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## OUTREACH GRANT PROJECT EVALUATION

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## SUMMARY OF FINDINGS

### 1. Background

The worldwide Title II Outreach project was originally approved in August 1978 and extended in late 1981 for two years. To date twenty Outreach Grants totalling \$12.7 million have been funded in 16 countries. The main purpose of these grants is to assist the voluntary agencies to comply with the Congressional mandate that food aid reach low-income populations.

The original Outreach project focused primarily on enabling the voluntary agencies to expand Title II programs to needy populations by assisting with the funding of distribution costs, e.g., in-country transportation, storage, and accountability. The project amendment, reflecting AID directives that PL 480 resources were to be used more effectively to achieve developmental objectives, provided that up to 20% of an Outreach grant would finance non-logistic enrichment items such as scales, small tools, training, mineral supplements, etc.

### 2. The Major Achievements of Outreach

#### (1) Increased Distribution

By supporting additional storage capacity and expanded transportation systems, Grants to countries such as Burundi, Sierra Leone and Upper Volta, enabled Title II programs to increase recipients by more than 60%. In the SAWS programs in Haiti and Rwanda, Outreach provided start-up costs, establishing Title II services to new recipients. By subsidizing transportation, Outreach enabled programs in Togo, Haiti and Upper Volta to somewhat extend to hard to reach recipients who hadn't been served previously.

#### (2) Improved logistic support and reduced distribution costs and food losses

New warehousing in Rwanda, Haiti, Upper Volta, and Sierra Leone is providing assured adequate storage which has improved forward planning and reduced stock disruptions. Suitable warehouse design and location increased the efficiency of inventory control and handling, reducing costs for repackaging, handling, indirect transport, fixed labor and fumigation. In addition, there has been less food loss from spoilage, rodents and pilferage. The construction of central warehouses and local storage facilities reduced recurrent rental expenses and the need for relatively higher cost mobile services.

Outreach funding of vehicles and repair facilities in Haiti eliminated dependence on unreliable commercial truckers, improving the timeliness of deliveries and reducing costs. Transport subsidies in Upper Volta enabled the volag to centrally manage the commercial commodity distribution which has reduced unit costs and increased reliability.

A cost-effectiveness analysis showed that, in the countries studied, the savings in logistics and distribution costs generated by the Outreach project exceeded the costs of the project.

Outreach contributed to increasing potential responsiveness to disasters in Haiti and Upper Volta by supporting more reliable transportation systems, more extensive distribution points, and larger food reserves.

### (3) Program improvement

Outreach provided indirect support to programmatic improvement by financing logistics costs that had been paid by local sources thus releasing that money for program management, technical assistance and complementary activities. Direct support for program supervision resulted in improved nutrition education and surveillance and some related developmental activities.

In Haiti, Rwanda, Upper Volta and Burundi, Outreach has been a catalyst in improving the coordination between the voiaqs and the local USAID missions.

## 3. Major Conclusions and Recommendations of the Evaluation Team

(1) A fundamental difficulty with planning an Outreach Grant is that Title II commodity levels are determined annually and therefore even a two or three year Outreach project is developed without assurance that the commodities will be available to support the projected program size. Outreach is not synchronized with either the financial year or submission of the Annual Estimate of Requirements, causing accounting discrepancies and problems coordinating annual Outreach tranches with commodity levels.

It is recommended that Grant requests be developed, to the extent possible, in conjunction with annual or multi-year operational plans. In addition, it might be advisable that the Outreach Grant year be synchronized with the AER so that requests for annual tranches would coincide with submission of the AER and the Outreach accounting year would coincide with the financial year.

(2) Although relationships between the voluntary agencies and USAID missions are almost universally cordial and mutually respectful, excepting in countries in which a Food for Peace or voluntary agency officer is adequately informed and has the time, there is a minimum of communication on substantive issues. Relationships between AID/W and the voluntary agencies are smooth but there are unavoidable delays in expediting project approvals and amendments.

It is recommended that USAID missions be given adequate personnel resources to devote the necessary time to working with the voluntary agencies on the planning and implementation of Title II/Outreach projects, and to study areas of potential collaboration.

(3) Outreach is a responsive, flexible, and germane mechanism for supporting Title II projects. Both the USAID missions and the voluntary agencies favor having Outreach administered by AID/W.

It is recommended that Outreach continue to be administered by AID/W and programmed as it is presently being done.

(4) Outreach has, either directly or indirectly, provided small amounts of support for developmental activities. However, in order to have a major effect, Outreach money for "enrichment" would have to be significantly increased.

It is recommended that increased money for enrichment be available through Outreach and the 20% limitation be eliminated. However, logistic support should still be given priority if a choice must be made. USAID missions should work more closely with the PVOs in identifying developmental activities that can be associated with Title II and that reinforce the host government's developmental priorities and the mission's strategy. These activities should be supported, to the extent possible, by OPGs or other mission funds and Outreach requested only if no other sources are available.

(5) A primary purpose of Outreach was to support the Congressional mandate that PL 480 target the poorest and most remote areas and malnourished populations. Outreach did finance some targeting of recipients in more geographically remote areas. Most programs attempt to target poorer communities but there is rarely anything but subjective information on which to make the selection or to base an evaluation.

It is recommended that there be a more systematic approach to selecting the more "needy" beneficiaries in order to maximize the benefits resulting from Outreach support. Outreach money should be available to assist the volags to identify more needy communities and/or more needy families within communities, and to redirect Title II to those communities and/or families. This may require some applied research for establishing selection criteria and procedures.

(6) It is generally more costly to serve communities that are further away from the warehouse. However, these costs may be justified by the relative severity of need in those communities.

It is recommended that Outreach subsidize the distribution to populations beyond that distance at which the program is self-supporting, taking into account non-Outreach contributions, if warranted by the relative need of the population.

(7) Financial analyses of alternate approaches to organizing the logistic support systems would enable the PVOs to ascertain the most cost-effective option. However, the least-cost solution to storage or transportation is not always practical because of the particular circumstances in the host country.

It is recommended that if support for storage or transportation is sought in an Outreach proposal, a financial analysis and possibly an economic analysis be done to determine the least-cost solution. If the request cannot be justified in financial terms, then the mitigating circumstances should be explained and given full consideration in awarding the Grant.

If the PVOs do not have the necessary expertise on their in-country or central staffs to carry out the financial analysis, technical assistance should be provided. To the extent possible, this assistance should come from the USAID mission or regional AID office.

(8) Outreach began at a time Title II was growing. It was a mechanism for AID to provide support to enable the PVOs to reach greater numbers of harder to reach recipients. Although Outreach was approved as a three year project, continuation was implicit in the growth environment in which the PVOs planned costly expanded distribution. However, as greater demands were made on Outreach monies, Outreach had to put more emphasis on requiring programs to plan for phasing over the assumption of Outreach-funded costs to other sources of support.

Outreach Grants were awarded to programs that could not afford to achieve project objectives to expand and/or strengthen Title II without assistance and most will continue to need outside support after Outreach has ended. Other sources of funding may be able to meet some of the program costs but in the majority of the countries in which there have been Outreach Grants, Outreach is the only viable source for most of these costs.

It is recommended that Outreach not automatically be terminated at the end of a Grant. Phase-over plans should be made for those costs that can realistically be met internally, or by other outside sources. However, in programs in which there are expenses that cannot be funded in any other way, Outreach should continue to provide support.

In reviewing new Outreach Grant proposals, priority should be given to those that request logistic or programmatic support to strengthen, rather than expand existing programs, excepting in those countries in which growth of the Title II program is a priority of the USAID missions and AID/W.

In sum, Outreach is an effective mechanism and has enabled Title II programs to reach greater numbers of needy recipients. Outreach has resulted in greater efficiencies in the logistic support systems and in programmatic improvements. Continuation of the project is strongly endorsed. A few administrative adjustments are recommended as well as increased support for targeting and enrichment.

## 1. INTRODUCTION

### 1.1. Purpose

The purpose of the evaluation was to review the accomplishments and drawbacks of the Outreach Project with a view to making recommendations about Project modifications that would enable Outreach to more effectively support the Title II program. In particular, the evaluation focused on the role of Outreach in enabling Title II programs to expand and/or retarget to needy populations, the degree to which Outreach supported qualitative improvement, particularly with regard to developmental activities, and the effectiveness of Outreach achievements in relation to costs. In addition, the team studied the potential for Outreach costs to be covered by other sources at the end of the Grant period.

### 1.2. Approach

The approach was to study on-going Outreach Grants, assess the benefits and problems and draw some conclusions based on past experience. There were in-depth case studies in the field of nine projects in four countries and desk reviews of other Outreach projects. Discussions were held with Food for Peace staff, individuals in the Bureau for Food for Peace and Voluntary Assistance and the Regional Bureaus in AID/W, REDSO/WA, REDSO/EA, and USAID missions in Haiti, Upper Volta, Burundi, and Rwanda, persons in the head offices of CARE, Catholic Relief Services, Church World Service, and the Seventh Day Adventist World Service, voluntary agency field staff, host government officials and others working with Title II programs in-country.

The evaluation team worked together in Washington for one week in mid July 1982, meeting with people in AID/W and the voluntary agencies, and studying Outreach files. The team prepared a common framework for the field studies which included lists of issues to discuss with the USAID missions, the voluntary agencies, and personnel in distribution centers, and an outline of cost data to be gathered from each of the projects to be visited. During August 1982, two members of the team visited the CARE, CRS, CWS and SAWS Title II/Outreach projects in Haiti. The other two team members visited the Upper Volta/CRS, Burundi/CRS, Rwanda/CRS, and Rwanda/SAWS projects. The draft report was prepared in Washington during September 1982. Participants were not interviewed due to the limited time and scope of the evaluation.

### 1.3. The Field Studies

While the field studies did not produce all the quantitative or qualitative data that would have been desirable in order to fulfill the evaluation purpose, the team collected what was feasible within the time allowed. In assessing the role of Outreach in enabling Title II programs to expand and retarget, we were able to determine the increase in the number of recipients and differences in geographic distribution of beneficiaries before and after Outreach. (See Secs. 4.2.4., 5.5.1., Appendix 5-A) However, we were not able to evaluate the degree to which these programs focused on "needy" populations because of a lack of information on relative need among participants compared with non-participants. (See Sec. 3.5.)

The team studied the effect of Outreach on qualitative improvement in the programs. We were able to find evidence of greater efficiencies in the logistic support system and improved reliability of commodity distribution. (See Secs. 4.2.1., 4.2.3., 5.5.2., 5.5.3., 5.5.4.) With more time the team would have been able to obtain quantitative data on the effect of Outreach on reducing food losses and on the timely delivery of commodities. However, all of the methodologies we considered would have required a significant level of effort which, we believed, could not have been justified either on the basis of the quality or the usefulness of the data that would have been produced.

Ascertaining the effect of Outreach on developmental activities was completely based on subjective information. Outreach support to programmatic improvement in the programs studied was indirect, including transportation for supervisors and Outreach financing of commodity movement that released local money for center and school based activities. The outcomes of this type of support would have been difficult to identify without extensive field visits, and even then it would have been almost impossible to relate them specifically to a single input, such as Outreach.

The team looked at the cost-effectiveness of Outreach in terms of numbers of beneficiaries served. (See Secs. 3.6.1. and 3.6.2.) We were not able to measure "benefits", such as the effect on poverty or nutritional need, and therefore were not able to ascertain how much "good" was achieved with Outreach monies. Even collecting data on program costs was difficult in the short time allowed. While the team was able to obtain information on direct and indirect storage and distribution costs in each of the programs, there were gaps in almost every case. In some, it wasn't possible to meet with key people, in others, the PVO simply did not have the data and getting them would have required a lot of research. Moreover, the team was unable to collect adequate financial information on the program without Outreach, with which to compare costs per recipient under Outreach, as suggested in the Scope of Work. Therefore, the analysis of "with" and "without" Outreach (Sec. 3.6.3.) was partly based on hypothetical data.

#### 1.4. Organization of the report

The report is organized into three main parts. The Background section is a very brief overview of Outreach: the history of the Outreach Project, characteristics of Outreach Grants, and the major achievements. The final two sections include all of the case studies. The Issues section is the main body of the report in which we have analyzed findings from the case studies and other aspects of our review. This section includes all of the team's recommendations. The major issues discussed are:

- 1) Is the Outreach project designed and managed most effectively to; (a) enhance Title II programs, and (b) be responsive to Grant requests and operations? (See Sec. 3.1.)
- 2) How do the relationships between the voluntary agencies, USAID missions, and AID/W affect the design and implementation of Outreach Grants? (See Sec. 3.2.)

- 3) What are the advantages and disadvantages of Outreach compared with alternative sources of funding or alternative mechanisms for programming Outreach? (See Sec. 3.3.)
- 4) To what extent does Outreach support the developmental objectives of Title II and the USAID missions and should Outreach support of developmental activities be increased? (See Sec. 3.4.)
- 5) Has Outreach support enabled Title II programs to retarget or expand to needy populations, e.g. malnourished children and/or nutritionally at risk individuals from low-income households in poor and/or remote sections of the country? (See Sec. 3.5.)
- 6) Were the Outreach Grants effective in relation to the costs incurred? (See Sec. 3.6.)
- 7) Given that Outreach Grants are supposed to be catalytic and short-term as opposed to a long-term subsidy, to what extent will the costs funded by Outreach be assumed by the host government, program participants, the implementing PVO, or other sources after Outreach is terminated? (See Sec. 3.7)

There are three major overriding issues that were outside the purview of this study and therefore are not discussed directly in the report. However, they are the basic elements of policy decisions on the future of Outreach and therefore should be kept in mind as the reader reviews the report. These are:

- 1) If it is agreed that Outreach, or another centrally-funded mechanism, is best suited to supporting activities that are designed to increase the developmental effect of Title programs, what is the optimal way of providing the necessary funding? Several options may be considered: increasing the dollar value of Outreach; establishing parallel projects for supporting logistics and enrichment; monetizing Title II commodities to raise funds for enrichment; etc.
- 2) What is the appropriate total dollar allocation for the Outreach Project? The primary underlying consideration is the proportion of Outreach that will be available for enrichment support.
- 3) What are the criteria for selecting among countries?

## 2. BACKGROUND

### 2.1. History

The worldwide Title II Outreach project was originally approved in August 1978 and extended in late 1981 for two years. To date twenty Outreach Grants, totalling more than \$12.7 million, have been funded in 16 countries. (See Table 2-1). The main purpose of these grants is to assist PVOs to comply with the Congressional mandate that food aid reach low-income populations. Often the poorest regions are the most difficult and, thus, most expensive to reach.

Outreach began at a time when transport costs were escalating and many of the least developed countries were experiencing severe economic problems and agricultural shortfalls. Thus many governments were no longer able to support transportation of the commodities to the extent required and recipient contributions, where they are collected, could not be adequately increased to compensate. Nor did the voluntary agencies have adequate resources to finance totally the high program costs.

The original Outreach project focused primarily on enabling the voluntary agencies to expand the Title II program to needy populations by assisting with the funding of distribution costs, e.g. in-country transportation, storage, and accountability. The initial guidelines indicated that Outreach monies could be used for recurring expenses. However, some of the early proposals claimed the relative cost-effectiveness of warehouse construction and purchase of vehicles as compared with leasing, and were funded.

The project amendment, responding to a perceived need and reflecting the AID directives that PL 480 resources were to be used more effectively to achieve developmental objectives, provided for Outreach financing of non-logistic support costs as well. The revision allowed up to 20% of the Grant to be used for enrichment items such as scales, charts, small tools/equipment, education materials, training, and vitamin and mineral supplements, etc. In order to further enhance the developmental effects of Title II commodities and to foster increased coordination with the USAID country strategies, a more recent Grant has allowed exceptions to the ceiling up to 37% of the total budget. The amendment also suggests that project proposals incorporate more careful planning for how recurring costs will be covered after an Outreach Grant has ended.

