish: Twice a week. No meat, peas, or millet. Maize and rice sometimes. ALL PURCHASED.
Sources of Food	See above.	See above.
Problems of Food Availability (market access, price, income, production shortfall)	<ul style="list-style-type: none"> <li>• Lack of means of production</li> <li>• Depletion of natural resources</li> <li>• High price of goods</li> <li>• Production shortfall, except 1 household.</li> </ul>	
Food Processing	None.	None.
Traditional Food Sharing Practices (including ceremonies and festivals)	Only one household.	No, nothing left to share.
Food Preferences	Rice, peas, meat.	No preference, whatever they get.
<b>VI. PARTICIPATION IN FOOD AID PROGRAMS: CANTINES POPULAIRES AND DRY DISTRIBUTION</b>		
Involvement in Program	None	None

<b>Rapid Food Security Assessment Matrix</b>	<b>Bord de Mer</b>	
	<b>Male-Headed (3 households)</b>	<b>Female-Headed (2 households)</b>
<b>Participants' perception of impact, strengths &amp; weaknesses of food aid programs</b>	<ul style="list-style-type: none"> <li>• Lack of organization</li> <li>• Small ration size</li> <li>• No guarantee of food everyday</li> <li>• No cantine in dry area of community.</li> </ul>	Same as at left.
<b>Recommendations for improvement</b>	<ul style="list-style-type: none"> <li>• More Cantines Populaires</li> <li>• Cantines on the hills</li> <li>• Census of households</li> <li>• Prefer dry distribution.</li> </ul>	

<b>Rapid Food Security Assessment Matrix</b>	<b>Paskatabwa (Passe Catabois)</b>
<b>GROUP INTERVIEW FOR SURVEY AREA</b>	
<b>Agro-Ecological Zone</b>	<b>Inland Dry</b>
<b>Population (number, household types)</b>	<b>Around 4,000. 25 % female-headed households. Population increase despite migration</b>
<b>Major Crops Grown, Crop Calendar, and Trends</b>	<b>Major crops: petit mil, maize, gros pois blanc, gros pois rouge, pois inconnu, manioc, patates, peanuts, pumpkin, plantain, melons. Seasons: March-July (main) and October-March (secondary).</b>
<b>Social Organization (associations, food-sharing networks)</b>	<b>Kwadi work groups and Lakou. Kwadi groups include both kin and friends. They are paid in kind or in cash when the work is non-reciprocal, even if the members are relatives.</b>
<b>Major Crises, and Coping Strategies</b>	<ul style="list-style-type: none"> <li>• 1954-Cyclone Azelle (wind and devastation)</li> <li>• 1967-69-Severe drought, mostly drought since that time. Lost 150-200 children. Since then, drought has started to last more than one year.</li> <li>• 1985-Flood: large amounts of destruction to land, livestock, trees, top soil. At that time, migration began as a major coping strategy. Since then, soil fertility has decreased.</li> <li>• 1993-This year, 299 people died when the boat they were sailing to Miami sank.</li> </ul>
<b>Population Trends (out-migration)</b>	<b>1/6th of village involved in migration.</b>
<b>Other Income Generating Activities</b>	<b>Occasional agricultural labor (locally and in neighboring zones, paying \$1/day for work by little children), charcoal production, petty commerce, and gardiennage.</b>
<b>Child Care in Mother's Absence (sevrage (weaning), introduction of solid food)</b>	<b>Older persons and children, feeding as needed, weaning age 12-19 months.</b>
<b>Community Participation in Food Aid</b>	<b>The majority of household members eat at the Cantines Populaires.</b>

<b>Rapid Food Security Assessment Matrix</b>	<b>Paskatabwa (Passe Catabois)</b>
<b>Community Problems and Needs</b>	<ul style="list-style-type: none"> <li>• Lack of water for irrigation</li> <li>• Animal diseases</li> <li>• No income-generating activities</li> <li>• Insufficient, costly and distant health care/facilities</li> <li>• Poor transportation (roads and cars)</li> <li>• Not enough food in Canteens (rations are small, favoritism)</li> <li>• Poor housing (local building materials are being depleted, especially for poor HHs).</li> </ul>
<b>ACCESS TO INFRASTRUCTURE</b>	
health facilities	No
schools	2 private secondary, 5 private primary, 1 public secondary, mixture of religious and private schools. Tuition = \$40-\$60, supplies = \$200-\$250 per child.
markets	Small market (Fridays), regional market in Beaux-Champs.
roads/transport	When river floods, it constrains access to wood.
storage	Cereals stored in sacks in the homes. No granaries.
water sources	Year-round piped-in drinking water, a river 15 minutes away (dry 2-3 months per year) used for laundry and bathing.
<b>ACCESS TO NATURAL RESOURCES</b>	
land	Inheritance (50%), purchased (50%).
livestock	Cows, goats, horses, mules, donkeys, sheep, chickens.
wood	Less and less in the area. Two days to gather and three days to make it into charcoal. Normal wood supply is depleted, and they depend on cactus roots.
fish resources	No
wild food	Guinea hen. baited by poisoned seeds. Wild plants: concombres, wild yam, nime, tamarind, "mombam," cactus, wild goyave, sweet pea, "bondicubay," vine "ensken," "l'arnite," seeds from bois blanc.
trends	Diminishing supplies of game and plants.