### 2.2. Application

Most of the Outreach Grant, awarded between 1978 and 1981 when steadily increasing quantities of Title II commodities were available, assisted established Title II programs to reach greater numbers of beneficiaries. A few were awarded to PVOs that were starting new programs. These Grants were used to improve logistic capability by funding commodity transport, construction or rental of additional warehouse space, fumigation and pallets, administrative staff and end-use checkers, and vehicles for supervision and management. All of the Grant requests were justified on the basis of national poverty and serious malnutrition. Most indicated that expansion into remote and

Table 2-1: Title II Outreach Grants Summary

	<u>78</u>	<u>79</u>	<u>80</u>	<u>81</u>	<u>82</u>	<u>Projected 83</u>
auritania/CRS	218,800	280,000	-	541,543	602,043	-
aiti/CARE	-	28,461	-	276,026	104,927	-
aiti/CRS	-	246,100	119,810	-	35,810	-
aiti/CWS	-	268,970	-	171,700	-	-
aiti/SAWS	-	149,950	328,700	-	213,050	237,025
pper Volta/CRS	-	315,624	359,291	590,783 <sup>1/</sup>	873,923	589,982
kenya/CRS	-	242,680	182,440	666,130	-	400,000
rwanda/CRS	-	114,000	17,472	-	-	126,933
ogo/CRS	-	256,909	35,930	-	-	-
Indonesia/CRS	-	775,180	-	-	-	-
Burundi/CRS	-	-	230,539	-	166,326	-
Djibouti/CRS	-	-	394,856	542,035	575,545	401,450
Nicaragua/CARE	-	-	166,406	47,170	-	-
Sierra Leone/CRS	-	-	232,848	80,674	-	217,651
Rwanda/SAWS	-	-	251,843	-	281,470	-
Sudan/CRS	-	-	513,737	-	-	-
Benin/CRS	-	-	-	237,365	-	-
Zaire/CRS	-	-	-	346,350	-	-
Ecuador/CARE	-	-	-	-	97,653	-
Honduras/CARE	-	-	-	-	549,102	726,779
Honduras/CRS	-	-	-	-	-	-
Lesotho/CRS	-	-	-	-	-	543,398
Bolivia/SAWS	-	-	-	-	-	300,000
Bolivia/CRS	-	-	-	-	-	201,450
<b>TOTAL</b>	<b>218,800</b>	<b>2,677,874</b>	<b>2,833,872</b>	<b>3,499,776</b>	<b>3,499,849</b>	<b>3,744,668<sup>2</sup></b>

<sup>1/</sup>Two different grant agreements

<sup>2/</sup>Additional requests not funded: Burundi/CRS - 80,000; Sudan/SAWS - 200,000

particularly needy areas was a major objective. The primary area of program emphasis has been maternal and child health. Several Grants also support Food for Work and School Feeding components, and a few fund the conversion of refugee assistance to a regular program.

More recent Grants, planned since the availability of commodities has levelled off or been reduced, have been awarded to strengthen existing programs rather than for expansion. In addition to providing logistic support, these Outreach Grants have been funding a variety of programmatic inputs, including equipment needed for maternal and child health and Food for Work programs, the development of health education materials, and training of program and administrative personnel.

The new proposals have dealt in various ways with the issue of phasing over Outreach-supported expenses to other sources. In some instances the host governments have agreed to take on the responsibility for commodity movement. In others, Outreach-supported capital investments will reduce recurrent costs by building central warehouses to replace rented space or by assisting communities served by costly mobile clinics to build local storage facilities. Some programs plan to increase recipient contributions. The Ecuador Grant was awarded specifically to assist with the phase-out of Title II and the transition to an AID-supported health program in which a locally produced weaning food will be distributed.

### 2.3. Achievements of Outreach

#### 2.3.1. Distribution

##### (1) New programs

Outreach Grants provided essential financing for launching several new Title II programs in countries in which there were no other funds available. The start-up costs, for example, of the SAWS programs in Haiti and in Rwanda, were funded by Outreach enabling those programs to develop a network of Title II services to new recipients.

##### (2) Increased number of recipients

The underlying purpose of a number of the Outreach Grants was to increase the number of beneficiaries by providing the necessary additional storage capacity and expanded transportation systems. Several of the Grants, including Haiti, Burundi, Sierra Leone, and Upper Volta, enabled Title II programs to increase recipients by more than 60%. (See Secs. 4.2.4., 5.3.4., 5.4.4.)

##### (3) Extended distribution

By subsidizing transportation, Outreach enabled programs, such as Togo, Haiti and Upper Volta, to target some hard to reach recipients who would otherwise not have been able to participate because of prohibitively high transportation costs. (See Secs. 4.2.4., and 5.5.1.)

## 2.3.2. Logistics

### (1) Improved efficiency and reliability of commodity distribution

The efficiency of commodity management and the reliability and timeliness of deliveries were improved by Outreach. New warehousing in Rwanda, Haiti, and Upper Volta, either has given, or will give those programs the assurance of long-term warehouse availability, enabling them to plan more effectively for the future. Some of the new warehouses are better located to receive commodities when they arrive at a railhead or port, as in Upper Volta, and to distribute them without, for example, fighting city traffic, as in Haiti. The warehouses are designed for better inventory control and more efficient handling. Increased central warehouse space and, in some countries like Sierra Leone, additional local storage, have reduced stock disruptions. Adequate space for storing additional food reserves has made national programs less susceptible to the vicissitudes of overseas deliveries and better able to distribute enough stocks to last through the rainy season when roads are closed. (See Sec. 4.2.1 and Sec. 5.5.4.)

Outreach funding of vehicles for the Haiti volags increased the reliability of commodity distribution because the commercial firms were undependable and unable or unwilling to deliver to all distribution points. A repair shop that was partly supported by Outreach, resulted in reduced downtime for vehicles enabling CARE to better meet its delivery schedule. (See Sec. 4.2.2.) On the other hand, the Outreach transportation subsidy in Upper Volta enabled CRS to improve reliability by relieving the recipients of responsibility, and by centrally managing and consolidating the distribution it became more efficiently organized through commercial truckers. (See Sec. 5.5.2.) Higher rates of accountability occurred in countries in which Outreach Grants were used to support more frequent and pervasive end-use checking. (See Sec. 5.5.3.)

Outreach has contributed to enabling the PVOs, in countries like Haiti and Upper Volta, to increase their potential responsiveness to disasters such as hurricanes or periodic food shortages. Larger food reserves, a more reliable transport system, and a more extensive network of distribution points have laid the groundwork for providing food aid to a greater proportion of the population in times of special need. (See Sec. 4.2.6.)

### (2) Improved cost-efficiency

The construction of central warehouses reduces or eliminates recurrent rental costs. The capital costs will be amortized over different periods of time, depending on the country. (See Sec. 5.5.4.) Local storage facilities, constructed with the aid of Outreach funding in Sierra Leone (if approved), will result in significant cost savings by reducing the need for operating expensive mobile services.

The reorganization of commodity transport supported by Outreach in Upper Volta resulted in a per ton/kilometer savings because the high volume distribution was centralized and effectively managed by CRS. (See Sec. 5.5.2.) In Haiti, the costs of the PVOs transporting the commodities is less than if it were done commercially. CARE reduced its annual vehicle maintenance costs and hopes to extend the life of its vehicles by having its own repair facility. (See Secs. 4.2.2. and 4.2.3. and Appendix 4-A, CARE).

### (3) Reduced food loss

The new warehouses are better designed and located to protect the commodities against rodents, insects, and pilferage. Pallets and fumigation supported by Outreach Grants also contributed to reduced food wastage. PVO-managed transportation in Haiti helped to lessen pilferage and more frequent deliveries resulted in less spoilage in outlying store rooms. (See Sec. 4.2.1.) Finally, there is some evidence that relieving the recipients of some or all of the burden of paying for transportation reduces the amount of food that is otherwise diverted to pay those costs. (See Sec. 4.2.2.)

### 2.3.3. Program improvement

In several countries, by financing logistics costs that would have been paid by recipients or other local sources, Outreach freed money that was used to improve program management and technical support, and fund complementary activities. Some Grants provided direct support for program supervision which resulted in improved nutrition education and surveillance, and, in some cases, developmental activities. Recently approved Grants have included funding for a range of enrichment activities for programmatic strengthening and it is hoped they will result in increasing the developmental effects of Title II.

One important benefit of Outreach has been better coordination among the voluntary agencies and between the PVOs and the local USAID missions. In Haiti for example, all four of the PVOs and the USAID mission have begun to coordinate programming and implementation of Title II activities since Outreach began. (See Sec. 4.2.5.) In Rwanda, the mission provided a great deal of support to SAWS in designing the Outreach Grant. The USAIDs in Upper Volta, Burundi and Rwanda have become more involved in the Title II program because their concurrence is required at the time an Outreach proposal is submitted, involving them in the review of PVO plans.

### 3. ISSUES

#### 3.1. Design Issues

A fundamental difficulty with planning an Outreach Grant is that Title II commodity levels are determined annually and therefore even a two or three year Outreach project is developed without assurance that the commodities will be available to support the projected program size. One of the criteria for selection of proposals is that the commodities will be available but that cannot be guaranteed. The Burundi Outreach Grant, for example, is programmed to reach more recipients by the end of the project than the allotment of commodities would allow. Moreover, as the programmatic priorities of AID evolve, Outreach objectives approved for several years may not continue to reflect the changes and will have to be amended. On the other hand, if Outreach Grants were awarded for shorter periods, it would be impossible to program effectively. If Grant requests were developed in conjunction with the PVOs' annual or multi-year operational plans it would improve the coordination between Outreach and Title II programs.

Outreach is not synchronized with either the financial year or submission of the Annual Estimate of Requirements, causing accounting discrepancies and problems coordinating annual Outreach tranches with commodity levels. In addition, budgets for second and subsequent annual allocations are due with the third quarterly Outreach report. This does not always allow enough time to process the request through the PVO central office and AID/W, especially if there are queries or alterations that have to be cleared through the field.

The quarterly reports are an excellent management tool, especially for those programs in which Outreach affects most of the Title II program. Although the quarterly reports coincide with commodity status reports, it would simplify bookkeeping and enhance the administrative utility of Outreach reporting if the Grant year coincided with the Title II program year.

Synchronizing the Outreach year with the AER would reduce the flexibility and timeliness of funding unless projects continued to be processed as they come in and put into the AER cycle by adjusting the first funding year, if necessary. It would increase the burden on the volags and AID/W by having to review the AERs and Outreach reports at the same time. On the other hand, it would simplify forward planning and ensure compatibility between commodity levels and Outreach programs. It would also provide AID/W with a clearer annual prospective.

The guidelines for Outreach have not included cost-benefit criteria. The original project guidelines indicated that funds were to be used for recurrent costs related to logistical support. Some of the early proposals analysed the recurrent cost savings that would result from warehouse construction and they were accepted. However, few Outreach Grant proposals have included a cost analysis.

One of the criteria in the Project Amendment is that there be "cost sharing by the PVO and/or host country with a minimum target level of 10%". It is not clear whether this connotes a percentage of Outreach or of the entire program. Ten percent is an arbitrary figure, representing a substantial commitment in programs with little or no host government involvement and relatively poor recipients, and a less significant one in others. It could be covered by an accounting mechanism, such as attributing salaries of school or center personnel or the value of the physical facilities in which food is distributed.

## Conclusion

Outreach planning is hampered the lack of coordination with Title II programming, including commodity levels, and complicated by the lack of synchronization with the financial year or submission of the AER.

## Recommendation

Grant requests should be developed, to the extent possible, in conjunction with annual or multi-year operational plans. In addition, it might be advisable that the Outreach Grant year be synchronized with the AER so that requests for annual tranches would coincide with submission of the AER and the Outreach accounting year would coincide with the financial year.

### 3.2. Relationship between the voluntary agencies, USAID missions, and AID/W

In all of the countries visited, the relationship between the mission and the voluntary agencies was excellent. The USAID personnel were very respectful of the PVOs and their ability to manage Title II programs. However, very few missions have adequate staff to devote the time it would require to provide substantive support to the PVOs. In countries without a full time Food for Peace Officer, the missions and the PVOs rely on the Regional Food for Peace Officer for assistance.

The original guidelines for developing Outreach Grant proposals were not very clear to the applicants, but there were several seminars in which Outreach was discussed and individual meetings were held in Washington for further clarification. Although the guidelines were clearer in the Project Amendment, neither the PVOs, nor the missions, or the Regional Food for Peace Officer recalled having seen the project amendment (even though it was circulated). In general, the missions have not been well informed on details of Outreach so that, while they have been interested and supportive, most have not been able to provide much direction.

In a few cases, such as Rwanda/SAWS, the mission worked very closely, with the PVO in developing a Grant proposal. In Haiti, where there has been someone in the mission responsible for Food for Peace, USAID has provided significant support to the PVOs in planning and implementing Outreach Grants. Other mission resources have also been available. In both Rwanda and Haiti, an AID engineer assisted with planning warehouse construction.

The missions must concur with the submission of a proposal which necessitates agreement on design. This appears to be a good mechanism for ensuring communication on program planning. However, in at least one case, the mission philosophy on Title II/Outreach changed subsequent to the mission's approval of a proposal and the project plan had to be reworked, resulting in unanticipated delays.

The missions do not have a monitoring function for Outreach. This arrangement suits the missions, because of their staff limitations, and the PVOs, because they cherish their autonomy, especially with regard to program operations. On the other hand, several PVOs working in countries without a Food for Peace Officer, suggested they would welcome more frequent and more substantive exchange with missions on Title II/Outreach planning and implementation issues. In general, their primary contacts are in conjunction with the annual negotiation on the AER.

The Food for Peace Office, AID/W is generally considered to be efficient and effective in managing Outreach. AID/W has proved to be very flexible in continually adapting the project guidelines to reflect needs that were identified by personnel working in the field. AID/W generally responds quickly to project requests and amendments, although there have been a few problems. There are delays, caused in part by the fact that all communication between the field and the U.S. takes a long time. In addition, everything must pass through the respective PVO's head office before being sent to AID/W. However, while this slows down the process, it also has the benefit of all field offices having assistance in packaging and presenting their requests, and an advocate in the U.S. that can continually ensure attention by AID/W to their individual problems.

Because of the number of entities involved in the design and approval of projects and the release of funds, it is rare that any action is taken by AID/W without an exchange of cables, telephone calls and/or letters that are necessary to prod one or another of the interested parties, or to clarify and resolve questions or differences. The volag field offices that depend on the action, are furthest from AID/W, and are often frustrated by the delays and snags, although they acknowledge that the system is relatively efficient.

The PVOs have encountered difficulties with the approval of project amendments. For example, the budget submitted by Burundi/CRS for the second year funding of the Outreach Grant was altered -- line items changed and the total amount was reduced, complicating project implementation. Because of delays in drawing first year funds, Rwanda/SAWS second financial year was extended by several months. However there was no corresponding increase in money to cover ongoing expenditures. These types of problems are eventually worked out by the PVOs and AID/W. However, they do cause cash-flow shortages and, because they occur, the field offices are sometimes reluctant to make commitments that they are not fully confident will be met on schedule. This can have repercussions, such as increased warehouse construction costs because of delays in letting building contracts until a local volag office is assured of adequate funds.

### Conclusion

Although relationships between the voluntary agencies and USAID missions are almost universally cordial and mutually respectful, excepting in countries in which a Food for Peace or voluntary agency officer is adequately informed and has the time, there is a minimum of communication on substantive issues. Relationships between AID/W and the voluntary agencies are smooth but there are unavoidable delays in expediting project approvals and amendments.

### Recommendation

USAID missions should be given adequate personnel resources to devote the necessary time to working with the voluntary agencies on the planning and implementation of Title II/Outreach projects, and to study areas of potential collaboration.

### 3.3. Programming Outreach

Outreach is an excellent mechanism for supporting Title II programs. The administration of Outreach within the Food for Peace office of AID/W ensures that grants are most effectively used to enhance Title II. Outreach requires a minimal design effort and simple reporting, and the approval process is relatively fast. Grantees can freely move expenditures between line items, allowing them the flexibility to respond to unanticipated changes in the field.

There are a number of advantages of Outreach compared to mission supported grants, such as OPGs (Operational Program Grants). Outreach relates directly to Title II and continually evolves to meet needs that are specifically identified with Title II. A request for an OPG would have to compete for mission support with non-Title II projects that may have priority in USAID's portfolio. It would be difficult, for example, for a mission to justify support for the storage, transport and management of commodities if there were an alternative opportunity to fund a viable development project, especially one that was directly related to the mission's country strategy. Moreover, in most countries, AID operates through government channels while the PVOs work more closely with the private sector.

Both the missions and the PVOs favor the AID/W funded mechanism. Outreach takes less administrative time than an OPG. OPGs require much more detailed project proposals and reports. The vouchering process is more complex and slower and the mission's oversight responsibilities are more demanding. In countries without a full AID mission, the additional burden of clearing decisions with a REDSO office causes further delays.

AID/W exercises less control over the implementation of an Outreach Grant than OPG guidelines require missions to exercise over the operations of an OPG. The PVOs prefer this autonomy and the missions respect their independence. Some missions fear that if USAID grants were available for Title II, the PVOs with their powerful lobby, might successfully compel the missions to support Title II regardless of priorities. On the other hand, this same lobby might also be effective in getting increased monies appropriated to the centrally funded Outreach project.

Another option for programming Outreach is to integrate funding for operating costs with the Annual Estimate of Requirements, with support based on a standardized per ton amount, a percentage of the total ton/kilometer costs in each country, or another formula. The major disadvantages of integrating Outreach-type funding with the AER are: it would only fund operating expenses, thus eliminating the possibility of capital financing of infrastructural development that might help to reduce recurrent costs; there would be no direct support for program enrichment; and a standardized formula would not be responsive to the special needs of individual programs and might, in some instances, provide funding that was not essential. This approach would, however, eliminate special programming and be less costly to manage and it would parallel World Food Program and European Economic Community support to their food-aid programs.

### Conclusion

Outreach is a responsive, flexible, and germane mechanism for supporting Title II projects. Both the USAID missions and the voluntary agencies favor having Outreach administered by AID/W.

### Recommendation

Outreach should continue to be administered by AID/W and programmed as it is presently being done.

#### 3.4. The role of Outreach in supporting the developmental objectives of Title II and the USAID missions' development assistance strategies

Outreach has been used directly and indirectly to enhance developmental objectives of Title II programs. Most of the Outreach grants that fund logistics assert that this enables local contributions to be used effectively for developmental activities. "Enrichment" funds are used more directly to strengthen the developmental effect of Title II programs. However, the amounts are very small in either case. Nonetheless, most of the programs that have Outreach Grants could not support developmental activities, even to the extent they do, without Outreach because most of their resources would have to be used to pay for distribution of the food.

The types of developmental activities that are carried out in conjunction with Title II programs vary. In the MCH centers, there are nutrition education efforts, income generating and nutritionally beneficial projects, such as small stock raising, vegetable gardens, small mills, and grain storage, and health-related activities, such as vaccinations and nivaquine distribution. In school feeding centers there are farming activities that are educational and sometimes yield a monetary return. Most Food for Work projects are inherently developmental.

It is the responsibility of the missions to explore with the volags the ways in which Title II and mission-funded projects can be mutually reinforcing. However, since the missions do not control Outreach, they have less leverage on the marginal effect of Outreach funds. Moreover, both the missions and the PVOs are inhibited by the apprehension that creative programming might somehow cross a PL 480 regulation and result in recriminations from the auditors. Nonetheless, more substantive communication between the missions and the volags could lead to more supportive programming on both sides.

Outreach funds at present are not adequate to have a major effect on the achievement of developmental objectives. However, if a larger proportion of Outreach Grants were approved to support enrichment there might not be sufficient money to fund logistics costs. Other sources are available for developmental activities, such as OPGs, AIPs, and non AID donors, but no other money is available for logistic support. Moreover, in terms of justifying the outcome of an Outreach Grant, qualitative outputs are much harder to identify, much less to quantify, especially if the funding has been relatively small. Nonetheless, a convincing argument can be made for increasing Outreach support for enrichment. Title II programs in the past have not been strongly

oriented toward achieving developmental objectives. Therefore, a lot of new programming is necessary and the type of activities that need to be planned are expensive. Since Title II is not a high priority of most missions, it will be difficult to raise local or regional AID funds, and other donors are not likely to want to contribute to the U.S. food aid program. Also, while local governments often champion Title II, many are too poor to provide much monetary aid and, moreover, they are usually interested in the political credit accruing from the distribution of food and not the less perceptible benefits of ancillary activities. Consequently, funds that are needed to strengthen Title II may have to come from the Food for Peace office. This would require more money in the Outreach project and might make more demands on the review process within AID.

If Outreach is going to be the major funding source for Title II program strengthening, there are a number of ways in which Outreach could continue to assist Title II to achieve developmental objectives. Increased program supervision helps strengthen the MCH and school feeding center's nutrition education and surveillance, and developmental activities. A year or more of continued supervision of centers and schools that "graduate" from the food aid program would assist them to entrench developmental activities that had begun, thus ensuring a developmental rather than transitory effect from Title II. Currently, in many countries, there is no source of support for pre-service and in-service training of program personnel in the centers and schools. Training of these people would enhance the introduction of developmental activities and ensure that they could be continued even if Title II were phased out.

Outreach could do more to support ancillary activities, providing the initial capital to buy tools, seeds, materials etc. that are needed to launch a gardening, small stock or handcraft project, for example. Outreach could help fund deworming drugs, vitamins, vaccinations, and family planning, etc. in order that the food aid be used as a catalyst for improving nutritional and health status through strengthened preventive and basic health services.

Outreach support of more supervisory and technical assistance to Food for Work, would aid communities that need help to plan development projects and ensure their technical viability. In addition to technical assistance, Food for Work projects often lack the necessary complementary inputs, such as shovels with which to dig a road bed, cement for school construction, seedlings for reforestation etc. Outreach could provide ready money enabling the PVO to purchase necessary items and have them available to the projects at the time work was about to begin.

### Conclusion

Outreach has, either directly or indirectly, provided small amounts of support for developmental activities. However, in order to have a major effect, Outreach money for "enrichment" would have to be significantly increased.

### Recommendation

Increased money for enrichment should be available through Outreach and the 20% limitation eliminated. However, logistic support should still be given priority if a choice must be made. USAID missions should work more closely with the PVOs in identifying developmental activities that can be associated with Title II and that reinforce the host government's developmental priorities and the mission's strategy. These activities should be supported, to the extent possible, by OPGs or other mission funds and Outreach requested only if no other sources are available.

#### 3.5. Targeting

One of the primary purposes of the Outreach Project was to support the Congressional mandate that PL 480 reach the poorest and most remote regions of countries and that priority be given to those suffering from malnutrition. In evaluating the effect of Outreach, it is possible to ascertain where the program expansion occurred. (See Appendix 5-A) However, it is not possible to determine whether the program reached the poorest or whether priority was given to the malnourished because there are few data on the economic or nutritional status of participants and fewer comparative data.

In countries such as Upper Volta, Togo, and Benin, Outreach funds were used to extend into areas that were more distant from the central warehouse. However, while the program in Upper Volta, for example, did grow in areas further than 100 kilometers from the central warehouses, there was a far greater proportionate increase in the areas closer in. Thus, without Outreach the program probably couldn't have extended out but, in fact, Outreach appears to have provided relatively less benefit to the remote areas. Nonetheless, while a more concerted effort to reach the remote areas would be easy to plan, the objective of reaching the remote areas is not justifiable without additional information indicating the relative need in relation to the costs of servicing the furthest communities.

It would be useful to develop a formula for determining the relative need among individual communities. One could select the most relevant indicators, such as poverty, malnutrition, and lack of infrastructure. Each would be ranked on a scale of numerical values depending on its severity in the given community. The total number of points would have to be weighted according to the size of population. Thus one would have a quantitative value of need to balance against the relative costs of serving individual communities.

It is extremely difficult to establish poverty levels in specific communities in developing countries. All of the programs have attempted to identify poor communities in which to introduce Title II. However, the selection is generally subjective based on local knowledge. This may be the most cost-effective approach to identifying needy populations. Objective reconnaissance methods are expensive, especially for pinpointing individual communities, and local knowledge is often just as reliable.

If a socio-economic indicator is to be used for targeting Title II programs, nutritional status most effectively assists programs to satisfy the mandate. It is easier and less costly to measure nutritional status with

reasonable reliability than "poverty". A few countries with Outreach Grants, like Haiti, have national, and in some cases, regional nutritional data that can be useful in identifying areas of relative need and were used for targeting purposes. (See Sec. 4.2.4.) In conjunction with Title II, nutritional data are being collected in a number of MCH programs, and in a few school feeding programs. In countries in which nutritional surveys are needed to establish priorities, Outreach might be an appropriate source of funding. Alternatively, this might be an area in which mission support would complement Title II and possibly other USAID funded projects.

Targeting based on nutritional status has generally been directed toward generic groups that are vulnerable to malnutrition, e.g. children under five and pregnant and lactating mothers. There has been little selectivity within these groups excepting for the special care that is given to the severely malnourished subgroup of participants. During the first Outreach Grant, the Upper Volta program started to target by "graduating" children at three years of age and identifying MCH centers in which a level of nutritional status has been reached that justifies "graduating" the entire center. Upper Volta has also begun identifying schools in which the feeding program has less priority because of lower rates of malnutrition than more needy school populations.

The CRS African regional office has recommended that the Growth Surveillance System be used to identify regions of nutritional need so these areas can be given priority. Once a center is opened, the policy is to accept all of those who enroll. However, little consideration has been given to targeting needy members of the community who do not appear at the center. There is little information on the effect of cultural attitudes, user fees, and requirements, such as eight weekly attendances prior to enrollment, in selecting out the most needy. Outreach money might effectively be used to target needy non-participants within participating communities by supporting activities, such as community surveys, home visiting and mobile services.

In some countries, like Haiti or those in the Sahel, targeting regions in which there is less of an infrastructure is an overriding "need" because of the necessity to have an established network that can be used when there is a disaster, such as a hurricane or a drought.

### Conclusion

Outreach financed some targeting of recipients in more geographically remote areas. Most programs attempt to target poorer communities but there is rarely anything but subjective information on which to make the selection, or to base an evaluation. Nutritional status is a more reliable indicator than poverty and can be used for identifying geographic areas of greater need. Special assistance might be required to reach needy non-participants within participating communities.

### Recommendation

In order to maximize the benefits resulting from Outreach support, there should be a more systematic approach to selecting the more "needy" beneficiaries. Outreach money should be available to assist the volags to identify

more needy communities and/or more needy families within communities, and to redirect Title II to those communities and/or families. This may require some applied research for establishing selection criteria and procedures.

### 3.6. Cost Effectiveness

In this section we estimate the return of the Outreach Grant program and answer the basic question whether the program was worthwhile, or whether Outreach funds should have been spent on something else.

There are two approaches to answering this question: Benefit-Cost Analysis, and Cost-Effectiveness Analysis. Though in principle the best approach would be Benefit-Cost Analysis, it cannot be applied in our case because the "benefits" of the program are not measurable except in terms of the number and geographic distribution of the recipients served. Thus, the fact that, with Outreach, fewer but possibly more "worthy" recipients located in more remote areas are reached than without the Outreach Grants, cannot be quantified. This same problem of measurement impedes attempts to improve targeting of the recipients, as discussed above.

#### 3.6.1. Geographic Distribution

Outreach support is awarded to assist the PVOs to carry out the Congressional mandate that Title II reach the "...most remote villages..." and "...poorest regions of countries...". The resources of Title II and Outreach are limited and so there has to be some selection of beneficiaries among the poor and malnourished. As the cost of reaching remote villages is, in most countries, greater than serving communities that are closer, the selection has to take into consideration the marginal cost in relation to the potential effectiveness of serving harder to reach areas. The effectiveness side of the equation should incorporate information on relative need in the area, size of population to be served, the receptivity of the community, improvement of nutritional status, extension of a service network into a bereft area, etc. However, as we have not assigned values to any of these benefits, effectiveness is defined simply in terms of numbers of beneficiaries.

The costs of distribution include the fixed costs, storage and administration, and the variable costs of transportation. In programs in which there is a contribution toward distribution costs by the participants, the host government, or another source, that is more than adequate to finance the fixed costs, a portion of the variable transportation costs will also be recovered. Calculating the geographic distance from the warehouse at which the project can break even on distribution costs (the breakeven distance) and the distance where the addition of another beneficiary is covered by additional contributions (the self-sustaining distance), will enable the administrator to determine the feasibility of serving communities located at various distances from the central warehouse.

The breakeven distance (BED) is a useful management indicator. It defines the distance from the central warehouse at which the total fixed and variable contributions towards the distribution costs from the PVO and from

local sources<sup>1/</sup> equals the fixed plus variable costs of distribution. In other words, it defines the point where neither a surplus nor deficit is generated and the distribution does not require external support.

The formula for calculating the BED is as follows:

$$\text{BED} = \frac{\text{total contribution towards distribution} - \text{fixed costs of distribution}}{\text{cost per ton-km} \times \text{tons distributed}}$$

For example, for the following case:

Fixed contribution toward distribution costs from the PVO = \$40,000

Participant contribution towards transportation = \$40/ton

Total tons distributed = 5000 tons

Fixed distribution costs = \$100,000

Inland transport cost = \$.40 per ton-km

$$\text{BED} = (40,000 + 40 \times 5000 - 100,000) / (.40 \times 5000) = 70 \text{ kilometers}$$

This concept is useful to management. It indicates the geographic distance from the central warehouse at which the project is self-sustaining. If a PVO is operating within that distance, i.e., if the centroid<sup>2/</sup> of the distribution effort is within the BED, revenues exceed costs. In that case the PVO is generating a surplus that can be used for expanding the program. If the centroid is located exactly at the BED, the program is breaking even in that it is generating neither a surplus nor a deficit. Beyond that distance, however, there will be deficits requiring corrective action, i.e. retrenching the program, increasing local contributions, or requesting additional contributions from donors. The BED would also be useful in helping to determine the "best" location for warehouses.

The self-sustaining distance (SSD) is that distance where the marginal revenue from adding a participant is equal to the marginal cost of serving that participant.<sup>3/</sup> It is calculated by dividing the marginal revenues<sup>4/</sup> (\$ per ton) by the unit transport cost (\$ per ton-km). For example, for the MCH participants in Rwanda, the participant contribution is \$40.35 per ton and the unit transport cost is \$.43 per ton. The average SSD for the whole country is therefore  $40.35 / .43 = 93.84$  kilometers.

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<sup>1/</sup> Including contributions from the host government, container sales, or other local sources.

<sup>2/</sup> The centroid equals the total ton-kilometers of food transported divided by the total tonnage of food transported. See Appendix 5-A, Sec. 2 for a fuller explanation.

<sup>3/</sup> Given that the PVO is able to cover the fixed costs by fixed contributions the BED will be equal to the SSD. In other words, the SSD indicates the upper limit for the BED.

<sup>4/</sup> Including participant contributions or other marginal revenue, such as container sales, that would increase in relation to increased tonnage. Note: the SSD is zero if there is no marginal revenue.

The SSD is also a useful management tool. For example, if beneficiaries are added beyond the SSD, the program will not be self sustaining unless the fees are increased. If participants are added within the SSD, however, the program is self sustaining and a surplus will be generated or the deficit will be decreased unless participant contributions are reduced. However, when planning to expand into areas in which the costs are above or below average, the decision maker should use the actual transport costs in calculating the SSD (taking into account weather, terrain, and other factors that affect transport costs).