<b>Rapid Food Security Assessment Matrix</b>	<b>Paskatabwa (Passe Catabois)</b>
<b>ACCESS TO GOVERNMENT OR DEVELOPMENT SERVICES</b>	
agriculture	CARE Plus, Baptist project
forestry	same as above
veterinary	Baptist project
health	No
credit	No

# CALENDRIER AGRICOLE BOMBARDOPOLIS - REGION I

MOIS	JAN	FEV	MAR	AVR	MAI	JUIN	JUIL	AOU	SEP	OCT	NOV	DEC
<b>CULTURE</b>												
PISTACHE			■	■	■	■	■	■	■		■	■
GIGIRI (ROROLI)			■	■	■	■	■	■	■			
POIS			■	■	■	■	■	■	■		■	■
MAIS			■	■	■	■	■	■	■			■
PETIT MIL			■	■	■	■	■	■	■		■	■
POIS CONGO			■	■	■	■	■	■	■		■	■
MANIOC		■	■	■	■	■	■	■	■			
PATATE	■	■	■	■	■	■	■	■	■			
IGNAME	■	■	■	■	■	■	■	■	■	■	■	■
CANNE-A-SUCRE		■	■	■	■	■	■	■	■	■		
MALANGA (TAYO)			■	■	■	■	■	■	■		■	■
BANANE		■	■	■	■	■	■	■	■			
GIROMOND		■	■	■	■	■	■	■	■			
MELON		■	■	■	■	■	■	■	■			

LEGENDE:

PREPARATION



SEMIS



SARCLAGE



RECOLTE



MS

# BARBE PAGNOLE - REGION II

(Zone Montagneuse)

MOIS	JAN	FEV	MAR	APR	MAY	JUIN	JUIL	AOU	SEPT	OCT	NOV	DEC	JAN	REMARQUES
<b>CULTURE</b>														
MAIS			■	■		▨	▨							Toute
GROS POIS				■		▨			▨		▨			L'annee
MANIOC	■	▨	■		▨	▨		▨	▨	■	■	▨		1 a 2 an
POIS CONGO	▨	▨	▨	▨	▨	▨		▨	▨		▨	▨		
POIS INCONNU								▨	▨	▨	▨			
PATATE	▨	▨	▨	▨	▨	▨		▨	▨	▨	▨	▨		
POIS SOUCHE				■		▨			▨	▨	▨			
IGNAME	▨	▨	▨	▨				▨	▨			▨		
TAYO			▨	▨	▨	▨		▨	▨					

LEGENDE:

SEMIS

SEMIS ACCELEREE

RECOLTE



196

# CALENDRIER AGRICOLE PASSE CATABOIS - REGION III (Zone de Haute Altitude)

MOIS	JAN	FEV	MAR	AVR	MAI	JUIN	JUIL	AOU	SEP	OCT	NOV	DEC
<b>CULTURE</b>												
SORGHO (cycle court)			■	■	■	■	■	■	■		■	■
SORGHO (cycle long)	■			■	■	■						■
MAIS (3 mois)	■	■	■	■			■	■		■	■	
MANIOC (12 mois)				■	■							
HARICOT		■	■	■		■	■	■		■	■	
POIS INCONNU								■		■	■	
PATATE				■	■	■				■	■	
IGNAME				■	■	■						■
PISTACHE			■	■	■		■	■				
POIS CONGO (8 mois)				■	■							■
POIS CONGO (1 a 2 ans)				■	■							■
MALANGA (1 a 2 ans)												

LEGENDE:

SEMIS

RECOLTE



127

# CALENDRIER AGRICOLE LAFOND REGION - IV

MOIS	JAN	FEV	MAR	AVR	MAI	JUIN	JUL	AOU	SEP	OCT	NOV	DEC
<b>CULTURE</b>												
BANANE							■	■	■			
CANNE-A-SUCRE			■	■	■							
MAIS			■	■	■		■	■				
MANIOC			■	■	■	■	■	■	■	■		
PATATE			■	■	■		■	■			■	■
PISTACHE							■	■			■	■
POIS HARICOT			■	■	■		■	■				
POIS CONGO			■	■	■						■	■
POIS INCONNU			■	■	■	■	■	■	■	■		
PETIT-MIL			■	■	■							

**LEGENDE:**

■ PREPARATION

■ SEMIS

■ PLANTIC

■

178