### Conclusion

It is generally more costly to serve communities that are further away from the warehouse. However, these costs may be justified by the relative severity of need in those communities. The relationship between the breakeven distance (BED) and the centroid is a guide for determining the need for external support in order to reach into those communities. The self-sustaining distance (SSD) is a tool for programs with participant fees to use internally to ascertain the geographic point at which variable transportation costs are covered by those fees.

### Recommendation

If extending a Title II program beyond the breakeven distance (BED) can be justified by the relative degree of need and the population size in those communities, then Outreach should subsidize the distribution.

#### 3.6.2. Storage and Transportation

A number of the Outreach Grants have paid for warehouse construction. In strictly economic or financial terms the decision to build rather than lease cannot always be justified, and a sound financial analysis is required to avoid possible overinvestment in warehouses. However, though simple pay-back periods were calculated for some projects, none of the projects had done a careful analysis prior to proposing construction. In addition, there are, in many countries, special circumstances that favor PVO ownership of warehousing facilities even though the cost is high.

Discounted cash flow analysis would enable administrators to determine whether the present and projected future value of the savings in rent were greater or less than the capital cost of building. Savings in rent alone are usually not enough to justify the construction. However, other factors that have to be taken into consideration in the cost decision can offer substantial cost savings. For example, if the new warehouse is replacing several small storage facilities, there will be differences in handling and management costs. Location may have an effect on indirect transport costs, such as in Upper Volta where one of the new warehouses will be next to the railhead. If the new warehouses are more secure against spoilage or pilferage, there may be considerable reductions in food loss.

The major advantages of formal financial analysis of the "build versus lease" decision for warehouses are:

- 1) The least cost storage solution is determined.
- 2) Over-investment in warehouse capacity is avoided.
- 3) Premature investment in warehouses is avoided.

Furthermore, if the financial analysis is done in a broad enough context by including the storage inventory costs, valuable insights can be obtained on the best size of the warehouse, proper level of safety stocks and the timing of the call-forwards. Because warehouses are expensive, a good financial analysis can save considerable money. For example, an analysis that indicated the best time for construction to be next year and not this year could easily save \$15,000 to \$20,000 in premature expenditures.

Appendix 5-C gives an example of a financial analysis supporting the decision to invest in a warehouse in Upper Volta. The analysis shows that the decision to buy is sound, but cannot be based only on the savings in rent.

An economic analysis would also be very desirable in proving the soundness of the investment, especially since the GOUV provides significant subsidies in rent and also in construction costs by providing "free" land. Such contributions are usually not included in the financial analysis and, though the financial analysis may be favorable, it may lead to investments that are not favorable to the host government.

If no other adequate storage facilities are available, as in Haiti, then there is no alternative to construction. In other countries, such as Upper Volta or Rwanda, in which the future availability of storage is not assured, the potential shortage of space would affect the capacity of the PVO to call forward the necessary stocks to ensure a reliable supply to the distribution points. In Burundi, leasing from the private sector is the only option as the government does not allow CRS, a foreign agency, to build a warehouse.

Decisions on transportation have not always been based on the least-cost solution. Some of the PVOs believe that operating their own transportation fleet, although it might be cheaper, requires more administrative capacity than they have. Moreover, while the apparent costs may be lower, the risks may be higher in countries, such as Burundi, where insurance is difficult to obtain and claims are hard to collect, or where there is no recourse for prosecuting against food losses. On the other hand, using commercial truckers in Upper Volta is probably the cheapest alternative. In that situation, by using Outreach to subsidize the administrative costs, the PVO was able to consolidate what had been a disparate system and reduce costs considerably. (See Sec. 5.5.2.) However, the ton-kilometer costs vary greatly. In Burundi, for example, where commercial rates are five times greater than in Upper Volta, the possibility of another solution should be studied. In Haiti, there is no adequate commercial alternative and therefore the PVOs were forced to operate their own system. The costs appear to be lower than the commercial rate even though vehicles need to be replaced every three years. (See Sec. 4.2.2.)

The relative cost-effectiveness of local storage compared with transporting commodities out of centralized warehouses is an issue in some countries. Sierra Leone claims that replacing mobile units in the rural areas with stationary services that have their own small storage capacity will reduce operating costs considerably. Local storage also enables the distribution centers to keep adequate stocks to carry them through seasons during which they are difficult to reach, thus adding weight to the effectiveness

side of the equation. This is important for Burundi/SAWS where the idea of mobile storage, using 20 ft or 40 ft shipping containers, is being studied in support of their FFW road construction program that moves from place to place. In Upper Volta, it appears that a regional warehouse can be justified in terms of the savings in transportation costs combined with the increased reliability of deliveries.

### Conclusion

Financial analyses of the logistic support systems will enable the PVOs to more effectively plan their Outreach projects. However, the least-cost solution to storage or transportation is not always practical because of the particular circumstances in the host country.

### Recommendation

If support for storage or transportation is sought in an Outreach proposal, a financial analysis should be done to determine the least-cost solution. If the request cannot be justified in financial terms, then the mitigating circumstances should be explained and given full consideration in awarding the Grant.

The PVOs may need technical assistance in financial analysis if they do not have the necessary expertise on their in-country or central staffs. To the extent possible, this should be provided by the USAID missions or the regional AID office.<sup>1/</sup>

### 3.6.3. Overall Cost Effectiveness

In this section we will address the question of how the Outreach Grants have affected the overall costs of distribution, and how they affected the cost in which participant as compared to the costs that would have been incurred without the Grants.

Cost-effectiveness analysis has proven to be a useful technique for cases in which project outputs can be expressed only in terms of physical units, such as "the number of participants reached." The cost-effectiveness methodology used in this section is called "with" and "without" analysis. The "with" case applies to the program with the Outreach Grant, and the distribution cost of serving the program recipients is calculated using the presumably more efficient distribution system made possible by the Grant. For the "without" case it is assumed that the same number and distribution of participants are served under the presumably more expensive distribution system (older warehouses, less consolidation of transport, etc.). It is important to note that the number of geographic distribution of the participants

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<sup>1/</sup> Note: Appendix 5-C is an illustrative example of a financial analysis of the warehouse lease vs. build decision and might be useful to the PVOs as a guideline for this type of analysis. It would be useful to have similar guidelines for decisions relating to transportation.

(the program) is the same for both the with and without case. Only when this is true do we have comparability. This, admittedly makes the without case hypothetical since, without Outreach, the programs would be, in all likelihood, severely curtailed. Nevertheless, the analysis is appropriate for purposes of assisting the decision process in considering whether to continue the Outreach program.

Using the pro-forma budgets presented in Tables 3-1 and 3-2, total distribution costs are calculated for the four PVOs operating in Upper Volta, Burundi, and Rwanda. The calculation in the first table is for the "with" Outreach case, using the approximate level of participants and tonnage appropriate for 1982. Then, in the second table, for the "without" Outreach case, the distribution costs are calculated for the same levels of participants and tonnage. (These costs are summarized in Table 3-3.)

In general, the unit costs for repackaging, handling, indirect transport, fixed labor, and fumigation will be from 10 to 20 per cent lower because of Outreach than for the without case. This, as explained earlier, is due to the more efficient operation of the distribution system made possible by the Outreach assistance. Inter alia, the more efficient warehouses enable cost savings, and the end-use checkers reduce spoilage and assure better inventory control. Also, of course, the warehouse rental costs are eliminated.

Without the Outreach assistance, it is estimated that the total distribution costs would have been \$1,613,159 for 1982. With the Outreach assistance, the total cost of distribution is estimated at \$1,318,475, a reduction of 17% in recurring costs. The savings in recurring costs are \$294,684. This does not yet justify the program since the investment costs in warehouses still have to be factored in. Also, as pointed out earlier these savings are hypothetical since, without the Outreach assistance, it is doubtful that the PVOs could have raised the funds to support the 1982 level of participants.

Are these savings in recurring costs sufficient to justify the investment costs? To answer this question we must compare the time stream of savings in recurring costs with the investment costs. Assuming a fixed cost investment of \$200,000, \$150,000, \$100,000 and \$100,000 for the new warehouses in Upper Volta, Burundi,<sup>1/</sup> and for the two PVOs in Rwanda, the total investment cost (assumed for 1982) would be \$1,150,000. Using depreciation techniques, the investment in vehicles is factored into recurring costs.

The rate of return of this investment is not very sensitive to the length of the time stream of recurring cost savings. If we assume a 50 year time stream, the rate of return is a highly favorable 26%. If the length of the time stream is reduced to 10 years, the rate of return is still favorable at 22%. (See Table 3-4)

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<sup>1/</sup> The Burundi case is hypothetical as Outreach did not finance warehouse construction in that project.

Table 3-1: PRO-FORMA BUDGETS WITH OUTREACH, 1982 (dollars)

	budshwi	C.R.S.UV	C.R.S.Dur.	C.R.S.Rw	SAUS.Rw
<b>RECIPIENTS</b>					
MCH	115000		35000	66550	0
School Feed.	253000		0	40800	30000
Othr.Chld.Feed.	0		3000	3000	0
FFW+Relief	10000		3000	4400	30000
<b>total</b>	<b>378000</b>		<b>70000</b>	<b>114750</b>	<b>60000</b>
<b>TONNAGE</b>					
MCH	6900		2100	3993	0
SF	15180		0	2448	1800
Othr.Chld.Feed.	0		300	180	0
FFW+Relief	850		2550	374	2550
<b>total</b>	<b>22930</b>		<b>4950</b>	<b>4995</b>	<b>4350</b>
<b>TRANSPORT COST.</b>					
\$/ton-km	0.10		0.49	0.43	0.22
aver.dist.	145		132	72	200
\$/ton	14.50		64.68	30.96	44.00
trans.cost	332485		135828	216565	191400
ind.trans.cst.	0		0	0	0
<b>total</b>	<b>332485</b>		<b>135828</b>	<b>216565</b>	<b>191400</b>
<b>STORAGE COSTS</b>					
space,m2	12000		2127	1000	600
fac.rental	0		0	0	0
\$/ton hndl	1.50		1.50	1.50	1.50
handling	34395		7425	10493	6525
\$/ton repck	1.50		1.50	1.50	1.50
repacking	34395		7425	10493	6525
fumigation	3960		702	330	198
\$/m2 pall.	3.00		1.25	4.80	4.80
pallets	36000		2659	4800	2880
WH fixed labor	20400		7400	7806	7499
spoilage	45860		9900	13990	8700
<b>total</b>	<b>129150</b>		<b>25611</b>	<b>33921</b>	<b>23827</b>
<b>ADMIN. COSTS</b>					
Office rent,etc	6000		10760	1240	2000
Comm.Mnct.	68800		15000	15000	10000
\$/ton veh.	2.21		3.00	2.50	2.50
end use transp	50675		14850	17488	10875
supplies	4000		1000	1000	1000
other	0		0	0	0
<b>Total</b>	<b>129475</b>		<b>41610</b>	<b>34728</b>	<b>23875</b>
<b>PARTICIPANT TRANSP. CONTR.</b>					
MCH, \$/TON	10.93		110.00	54.35	0.00
School, \$/ton	9.48		22.33	21.74	0
Othr.Chld, \$/Ton	0		22.33	21.74	0
FFW+Relief	0		22.33	21.74	0
<b>total</b>	<b>219323</b>		<b>294641</b>	<b>282283</b>	<b>0</b>
<b>total</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL DISTR.CDS</b>	<b>591110</b>		<b>203049</b>	<b>285214</b>	<b>239102</b>
<b>TOTAL PART. CON.</b>	<b>219323</b>		<b>294641</b>	<b>282283</b>	<b>0</b>
<b>TOTAL OTHER CON</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>
<b>SURPLUS</b>	<b>-371787</b>		<b>91592</b>	<b>-2931</b>	<b>-239102</b>
<b>Fix.Cst.</b>	<b>258625</b>		<b>67221</b>	<b>68649</b>	<b>47702</b>
<b>Var.Cst.</b>	<b>332485</b>		<b>135828</b>	<b>216565</b>	<b>191400</b>
<b>\$/ton</b>					
Fixed	11.28		13.58	9.81	10.97
Variable	14.50		27.44	30.96	44.00
Total	25.78		41.02	40.77	54.97
Deficit	-16.21		18.50	-0.12	-54.97
Part. Con.	9.56		59.52	40.35	0.00
<b>BRK.EV.KM</b>	<b>-17</b>		<b>221</b>	<b>71</b>	<b>-50</b>
<b>\$/PARTICIPANT</b>	<b>1.56</b>		<b>2.90</b>	<b>2.49</b>	<b>3.99</b>
<b>BASIC BUDGET</b>					

Table 3-2: PRO-FORMA BUDGETS WITHOUT OUTREACH, 1982 (dollars)

w/o OD	C.R.S.UV	C.R.S.Bur.	C.R.S.Rw	SAWS.Rw	
<b>RECIPIENTS</b>					
MCH	115000	35000	66550	0	
School Feed.	253000	0	40800	30000	
Othr.Chld.Fe	0	5000	3000	0	
FFW+Relief	10000	30000	4400	30000	
<b>total</b>	<b>378000</b>	<b>70000</b>	<b>114750</b>	<b>60000</b>	
<b>TONNAGE</b>					
MCH	6900	2100	3993	0	
SF	15180	0	2448	1800	
Othr.Chld.Fe	0	300	180	0	
FFW+Relief	850	2550	374	2550	
<b>total</b>	<b>22930</b>	<b>4950</b>	<b>6995</b>	<b>4350</b>	
<b>TRANSPORT COST.</b>					
\$/ton-km	0.12	0.49	0.43	0.22	
aver.dist.	145	132	72	200	
\$/ton	17.40	64.68	30.96	44.00	
trans.cost	398982	135828	216565	191400	
ind.trans.co	4286	0	0	0	
<b>total</b>	<b>403268</b>	<b>135828</b>	<b>216565</b>	<b>191400</b>	<b>947361</b>
<b>STORAGE COST</b>					
space,m2	12000	2127	1000	600	
fac.rental	100000	39240	15000	14876	
\$/ton hndl	1.88	1.88	1.88	1.88	1.15
handling	43108	9306	13151	8178	
\$/ton repck	1.88	1.88	1.88	1.88	1.25
repacking	42994	9306	13151	8178	
fumigation	4356	772	376	258	
\$/m2 pall.	3.00	1.25	4.80	4.80	1.1
pallets	36000	2659	4800	2880	
WM fixed lab	20400	7400	7806	7699	1.9
spillage	68790	14850	20985	13050	1.03
<b>total</b>	<b>246858</b>	<b>68683</b>	<b>54303</b>	<b>42049</b>	<b>411893</b>
<b>ADMIN.COSTS</b>					
Office rent.	6000	10760	1240	2000	
Comm.Mngt.	72240	15750	15750	10500	1.05
\$/ton veh.	2.65	3.60	3.00	3.00	1.2
end use tran	60810	17820	20985	13050	
supplies	4000	1000	1000	1000	
other	0	0	0	0	
<b>Total</b>	<b>143050</b>	<b>45330</b>	<b>38975</b>	<b>26550</b>	<b>253905</b>
<b>PARTICIPANT TRANSP.CONTR</b>					
MCH, \$/TON	10.93	110.00	24.35	0.00	
School, \$/ton	9.48	22.33	21.74	0	
Othr.Chld,\$/	0	22.33	21.74	0	
FFW+Relief	0	22.33	21.74	0	
<b>total</b>	<b>219323</b>	<b>294641</b>	<b>292283</b>	<b>0</b>	
<b>TOTAL DISTR.</b>	<b>793477</b>	<b>249841</b>	<b>509845</b>	<b>259999</b>	<b>1613159</b>
<b>TOTAL PART.C</b>	<b>219323</b>	<b>294641</b>	<b>292283</b>	<b>0</b>	
<b>TOTAL OTHER</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>SURPLUS</b>	<b>-574153</b>	<b>44800</b>	<b>-27560</b>	<b>-257779</b>	
Fix.Cst.	389909	114013	33278	68599	
Var.Cst.	403268	135828	216565	191400	
\$/ton					
Fixed	17.60	23.33	13.33	15.77	
Variable	17.60	27.44	20.96	44.00	
Total	34.60	50.47	44.29	59.77	
Deficit	-25.04	9.35	-3.74	-59.77	
Part.Con.	9.56	29.52	40.35	0.00	
BRK.EV.KM	-62	176	63	-72	
\$/PARTICIPANT	2.10	7.57	2.70	4.33	

Table 3-3 SUMMARY INLAND DISTRIBUTION COSTS WITH AND WITHOUT OUTREACH

	CRS Upper Volta		CRS Burundi		CRS Rwanda		SARWS Rwanda	
	Without	With	Without	With	Without	With	Without	With
Recipients	378,000	378,000	70,000	70,000	114,750	114,750	60,000	60,000
Tonnage (tons)	22,930	22,930	4,950	4,950	6,995	6,995	4,350	4,350
Inland Distribution Cost, <sup>1)</sup> (\$)	745,324	591,110	259,543	203,049	321,874	205,214	263,827	239,102
fixed (\$) <sup>2)</sup>	389,909	250,625	114,013	67,221	93,278	68,649	68,599	47,702
variable (\$) <sup>3)</sup>	355,415	332,485	145,530	135,828	228,596	216,565	195,228	191,400
Distribution Cost per Participants, (\$ per participant)	1.97	1.56	3.71	2.90	2.81	2.49	4.40	3.99
Distribution Cost per Ton (\$ per ton)	32.50	25.78	52.43	41.02	46.01	40.77	60.65	54.97

1. Inland distribution cost does not include any investment cost in warehouses.
2. Fixed costs include those costs that do not vary with geographic distribution of the recipients (storage and administrative costs).
3. Variable costs include those costs that vary with geographic distribution of the recipients (inland transport costs).

Table 3-4 CALCULATION OF THE FINANCIAL RATE OF RETURN OF THE OUTREACH PROGRAM

Year	Without Outreach (\$)		With Outreach (\$)		Net Benefits (\$)
	Investment Cost	Recurring Cost	Investment Cost	Recurring Cost	
0	0	1,613,519	1,150,000	1,613,519	-1,150,000
1		1,613,519		1,318,475	294,684
2		1,613,519		1,318,475	294,684
3		1,613,519		1,318,475	294,684
4		1,613,519		1,318,475	294,684
5		1,613,519		1,318,475	294,684
6		1,613,519		1,318,475	294,684
7		1,613,519		1,318,475	294,684
8		1,613,519		1,318,475	294,684
9		1,613,519		1,318,475	294,684
10		1,613,519		1,318,475	294,684

IRR = 22.16%

The Net Present Value of the sum of the investment (zero for the without case) and recurring costs for the with and without cases, is \$9,672,819 and \$10,427,700 respectively. This assumes a 15% discount rate and a 25 year time stream. Costs per participant and costs per ton are therefore about 8% higher for the without Outreach case. The financial benefit cost ratio is 1.65/1.

A concluding caveat is in order. The data underlying the analysis were difficult to obtain and, using best judgments, numerous estimates were made to fill data gaps. Therefore, the analysis above should be considered only as indicative of the positive value of the Outreach program and not as definitive proof.

### 3.7. Phase-over

The Outreach project was developed at a time when the Title II program was growing, especially in Africa and in Haiti. Outreach was a mechanism for AID to provide support to Title II to enable the PVOs to reach greater numbers of harder to reach recipients. Although Outreach was approved as a three-year project, continuation was implicit in the growth environment in which the PVOs planned costly expanded distribution.

In 1980 the amount of commodities available for Title II began to diminish. At about the same time, AID/W was beginning to urge that on-going Title II programs be strengthened to more effectively achieve developmental objectives. The combination of the limitation of resources, and a new orientation for Title II (articulated by the AID Administrator in January 1982 in a directive on the integration of Title II resources with the USAID missions' development strategies), forced the programs to reduce growth and to focus on programmatic reinforcement. As Outreach is a support to Title II, the purpose of Outreach evolved with these changes in orientation. However, as more Outreach Grants were awarded and greater demands were made on the monies, Outreach had to put more emphasis on requiring individual programs to plan for termination.

The changing role of Outreach has resulted in creating a difficult situation for a number of the programs. Most of the Outreach Grants planned between 1978 and 1981 supported substantial growth, much of which was to more geographically distant points that are very costly to reach. Also, as the PVOs are being asked to more effectively program the distribution of Title II commodities, an orientation with which they are generally in agreement, the per beneficiary costs are increasing. As the growth and program changes occurred in very poor countries in which neither the host governments nor the recipients could afford to take on the costs, these programs are beginning to face the conundrum of how to finance Title II if Outreach is not renewed.

The Upper Volta Grant, for example, was awarded at a time the government was no longer able to afford the significant contribution it had made in the past. Outreach enabled the program to grow, and to include areas that are more costly to reach. While improvements in the infrastructure will help reduce operating costs, and increased recipient contributions will cover a larger proportion of distribution expenses, the program cannot be completely

self-financing. The Djibouti Grant supports phasing refugee feeding into a regular program and Outreach is funding startup costs for a SAWS/Title II program in poverty stricken parts of Rwanda and Haiti. Neither has any other sources to replace this support. The Rwanda/CRS program, on the other hand, has been able to meet its operating costs since the first Outreach Grant ended. However, it is not as effective as it should be. There are not enough vehicles for the necessary amount of supervision and end-use checking. The vehicles they do have are old and spend an inordinate amount of time in the repair shop, increasing maintenance costs and reducing program efficiency. Phasing out the Burundi Outreach Grant would necessitate eliminating distribution points in harder to reach areas and drastically reducing the amount of recipient contributions that currently help to support the nutrition surveillance and education program, as well as developmental activities in the MCH centers.

In countries in which Title II is not expanding, Outreach monies can be used entirely for strengthening the logistic and programmatic support. In these programs operating costs may be reduced due to better management and capital improvements. Moreover, more programmatic supervision, in addition to improving the chances of Title II commodities being used for a developmental effect, results in a better response to the program and increased recipient fees where those are collected, and more income producing activities where those are prevalent. Thus, while Outreach may continue to be needed to support consolidation, and finance operations, there is less acceleration of costs. Some of these programs have included phase-over plans in their applications for Outreach Grants.

The second Outreach Grant proposal for Sierra Leone is a follow-on of the first which supported a 67% program expansion. The new request is for qualitative improvement and includes a detailed phase-over plan. The largest item in the Grant is to fund storage facilities that will enable mobile clinics to become stationary, thus reducing operating costs considerably. New vehicles are to be financed by money raised from the sale of old vehicles plus recipient fees and government contributions that are put into an interest bearing account. Operating expenses are to be covered by recipient fees, the sale of containers, and government contributions. The Benin Outreach Grant proposal phase-over plans also include putting recipient contributions that are saved during the life of the Project into an interest bearing account that will help support operating costs afterwards. Whether these plans will enable the programs to be completely self-supporting after Outreach remains to be seen. There is also a question as to how the program will be funded after the savings are spent. Moreover, there is an issue as to whether using Outreach to generate savings is appropriate.

There are some programs in which a single Outreach Grant supports the development of components of either the logistic or programmatic infrastructure that will not require additional money after the infusion of Grant funds. The Ecuador Grant, for example, is supporting the transition from Title II commodity assistance to a Government of Ecuador development oriented program that will be supported by AID. Thus Outreach will only be required for a limited period. However, most of the programs that have benefitted from Outreach thus far will need to replace part or all of the Outreach funds at the end of the Grant. There are several potential sources that can be considered if Outreach is not refunded. These are:

(1) Recipient contributions

CARE believes that no recipient fees should be levied because they have been shown to exclude the neediest. SAWS has programs in areas that are believed to be too poor to contribute anything. In some countries in which health services are free, the government does not permit charges for Title II programs. In programs that already collect recipient contributions, although they may be raised to help defray costs, in most cases, the participants cannot afford the increases that would be necessary to cover the costs completely. Targeting poorer recipients of course reduces the prospects for increasing cost recovery.

(2) Income generating activities associated with the distribution centers

As more effort goes into the developmental aspects of Title II programs, there is more potential for income generating projects to help with the costs. Some MCH centers and schools are involved in food production and handicraft activities that could, and in some cases do, provide a return. Some Food for Work project activities, do, or could lead to producing income. For example in Rwanda/SAWS, a FFW project is making bricks to build local government buildings. They plan to begin making extras to sell in order to raise money that will help fund the project.

(3) Proceeds from claims against lost commodities, sale of unfit commodities etc.

If the volag were permitted to retain the proceeds from claims against lost commodities and the sale of unfit commodities, it would contribute toward meeting program costs. However, it would not be a large amount of money, nor could the value be anticipated for future budgeting.

(4) Cooperating sponsors

The voluntary agencies are usually not able to provide more than the expatriate salaries and other contributions they are already making.

(5) Host governments

In most of the countries in which there are Outreach Grants, they were necessary either because the government had had to reduce the proportion of Title II costs it could support, or it was unable to contribute anything. In countries in which the host government is able to assume the costs, Outreach can certainly be phased out.

(6) Title I, Title III or Section 206

Using funds generated through the sale of PL 480 commodities would be logical in that one part of the U.S. food aid program would be subsidizing another part. However, as the obligation of those funds is controlled by the host governments, in consultation with the USAID

missions, they would have to be convinced that Title II were a priority and should take precedence over other developmental programs. If the developmental achievements of Title II programs compared favorably with those of competing projects, the priority would probably be higher. Some countries, like Rwanda and Burundi, may be too small for a Title I or a Title III program. The major drawback of using these funds, were they available, is that they are unreliable because of erratic commodity sales and irregular disbursement of funds by the local governments.

(7) Monetization of Title II commodities

If monetization of Title II commodities were permitted, this would be an appropriate alternative to Outreach in that Title II would be funding its own costs of operation. It would have the drawback of reducing the commodities available for distribution but this would encourage discipline in programming the quantity needed to sell.

(8) Other donors

It would be unusual for another donor to support the PL 480 Title II program unless there were an activity ancillary to the food distribution that was of special interest to the donor.

Conclusion

Outreach Grants were awarded to programs that could not afford to achieve project objectives to expand or strengthen Title II without assistance. A few of the Grants funded one-time program developments that will not require continued support, most will need outside assistance after Outreach has ended. Other sources of funding may be able to meet some of the program costs but in the majority of the countries in which there have been Outreach Grants, Outreach is the only viable source of support for most of these costs.

Recommendation

Outreach should not automatically be terminated at the end of a Grant. Phase-over plans should be made for those costs that can realistically be met internally, or by other outside sources. However, in programs in which there are expenses that cannot be funded in any other way, Outreach should continue to provide support.

Priority should be given to new Outreach Grant proposals that request logistic or programmatic support to strengthen, rather than expand existing programs, excepting in those countries in which growth of the Title II program is a priority of the USAID missions and AID/W.

#### 4. CASE STUDY: HAITI

##### 4.1. Introduction

Haiti is one of the poorest countries in the world and the only country in the Western Hemisphere on the United Nation's list of Relatively Less Developed Countries (RLDCs). The statistics speak for themselves<sup>1/</sup>: despite a per capita GNP of \$260 in 1979, more than 80 percent of the population had an average income of under \$150; less than 20 percent of all Haitians are functionally literate; 30 percent of children under 5 years of age are malnourished, and infant mortality rates are as high as 200 per thousand live births in the most crowded urban areas; the ratio of population density relative to arable land is 757 per sq. km. with an average plot size in 1971 of 0.77 hectares. This picture is dreary enough, but it is still deteriorating. A 1981 nutrition survey in the Southern region of the country shows that the level of acute malnutrition of children under five has jumped from 7 percent in 1978 to 11 percent in 1981.<sup>2/</sup> Haiti's vulnerability to disaster makes this situation even more precarious.

##### 4.1.1. Poverty and Malnutrition in Haiti

Poverty and malnutrition are pervasive in Haiti; according to the World Bank, in 1976, 0.4 percent of the population living in Port-au-Prince monopolizes 44 percent of the national income (World Bank 1976). In stark contrast, almost 90 percent of the population outside the capital and in the expanding urban slums live in conditions of absolute poverty.<sup>3/</sup> Average calorie consumption in rural areas is 40 percent below FAO/WHO recommended intake levels while the protein gap is even larger with a 31.5 percent deficit nationwide and 50 percent in rural areas. Consumption of high protein cereals, beans, vegetables and milk are far below the Haitian Bureau of Nutrition's minimum intake levels.<sup>4/</sup>

Protein/calorie malnutrition is one of the most critical public health concerns in Haiti today. A National Nutrition Survey carried out in 1978 by Haiti's Bureau of Nutrition, in cooperation with the Center for Disease

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<sup>1/</sup> Country Development Strategy Statement, FY 1984: Haiti, Agency for International Development, Washington, January 1982.

<sup>2/</sup> Preliminary Results of a Nutritional Survey in the Southern Region (Haiti - 1981), January 1982 in French. Acute malnutrition is defined as weight for height less than 80% of reference median.

<sup>3/</sup> Based on estimates of minimum consumption in relation to actual purchasing power contained in Food and Agricultural Sector Strategy for Haiti, Final Report, USAID, Port-au-Prince, Haiti, February 1982, pp. 167-8 and Table 6: People Living Under Conditions of Absolute Poverty, Haiti 1976.

<sup>4/</sup> Haiti Rural Health Delivery System, AID Project Paper Amendment, Nutrition Component, pp. 10-11.

Control,<sup>1/</sup> demonstrates the magnitude and severity of this problem. Almost 30 percent of children under 5 years of age were moderately or severely malnourished according to the Gomez classification weight for age measure. Sixteen percent were estimated to be suffering from acute malnutrition, and almost 27 percent were chronically malnourished or "stunted." A 1981 evaluation of the PL 480 School Feeding program in Haiti shows that primary school children are also malnourished with 25 percent of the 1,936 school-age children surveyed exhibiting signs of acute malnutrition.<sup>2/</sup>

Malnutrition is pervasive in both rural and urban areas. The National Nutritional survey concluded that the prevalence of malnutrition was greater in rural areas than in Port-au-Prince with no significant differences among the five rural geographic areas. Likewise, symptoms of illness, fever, and diarrhea were more frequent in the countryside than in Port-au-Prince, particularly in children who were malnourished.

Other studies, however, demonstrate that malnutrition is greater in urban than rural areas. The School Feeding evaluation found that children in urban schools were significantly worse off nutritionally than their peers in the countryside, although overall the urban students had a considerably higher socio-economic standing.

A recent survey of an urban slum outside of Port-au-Prince<sup>3/</sup> confirms this finding. Higher rates of stunting earlier in life and more severe wasting were registered in Cite Simone than in Haiti generally. In Cite Simone 12 percent of children were stunted by their 3rd to 5th month, increasing to 29 percent by 12 to 23 months of age. Acute malnutrition occurred in 16 percent of children between the ages of 12-23 months. By age two, more than one-third of children showed either wasting or stunting and 4 percent suffered from both. While Cite Simone is one of the most densely populated slums in Haiti, it can be considered typical of the rapidly growing urban areas created by rural outmigration.

Thus poverty and malnutrition are endemic to Haiti in urban as well as rural areas. Income levels are not sufficient for over 90 percent of the population to purchase a nutritionally adequate diet. Since 1978, conditions have worsened as illustrated by nutritional survey data and by the soaring malnutrition rates in the urban slums, both among pre-school and school-age children. The prospects of increasing local production of food crops are equally dim. Virtually all cultivable land has been exploited in Haiti. The degradation of existing land quality, due to population pressure, erosion and parcelization, makes higher yields almost impossible in the short term, if at all.

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<sup>1/</sup> Haiti Nutrition Status Survey, 1978, Summary Report, Government of Haiti with Center for Disease Control, April 1979.

<sup>2/</sup> Joel Cotten, Evaluation Research on the PL 480 Title II School Feeding Program in Haiti, USAID, Port-au-Prince, Haiti, February 1982.

<sup>3/</sup> Baseline Survey of Nutritional Status and Health of Mothers and Children in Cite Simone, USAID, Haiti, 1981.

The economic situation not only affects the nutritional status of children directly through the availability of food and fuel, but indirectly in that a woman can no longer afford to breastfeed for the traditional 18 months.<sup>1/</sup> Necessity requires her, as soon as possible after birth, to resume her business activities that are usually incompatible with breastfeeding. Combined with the easy availability of powdered milk and strong peer pressure to bottle feed, these time, income and resource constraints have resulted in much earlier weaning of children. Data from the nutritional survey in the Southern region of Haiti substantiate this conclusion. While 100 percent of mothers were breastfeeding their 3-5 month old babies in 1978, only 81.3 percent were nursing in 1981. At one and two years of age respectively, only 81 and 41 percent were breastfeeding in 1981 as compared with 94 and 53.6 percent in 1978. And in the Cite Simone study it was shown that nearly all mothers supplement with bottle milk from the first month of life, thereby increasing fourfold the risk of dying during the first 18 months of age.

Under these circumstances the PL 480, Title II program is a vital component of any nutrition strategy for Haiti. It has been in operation for twenty-four years. In FY 1983 the program will reach 606,00 recipients with 30,211 metric tons of food valued at \$7.8 million.<sup>2/</sup> Supplementary feeding can alleviate hunger and starvation during periods of food inadequacy and natural disaster. It can also help to rehabilitate malnourished children and prevent malnutrition in the future by assisting families to cope more effectively with the stresses and strains of economic life in Haiti. Only a well designed and integrated Title II program can achieve these objectives. But a prerequisite to any food distribution program is an adequate logistics system.

#### 4.1.2. Logistics

The extreme poverty and malnutrition in Haiti has required a sustained and substantial commodity assistance effort of approximately 25 to 30 thousand metric tons valued at \$7 to \$8 million per year. (See Table 4-1.) In-country logistic support for this program has been insufficient. Available storage and transportation facilities have not been equipped to handle the delivery of these large quantities of food in an expeditious manner.

Before Outreach, the existing warehouse capacity in Haiti was not large enough to accommodate the Title II program nor did it meet the minimum specifications for the storage of food commodities. Of the four voluntary agencies managing food distribution programs, CARE was the only one which had built its own storage relay system of 8 warehouses. The other PVOs rented premises which were too small in size, poorly ventilated, and unsuitable for loading and unloading.

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<sup>1/</sup> Maria D. Alvarez and Gerald F. Murray, Socialization for Scarcity: Child Feeding Beliefs and Practices in a Haitian Village, paper submitted to USAID/Haiti, August 28, 1981.

<sup>2/</sup> School feeding is the largest part of the program, 70 percent of recipients and over 50 percent of the commodities distributed.

TABLE 4-1: INCREASE IN VOLUME OF FOOD COMMODITIES BEFORE OUTREACH  
AS COMPARED TO LAST YEAR (1982)

<u>YEAR</u>	<u>VOLAG</u>	<u>TOTAL VOLUME OF FOOD (MTs)</u>	<u>% INCREASE</u>
1979	CARE	10,332	
1982	CARE	13,387	29.5%
1979	CRS	3,236	
1982	CRS	5,804	79.3%
1979	CWS	3,109	
1982	CWS	3,166	2.0%
1979	SAWS	1,216	
1982	SAWS	4,050	233.0%

In addition to warehousing deficiencies, the transportation infrastructure in Haiti is sorely inadequate. Vehicle ownership is less than seven vehicles per 1,000 inhabitants, the lowest in all Latin America and the Caribbean. Only twenty-seven percent of Haiti's motor fleet, or approximately 10,260 vehicles, are trucks and pick-ups serving private and public transport.<sup>1/</sup> The experience of the sponsoring agencies, including the World Food Program, suggests that public transportation is unreliable as well as insufficient and that the voluntary agencies should have their own means of transportation. Indeed, ONAPAM, the local counterpart of the World Food Program, has its own trucks to distribute its food commodities, although only one was operating during the time of our visit.

Moreover, the mountainous terrain and the absence of a viable road network in Haiti make it difficult and expensive to reach many poor communities which are off the beaten track, especially with public transportation. Of the 2,750 km. of motorable roads, only 576 km are paved.<sup>2/</sup> The primary road system extends from Port-au-Prince to Les Cayes and Jacmel in the South and to Gonaive and Cap Haitien in the North. The secondary roads originating from these two main arteries are gravel-surfaced and require 4-wheel drive vehicles. Although much of the main network has been upgraded recently, maintenance of existing roads and bridges is still a problem. The wear-and-tear on vehicles makes it extremely costly to service the more remote areas, some of which are still inaccessible except by foot, pack animal or boat. Thus, thousands of needy people, particularly those in the southwest and coastal towns, have been unable to participate in the food program because of lack of transportation.

It was, therefore, a priority need to increase the warehousing, transportation and management capabilities of the voluntary agencies not only to fulfill the logistic requirements of the existing Title II program but also to expand feeding activities and disaster assistance to those deprived individuals and families who were not otherwise being reached. Outreach answered this need.

#### 4.2. Benefits

Outreach grants provided the necessary logistic support for the \$7-8 million Title II food aid program. They resulted in more timely delivery of food, increased storage capacity, improved handling and supervision, program expansion and retargeting, reduction in vehicle maintenance and repair costs, and better coordination. But more than any one specific accomplishment, these Outreach grants have created, in the words of one PVO director, "a new spirit of control" in Haiti. This is perhaps the major contribution of Outreach and the most difficult to quantify beyond the weight of unanimous opinion.

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<sup>1/</sup> World Bank Staff Appraisal Report, Sixth Highway project, Haiti, March 8, 1982, p.5.

<sup>2/</sup> World Bank Staff Appraisal Report, Sixth Highway project, Haiti, March 8, 1982, p.4.

#### 4.2.1. Food Storage

The provision of basic storage requirements is one of the most important logistic operations in a Title II program; the lack of appropriate warehousing results in substantial commodity losses and delays in food deliveries. Outreach funds amounting to \$703,000 have been approved for the building of additional storage facilities estimated at approximately 46,000 sq. ft. Table 4-2 shows the breakdown by PVO, location, capacity, cost, and status of construction of these warehouses. The new or enlarged warehouses will provide storage space to accommodate a 20 percent operational food reserve for emergency needs in addition to regular Title II program commodities. Constructed according to engineering specifications, the warehouses will ensure proper food conservation practices, including insect and rodent control, stacking of commodities and inventory control, which were not always followed under earlier leasing or makeshift arrangements.

Along with more effective commodity handling, the warehouses have been designed to improve program management, safety and food distribution. Both the CWS and CRS facilities are located near the port of entry to avoid the congestion of the capital city and the frequent threat of thefts which harassed previous storage sites.<sup>1/</sup> CWS has a safe fence and ample area for the loading and unloading of several trucks. Office facilities have been established on the same land close to the warehouse. SAWS also constructed its warehouse on the outskirts of Port-au-Prince with office facilities as well as a garage and a conference room on the same premises. While before it shared storage space with the Seventh Day Adventist University, now the warehouse is being used exclusively for food commodities and has been built with this specific purpose in mind. Regional warehouses are also planned for the programs of CRS in Les Cayes and CARE in Cap-Haitien.

#### 4.2.2. Transportation

While the central and regional warehouses constructed by the PVOs are designed to store perishable commodities, like whole and processed grains, for relatively long periods of time, local distribution centers are usually not equipped to hold food for more than a month's duration. Thus, an uninterrupted flow of deliveries is necessary to supply the monthly requirements of project sites and commodities.

A total of \$273,706, or 3 percent of the total yearly value of Title II commodities, have been invested by the voluntary agencies from Outreach funds to purchase 10 trucks, 1 pick-up truck and 1 boat for the transportation of food (see Table 4-3). Private trucks have allowed the PVOs to manage the inland distribution more effectively, resulting in more timely arrival of food and reduced losses due to theft and improper handling. With their own trucks, PVOs can schedule their deliveries in accordance with program needs instead of depending on the vagaries of the trucking companies or the whims of recipients.

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<sup>1/</sup> The CARE warehouse, also situated near the airport, was constructed with Title I funds before Outreach.

Table 4-2: Additional Warehousing Infrastructure  
Outreach Grants

HAITI

Volag	Location	Capacity	Construction Cost	Date of Completion	Observation
SAWS	Port au Prince	12,000 sq. ft. (1000 MTs)	\$273,258.18	April 1982	The land belongs to the Seventh Day Adventists. Office space, garage and conference room constructed in same building.
CWS	Port au Prince	10,000 sq. ft. (830 MTs)	\$193,000.00	May 1982	Land purchased by CWS (\$34,000). Separate building for office space constructed.
CRS	Port au Prince	12,000 sq. ft. (1000 MTs)	\$229,968.34 <sup>1/</sup>	To be terminated February 1983	Land granted to CRS by GOH.
	Les Cayes	6,000 sq. ft. (500 MTs)		To be terminated March 1983	Land made available by the Bishop.
CARE	Cap-Haitian	6,000 sq. ft. (500 MTs)	\$ 90,000.00	Construction to start in September 1982	

<sup>1/</sup> Based on actual experience, this amount will be insufficient.

TABLE 4-3: TOTAL OUTREACH INVESTMENT IN TRUCKS

<u>VOLAG</u>	<u>NO. OF TRUCKS</u>	<u>TOTAL EXPENDED</u>
SAWS	3	\$ 63,167.39
CARE	3	\$ 93,995.08
CWS	1	\$ 26,892.42
	1 pick up	\$ 6,385.64
CRS	3	\$ 60,905.00
	1 boat	\$ 22,371.40
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TOTAL		\$273,706.93

Before Outreach, except for CARE which had its own fleet of trucks, the other PYOs were either using commercial trucking companies or relying on recipients to provide their own transportation. Neither of these solutions is acceptable in the Haitian context. Everyone we spoke with in Haiti, from the World Food Program to individual food recipients, complained about the inadequacy of commercial transportation, particularly the lack of control that can be brought to bear on these enterprises to ensure timely deliveries, recovery of claims on losses, and the proper handling of food. The same problems occur when the recipients are expected to furnish their own transport. Moreover, food is sometimes diverted to pay for the deliveries when no other resources are available.

Not only is the provision of trucks under Outreach justified by improvements in program quality but it is also a more cost-effective investment. Based on actual expenses, a truck produces a net benefit of approximately \$8,000 during the first three years of operation as follows:<sup>1/</sup>

	<u>Input</u>	<u>Output</u>
Cost of a 10-ton truck	\$36,700	
Maintenance & operating costs at a rate of \$10,737 per year <sup>2/</sup>	\$32,211	
Work output - transportation of 1500 tons per truck per year at an average cost of \$16 per ton <sup>3/</sup>		\$72,000
Salvage value at the end of three years		\$ 5,000
TOTAL	<u>\$68,911</u>	<u>\$77,000</u>
Net Benefit		\$ 8,089

This cost analysis indicates that the Outreach investment in purchasing trucks has produced a net benefit of \$8,089 per truck or almost \$2,700 per year.

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<sup>1/</sup> Experience has shown that under the road conditions in Haiti and the intensity of use in the PYOs program, a truck has a three-year effective service.

<sup>2/</sup> This figure is based on SAWS records and may be higher than other PYOs because SAWS operates throughout Haiti rather than in a specific geographic area.

<sup>3/</sup> The average cost of transportation per metric ton in Haiti is \$16. Commercial trucking rates vary from \$14 to \$18 depending on the distance from Port-au-Prince. During Hurricane Allen in 1980, CRS, which coordinated the emergency food distribution, paid \$0.40 for each 50 lb. bag (44 bags per metric ton), equivalent to \$17.60 per ton. The WFP reimburses ONAPAM, its Haitian Government counterpart in charge of logistics, the amount of \$8.00 per metric ton, or 50 percent of the total cost of inland transportation.

In addition to trucks, 4 jeeps have been provided to the PVOs under Outreach<sup>1/</sup>. Because of the expense and irregularity of public transportation, these jeeps have enabled field supervisors and inspectors to schedule more frequent visits to project sites and, thereby, to improve commodity and program management. The pick-up purchased by CWS is also used for field supervision part of the time.

#### 4.2.3. Maintenance and Repair

Vehicle maintenance and repair (including down time, costs, and quality control) is one of the major constraints to food delivery in Haiti. CARE estimates that 20-30 percent down time is about average for its fleet of trucks. In the specific case of SAWS, one of its trucks has been out of commission for over 6 months. To help redress this problem, CARE has constructed a garage facility as part of its central warehouse in Port-au-Prince with Title I funds. The mechanics' salaries and training, spare parts, and equipment have been provided by Outreach. As a result of this investment, in FY 82 the average maintenance cost per vehicle decreased by close to 45 percent with further reductions anticipated as the garage becomes fully operational and the mechanics better trained. CARE also hopes that, with better maintenance and repair, vehicles will continue to operate more than the present 3-year average.

#### 4.2.4. Program Expansion and Retargeting

The Outreach Grants in Haiti are predicated on the assumption that PL 480 Title II is a long-term investment and that program coverage should expand over time: warehouse construction was to accommodate an increasing volume of food; an improved logistics system was a prerequisite to reaching larger numbers of beneficiaries, many of whom were previously inaccessible to public transportation. While program expansion was not an explicit objective of all Outreach activities, in fact the programs of all the PVOs did grow substantially between FY 80 and FY 82, and in the case of CRS and CARE, geographic targeting did take place.

The following table summarizes this growth in numbers of recipients:

	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>
CARE	226,500	257,000	275,000	292,735	326,500
CWS	74,800	71,900	77,000	83,100	80,000
CRS	92,000	88,500	113,125	123,500	130,500
SAWS	20,324	42,546	66,631	75,440	73,500

<sup>1/</sup> The total value of the jeeps is \$40,362.92:

<u>VOLAGE</u>	<u>VEHICLE</u>	<u>TOTAL COST</u>
CARE	Jeep (1)	\$11,586.92
CRS	Jeep (1)	10,500.00
SAWS	Jeep (2)	18,276.00
	TOTAL	<u>\$40,362.92</u>

As seen from the above figures, CRS has expanded its program by over 60 percent (48,500 participants) in less than 4 years. Likewise CARE over the same period has grown by almost 456 percent or 100,000 recipients, although this was more a continuation of an existing trend than a direct result of Outreach. Since SAWS began its Title II program in Haiti with Outreach monies, its current beneficiary level is directly attributable to Outreach.

In addition to program expansion, CARE and CRS have attempted to direct this growth to areas which they considered to be particularly vulnerable to malnutrition and disasters. While the 1978 Nutrition Survey concluded that there were no significant statistical differences among rural geographic areas in Haiti, a close examination of the data reveals that in fact the Northern and Southern regions show the highest rates of stunting, 2nd and 3rd degree malnutrition, and concurrent wasting and stunting. A similar nutrition survey carried out in 1981 in the South, as mentioned earlier, demonstrates that malnutrition levels have deteriorated even further over the past 5 years. The Outreach Grants have enabled CRS to extend its program to the very poor departments of the South and Southwest including Grand Anse, Les Cayes, Jeremie and the Cayemite islands in the coastal zone. As a direct result of Outreach, 38,000 new recipients have been reached in the Jeremie area and 7,200 in Les Cayes. CRS now maintains an office in Jeremie with a warehouse (rented), 2 vehicles, and a full-time staff person. This is the first time that a PVO has established a branch office in such a remote, needy and disaster-prone area. The warehouse construction in Cap-Haitien, to be initiated in September 1982, will increase CARE's capacity by 500 metric tons. This will assist CARE to support more effectively the 111,200 beneficiaries to be served in 1983, approximately 35 percent of all CARE recipients. The volume of food programmed for this Northern area has increased from 3213.2 metric tons in FY 1980 to 5233.5 metric tons projected in FY 1983.

#### 4.2.5 Coordination

One unexpected outcome of Outreach in Haiti was to consolidate the coordination of PVO activities which had been attempted in earlier years, particularly during disasters. The attached map shows the geographical distribution of each PVO's program outside of Port-au-Prince: CARE is in the North and Northwest, CRS in the South and Southwest, and CWS in the Central region and the Island of Gonave. SAWS is not limited to any specific area but has agreed to consult with the other PVOs so as to avoid any duplication of effort.

At the same time, and largely due to a closer relationship spawned by Outreach, the Office of Private Voluntary Development in the AID Mission began to take a role in reinforcing this collaboration. USAID organizes monthly PVO meetings in conjunction with the World Food Program and takes advantage of all opportunities to bring the volags together. Due to this interest on the part of USAID, the number of PVO Grants (OPGs) has grown in recent years. The AID Mission in Haiti has also developed several unique projects in the areas of forestry, public works, health and nutrition, and education which integrate food commodities with other resources.



#### 4.2.6 Disaster Preparedness

Over the past 10 years, Haiti has had three nationally declared disasters as well as frequent flooding, drought and earthquake tremors. Until the recently announced appointment of a GOH disaster coordinator, the international voluntary agencies, in conjunction with the Haitian Red Cross, have assumed responsibility for the management of disaster responses. Their planning and implementation have been severely constrained by limited storage and transportation resources.

Outreach has relieved much of this pressure on infrastructure in fulfillment of its mandate to improve the disaster response capabilities of the voluntary agencies. Outreach grants have provided 46,000 sq. ft. of storage capacity, including a 20 percent food reserve<sup>1/</sup>, to enable the PVOs to respond rapidly and efficiently to natural disasters. Also the vehicles purchased by the PVOs under Outreach will allow them to react immediately to emergency situations instead of having to depend initially on commercial transportation. In the case of Hurricane Allen in August 1980, almost 3,000 tons of emergency food were dispatched to 330,000 persons in the eight affected zones by the PVOs and the WFP under CRS direction. CRS claims that the 3 trucks funded with Outreach monies were critical to their enhanced capability to mobilize this coordinated relief effort.

#### 4.3. Future Funding Options

As seen above, the most important function of Outreach monies is to support the storage and inland transportation costs of the Title II program. It is generally expected that host governments would provide storage facilities and inland transportation expenses with a view to eventual absorption of the entire program into its own development plan and budget. In fact, the Haitian government over the years has contributed regularly to these costs. In recent years, however, due to increasing pressures on its own resources, the GOH share of the program has substantially diminished. Monthly payments to PVOs have either decreased or have remained constant despite high levels of inflation, and for the past 18 months port charges have not been reimbursed as agreed. As of March 1980, the gasoline tax exemption for PVOs has been revoked, thereby increasing the price of a gallon of gasoline by 38 percent. In the case of CWS, for example, this means \$8,000 additional outlay for operating costs, the equivalent of more than 75 percent of the GOH contribution to inland transportation. All these costs have been gradually absorbed by Outreach grants, by the PVOs' own resources, or by the program participants. The bulk of future Outreach needs will consist of recurrent storage and transportation costs as well as vehicle replacement. This is an ongoing commitment that is essential to the functioning of a Title II program in Haiti.

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<sup>1/</sup> While the PVOs have a capacity to store a 20 percent emergency reserve, only a 5 percent reserve has been authorized.

The policy issue that emerges is whether Outreach is the most appropriate source for financing these recurrent and replacement expenses. On the one hand, a considerable investment has already been made in providing increased storage space and transportation carrying capacity as well as improved efficiency, and it would be penny wise and pound foolish to renege on this commitment for the relatively small amounts of money involved.<sup>1/</sup> On the other hand, Outreach criteria, as contained in the project amendment, make it more difficult to defend the funding of ongoing expenses for extended periods of time since these are assumed to be the responsibility of the host government.

Several options have been proposed, each with liabilities of its own. Funding for logistical support to the Title II program appears to be a reasonable use of Title I funds, particularly as these monies are viewed as coming out of the government's own coffers. Whether the Title II program would be given a high enough priority by USAID or the government to be eligible for Title I funding is uncertain, although USAID indicated that this might be feasible with enough forward planning. The PVOs, however, view Title I as an insecure funding mechanism in contrast to Outreach which they feel has been most responsive to their needs. Given the current rice glut in Haiti, \$9 million worth of rice has not been sold yet this year, meaning that the local currencies from these sales have not yet been generated, PVOs are reluctant to jeopardize their programs by reliance on what they believe to be a less than reliable source.

Another possibility is working through the Government's own transportation agency, ONAPAM, which provides the logistic support for the World Food Program. Currently, ONAPAM is in difficult straits with only 1 truck out of 5 operational and lacking sufficient money to pay for repairs. ONAPAM would require considerable strengthening before it could meet even its own mandate, not to mention that of the PVOs. Whether such an investment in institution building is worthwhile from a development and disaster relief perspective needs careful examination. PVOs are also extremely reluctant to work too closely with the government in Haiti.

Alternatively, program participants could be asked to increase their contribution to cover logistic support costs. As a result of the Outreach grants, the PVOs deliver more of the food directly to recipients who were previously required to arrange and pay for their own transportation. CRS now trucks all commodities from its regional warehouses to end users, collecting 30¢ for each bag - 20¢ for transport and 10¢ for the bags. CARE makes deliveries to public institutions while private organizations must handle their

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<sup>1/</sup> For example, Outreach finances about 13% of CARE's support costs for the Title II program and 25% of CWS' recurrent inland transportation expenses. On the other hand, in the case of SAWS, where Outreach funding was critical to the startup of the Title II program, between 41% and 72% of SAWS' total operational and administrative costs (depending on the year), are covered by Outreach.

own transportation needs. CWS services the most distant and needy while the other beneficiaries provide their own transport; these beneficiaries are reimbursed approximately 10 to 25¢ per bag by CWS, depending on quantities supplied and distance traveled. SAWS subsidizes 50 percent of transport costs for those outside of a 20-mile radius of Port-au-Prince. CRS is, thus, the only PVO that charges for transportation. All the PVOs require the return of the containers which they then sell to cover a part of the operating expenses.

These receipts can be a valuable source of income to reduce dependency on Outreach funds for inland transportation. In the case of CRS, 20¢ per bag adds up to \$8.80 per ton of food, equivalent to more than half the value of regular commercial trucking rates (\$16 - \$17/ton).<sup>1/</sup> Nevertheless, whether program participants can realistically be expected to bear those expenses is an open question. The School Feeding evaluation presents evidence which raises doubts about such an approach. It was found that 17 percent of School Feeding commodities were being used for extra-program purchases or the equivalent of about 22 percent of the total value of the FY 80 program.<sup>2/</sup> The largest losses were attributed to in-kind payments for operating costs. We presume that a hefty part of this amount was for transportation costs. If program recipients were required to contribute to transportation in addition to other already burdensome financial obligations<sup>3/</sup>, this may result in an even larger diversion of food.

Finally, PVOs could also be encouraged to seek funding from other international donors or their own constituents. CRS, for example, feels confident that it could obtain food aid and logistics support (\$25/ton) from the European Community if Outreach money were discontinued. On the other hand, CWS was receiving \$10-15,000 per year from the German Protestant Central Agency for transportation and storage of food for La Gonave. This assistance ended last December, and CWS is contemplating the reduction of its La Gonave program if additional funding is not identified shortly. Moreover, CWS supporters contributed last year the \$34,000 required to purchase land for the new warehouse when the GOH donated space did not materialize. In addition, CWS as well as the other PVOs already contribute substantial amounts of their own dollars to the Title II program. Since 1978, the Seventh Day Adventists have provided over \$370,000, and close to 30 percent of all administrative and operational costs will be covered by CARE in FY 1983. It may be overly optimistic to expect other donors, parent organizations or individual constituents to finance these recurrent logistic support costs.

Whatever the funding instrumentality, Outreach has made a valuable contribution to the food distribution work of PVOs in Haiti. The capital outlays expended as well as the collaboration that has developed among the PVOs and with USAID should be maintained at all costs. At the same time, attention should be given to improving the design of these feeding programs.

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<sup>1/</sup> The World Food Program will pay up to \$17 per metric ton for transportation.

<sup>2/</sup> Cotten, *op. cit.*, pp. 12-14.

<sup>3/</sup> The average fee per year to support a School Cantine is \$3.20 per child.

#### 4.4. Program Improvement

One of the basic logistical requirements for carrying out a PL 480 Title II program is the establishment and implementation of standards and regulations for the handling of the food during warehousing, inland transportation and distribution. This includes specific instructions for unloading, stacking, inventory controls, food conservation, and dispatching. In the same manner, guidelines should be developed for the handling and distribution of the food commodities at the project site, for example, the preparation of family food packages, selection of recipients, and reporting. Program management also requires staff to work with beneficiaries in nutrition/health education, food demonstrations, and home visitation. Unless an institutional infrastructure of trained personnel, i.e., warehouse managers, accountants, drivers, field inspectors, supervisors, etc., is in place, the capital investment provided under Outreach will fall short of anticipated objectives. These factors should be considered when reviewing future Outreach proposals.

Similarly, the nutritional impact of the program can be improved through more effective targeting. Given the high mortality and malnutrition rates during the early years of life in Haiti, every effort should be made to try and reach those children most at risk. While many primary school children are also malnourished, the School Feeding program is not structured as a nutrition intervention. The voluntary agencies running the program contend that the primary purpose is educational - increased and regular attendance - not nutritional. If reducing malnutrition is to be a major objective of the PL 480 Title II program in Haiti, School Feeding, as recommended in the evaluation, should be designed in order to have more impact on nutritional status. More resources could also be spent on MCH programs than the meager amounts currently programmed.<sup>1/</sup>

Although there is already some interaction with various government and private nutrition rehabilitation centers, there is room for much closer collaboration and program improvement. A recent survey of PVO food distribution activities was conducted in preparation for the rural health delivery project. The study concluded that "in general, MCH feeding programs suffer from a lack of clear priorities and policies beyond a basic 'feeding hungry children'. The development of a coherent national nutrition program, in which supplementary feeding plays an integral role, will call for tighter control and clearer guidelines."<sup>2/</sup> Program eligibility, graduation and referral criteria need to

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<sup>1/</sup> For FY 1982, the major Title II program categories are broken down as follows:

<u>Program Category</u>	<u>Recipients (%)</u>	<u>Metric Tons (%)</u>	<u>Dollar Value (%)</u>
School Feeding	70.4	57.0	58.2
Food for Work	13.8	24.0	22.1
Maternal Child Health	9.1	9.3	11.8

<sup>2/</sup> An Analysis of the Bureau of Nutrition: Nutrition Improvement Efforts in the National Context, Port-au-Prince, November 28, 1981.

be standardized and more clearly defined. Outreach funds (enrichment) could be used for program improvement in order to stimulate more effective targeting. Given the pervasive nutritional need in Haiti and the limited transportation infrastructure, targeting within existing programs are as important and may be more cost effective than expansion to outlying geographic areas.

With or without Outreach funds, however, the implementing agencies should be encouraged to retarget and integrate their programs more effectively. One of the justifications for a large school feeding program has been the lack of availability of a ready infrastructure for food distribution to the most vulnerable groups. The rural health delivery project, with AID support, is assisting the GOH to change its emphasis away from intensive rehabilitation of severely malnourished children, which was judged too costly for nationwide replication, to a program of nutritional surveillance in order to prevent malnutrition in the very young. In the Southern region of the country, CRS is providing food for the first time this year to these rural health dispensaries. The CARE community integrated Nutrition and Education Centers (CINEC) are also being used to reach malnourished children in remote areas. CARE is building 96 preschool centers in conjunction with the GOH primary school system. Food distribution, accompanied by nutritional and medical surveillance, is an integral part of the educational program to prepare the rural Haitian child to enter primary school. As other health centers are opened in the North or the Central areas of the country and more pre-school centers are constructed, there will be opportunities for program strengthening and further collaboration between the GOH and the voluntary agencies.

**Appendix 4-A**  
**PVO Program Summaries**

**CARE**  
**CRS**  
**SAWS**  
**CWS**

CARE

Objectives:

FY 80-82: To provide for the operation and maintenance of CARE's new transportation outreach system and for the training of additional mechanics and truck drivers.

FY 82-84: To maintain and improve CARE's current PL 480 storage and delivery system to accommodate the program expansion envisioned over the next few years.

Accomplishments:

Program Expansion: 35,735 beneficiaries between FY 80 and FY 82.  
(See attached table)

Increased Warehouse Capacity: 6,000 sq. feet to be completed by June, 1983.  
(See attached map)

Enhanced Transport Carrying Capacity: 3 (10-ton) diesel trucks,  
1 (4-wheel) drive passenger jeep

Reduction in maintenance costs: 45% (see attached table).

Expenditures to Date (from 7/1/79 thru 6/30/82)

Personnel	\$ 22,351.23
Maintenance and Repairs	58,028.67
Operation of commodities	205.90
Personnel Training	-0-
New York Overhead (7.42%)	5,979.45
Vehicle Purchases	105,582.00
TOTAL	<u>\$187,147.25</u>

Completion Date: September 30, 1984.

For FY 1983, \$145,254 is provided for warehouse construction and vehicle maintenance and \$104,924 for the purchase of trucks and vehicle maintenance.

Operational and Administrative Costs (FY 1983) of Title II Program by Source

	<u>Dollars</u>	<u>Percent (rounded)</u>
CARE	\$ 157,507	29
GOH	178,640*	33
Title I	96,000	18
Outreach	97,680**	18
Empty Container Funds	\$ 12,000	2
	<u>541,827</u>	<u>100%</u>

\* Includes lease values of premises donated by GOH amounting to \$34,640.

\*\* Does not include \$156,000 for warehouse construction and vehicle purchases.

Table 4-4: CARE-HAITI - PL 480 TITLE II

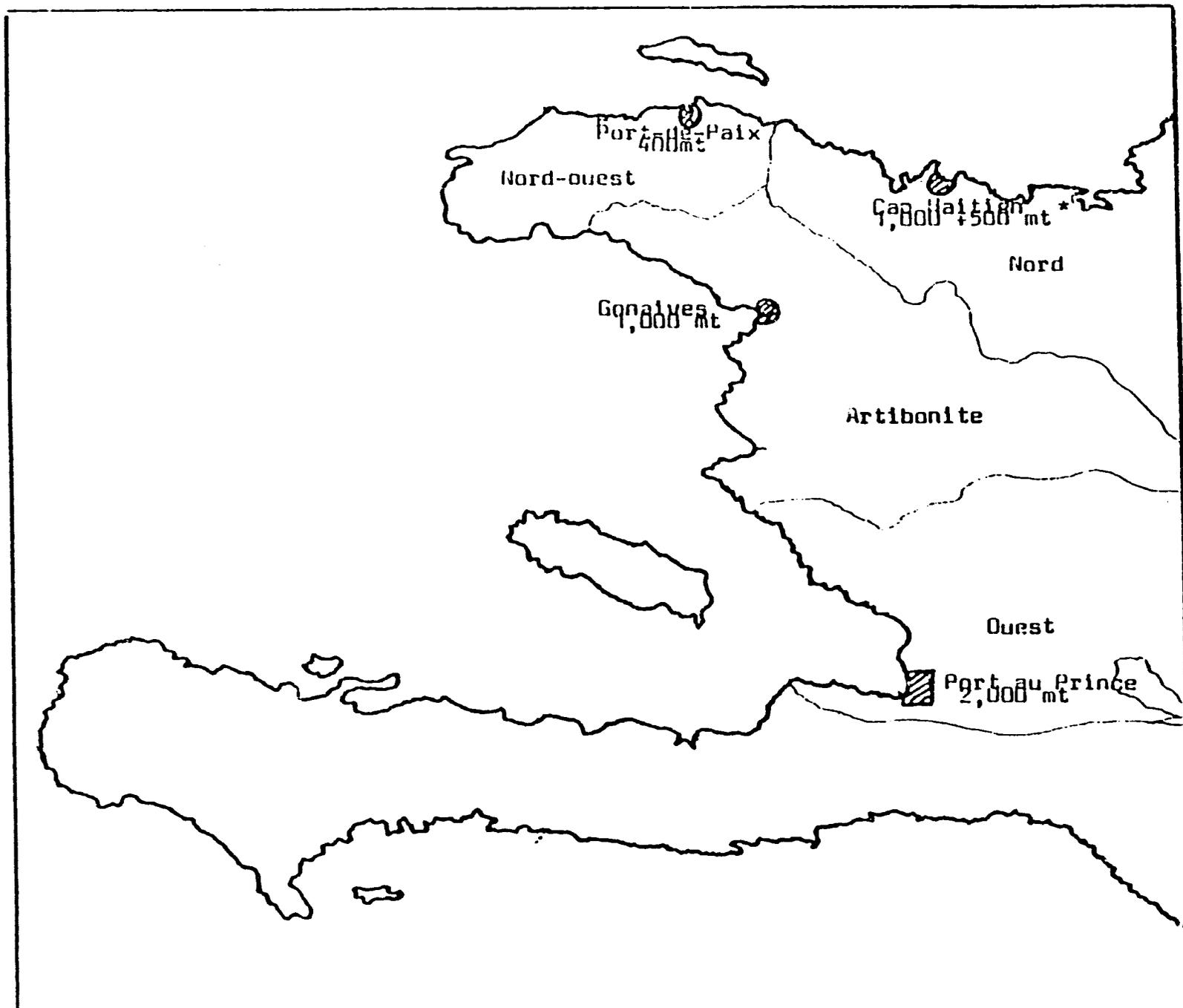
PROGRAM EXPANSION

1976-1985

YEAR	Total Program		School Feeding		MCH - Feeding	
	BENEFICIARIES	% INCREASE	BENEFICIARIES	% INCREASE	BENEFICIARIES	% INCREASE
1976	128,700		98,760		7,000	
1977	163,500	27%	104,000	5.3%	8,500	21.4%
1978	183,800	12.4%	110,000	5.8%	15,000	76.5%
1979	226,500	23.2%	140,000	27.3%	19,000	26.6%
1980	257,000	13.5%	170,000	21.4%	22,000	15.8%
1981	275,000	7%	193,000	13.5%	27,200	23.6%
1982	292,735	6.4%	203,000	5.2%	33,950	24.8%
1983	326,500	11.5%	226,000	11.3%	35,000	3.1%
1984	359,150	10%	248,600	10%	38,500	10%
1985	395,065	10%	273,460	10%	42,350	10%

FIGURE 4-2 : CARE - HAITI FEEDING PROGRAMME

LOCATION AND WAREHOUSE CAPACITY



Distances:

Port au Prince - Gonaives 150 kms.

Gonaives - Cap Haitien 100 kms.

Gonaives - Port de Paix 75 kms.

No. of Institutions:

Port au Prince	292
Gonaives	309
Cap Haitien	410
Port de Paix	155
<b>Total</b>	<b>1170</b>

-52-

Beneficiary levels:

	'82	'83
PaP*	77,550	84,300
Gon.	71,900	94,600
CH.	103,500	111,200
PPX.	39,000	36,400
<b>Total</b>	<b>291,950</b>	<b>326,500</b>

Paved road only between Port au Prince - Gonaives - Cap Haitien

\* 500 mt to be provided by Outreach funds

(+11.6%)

Table 4-5: CARE - Reduction in Maintenance Costs\*,\*\*

FY 1981

No. of vehicles	45	
Cost of vehicle maintenance		\$187,208
Average maintenance cost/vehicle in 1981		\$ 4,160

FY 1982

No. of vehicles	54	
Cost of vehicle maintenance		\$159,119
Average maintenance cost/vehicle in 1982		\$ 2,946
- inflation 15%		<u>- 441</u>
Comparable maintenance cost/vehicle in 1982		\$ 2,504

\* Includes spare parts, tires, labor and repair in outside garage; does not include salaries of CARE garage mechanics.

\*\* CARE garage was 30-40% completed in FY '81 and 75% equipped in FY 1982. Hydraulic lift and welding equipment were introduced in FY 1982.

Catholic Relief Services (CRS)

Objectives:

1. To expand the Title II coverage to reach needy areas in the Southwest, the islands of Les Cayemittes and the extremely poor communities in the coastal zones, never before reached by any food program (see attached map and table).
2. To increase and improve warehousing facilities with sufficient capacity to meet regular program requirements and for the warehousing of a 20% operating reserve.
3. To increase and improve inland transportation facilities.
4. To strengthen program supervision and control.

Accomplishments:

The number of recipients were increased from 82,000 before Outreach to 125,000 during 1982 (53% increase) in hard to reach areas of Les Cayes, Jeremie and Cayemite Islands in the Southwest (see attached map and table).

The construction of a 12,000 sq. ft. warehouse was initiated in June 1982.

A 6,000 sq. ft. regional warehouse will be constructed in Les Cayes during the current year.

Expenditures to Date (from August 1979 thru July 1982)

	<u>Actual Expenses</u>
1) Procurement of transportation equipment including 3 trucks, 1 boat and 1 jeep	\$ 95,476.50
2) Commodity storage costs, including construction of warehouses, <sup>1/</sup> purchase of wood pallets, and renting of storage space.	55,180.26
3) Commodity administration costs, including renting of office space, salaries, supplies and equipment.	28,339.01
TOTAL	<u>\$179,055.77</u>
Balance (as of July 1982)	\$222,664.23

Completion Date: September 1982

It is expected that upon completion of the warehouses in February/March 1983, Outreach commitment will terminate.

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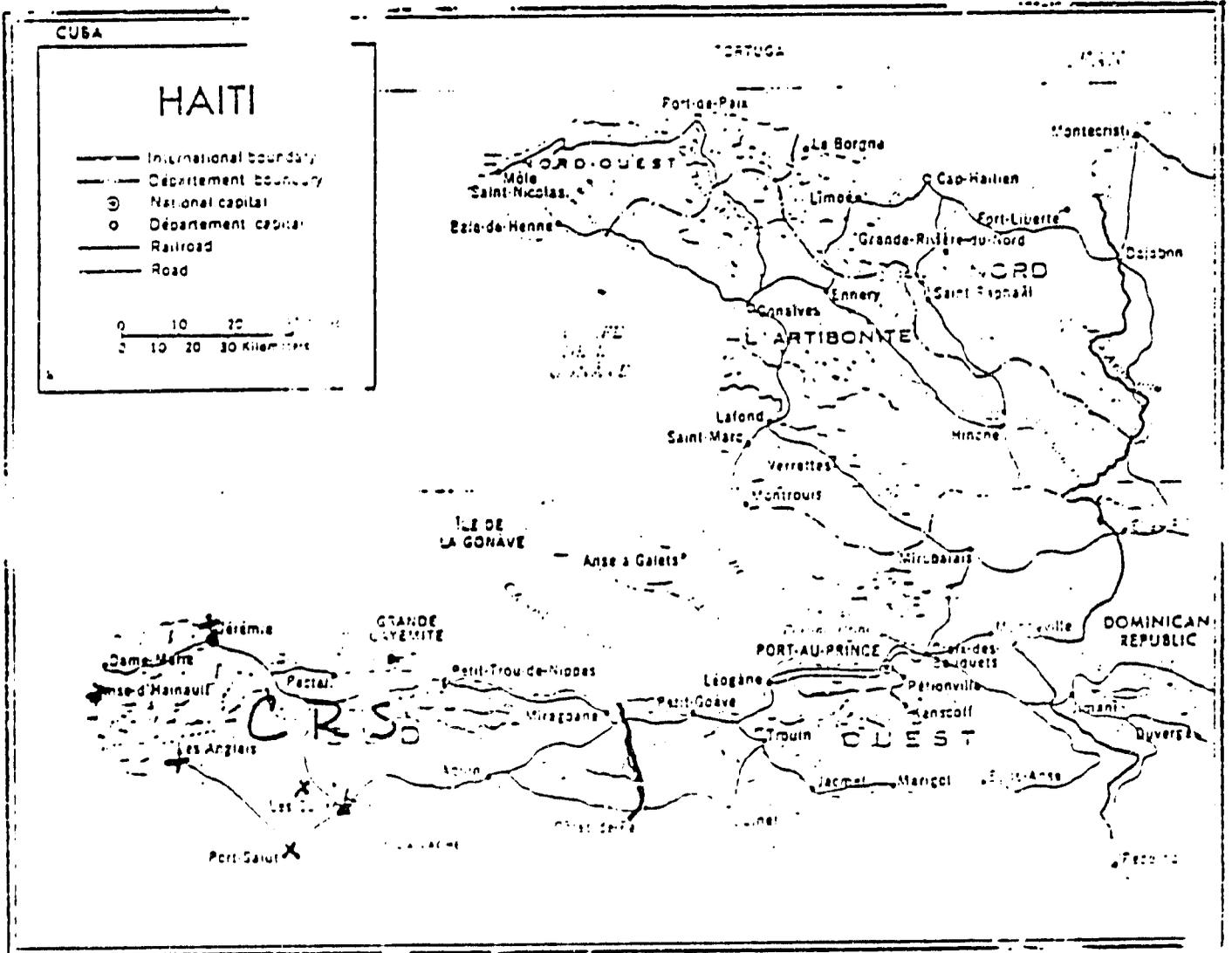
1/ The warehouse construction is now in process.

Table 4-6: CRS Program Expansion

PL 480 Title II Food Program

<u>Approved Beneficiaries</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
MCH-Preschool	10,000	12,000	11,000	13,000	15,000
School Feeding	52,000	57,000	91,125	97,000	102,000
FFW Adult Training	3,800	3,700	5,000	2,500	2,500
FFW Comm. Works	15,200	14,800	10,000	10,000	11,000
Institutions	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>1,000</u>	<u>--</u>
TOTAL	82,000	88,500	118,125	123,500	130,500

FIGURE 4-3: CRS - GEOGRAPHIC DISTRIBUTION



Seventh Day Adventist World Service (SAWS)

Objectives:

To develop health committees at the community level for identifying people in need of food assistance.

To extend the services of Title II food to needy people previously unreached by the program.

To provide adequate storage facilities and establish appropriate inland transportation and food delivery systems.

Accomplishments:

50 health committees have been organized, trained and are functioning. 73,500 recipients are currently participating in the Title II program. (See attached table.)

A 12,000 sq. ft. warehouse was completed in April 1982.

Two 10-ton trucks have been purchased for the inland transportation of food commodities. Each truck has a carrying capacity of 1,500 metric tons of food per year.

Two jeeps have been purchased for program supervision and control.

Expenditures to Date: (From June 15, 1979 thru June 30, 1982)

Warehouse construction	\$ 273,258.18
Procurement of vehicles	81,953.95
Warehousing operation expenses <sup>1/</sup>	127,313.89
Vehicle maintenance & operation expenses <sup>1/</sup>	<u>139,730.82</u>
TOTAL	\$ 633,428.18
Balance (as of July 1982)	\$ 55,271.82 <sup>2/</sup>

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<sup>1/</sup> Includes salaries of warehouse personnel, drivers and helpers, etc.

<sup>2/</sup> Funds sufficient to meet Outreach programmed expenses through the estimated completion date, October 31, 1982.

Operational and Administrative Costs of Title II Program by Source

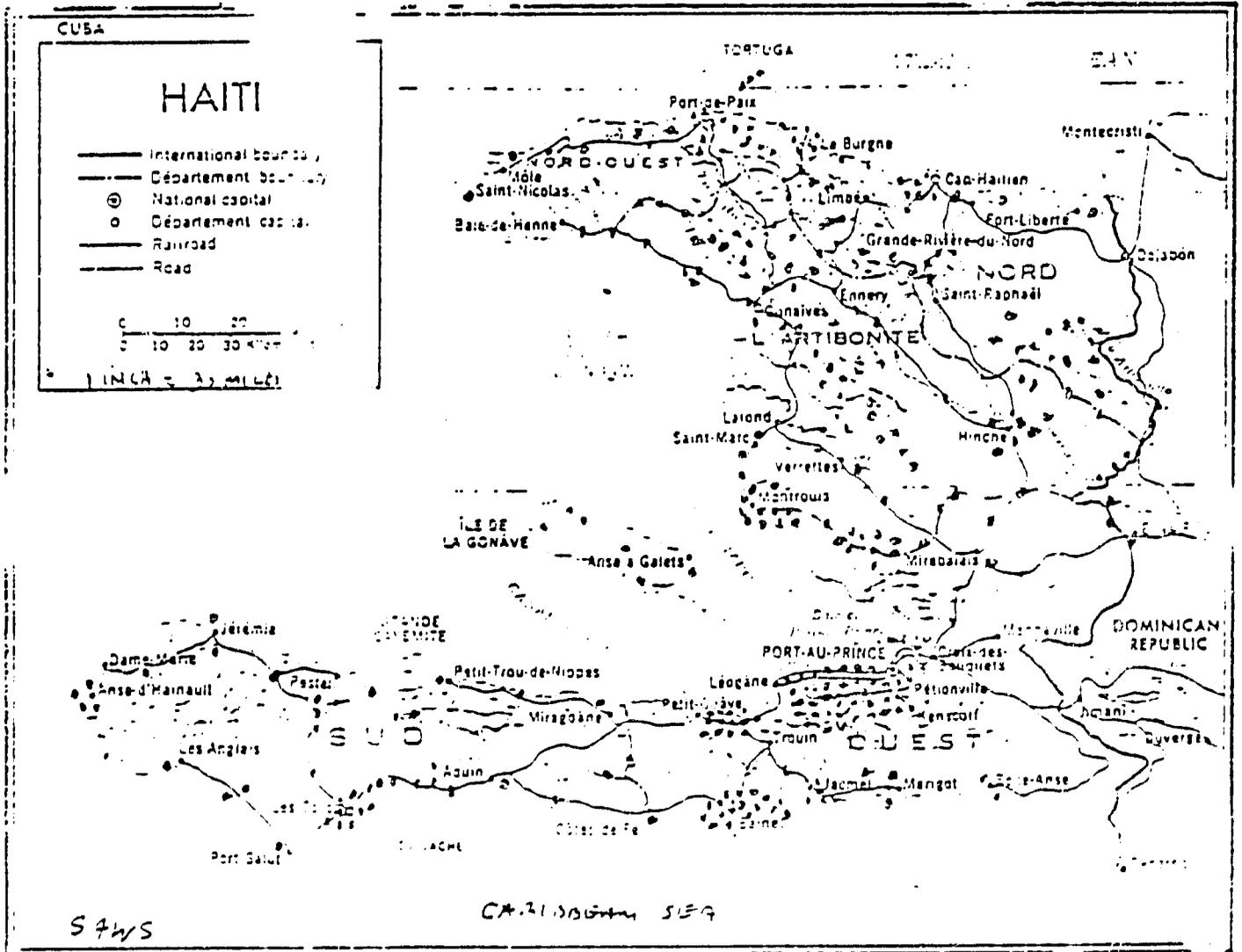
	<u>1st Year</u>	<u>2nd Year</u>	<u>3rd Year</u>
SAWS <sup>1/</sup>	\$ 92,250.00 (59%)	\$ 43,000.00 (28%)	\$ 60,000.00 (35%)
Outreach	<u>61,913.65</u> (41%)	<u>107,111.68</u> (72%)	<u>110,144.07</u> (65%)
	\$154,163.65	\$150,111.68	\$170,144.07

<sup>1/</sup> SAWS receives its funds from SAWS International, the International Division of SDA, and the French Haitian Union of SDA.

Table 4-7: SAWS PROGRAM INCREASE AS RESULT OF OUTREACH

<u>Year</u>	<u>Number of Recipients</u>	<u>% Increase</u>	<u>Metric Tons</u>	<u>\$ Value (000)</u>
1979	25,000		1,216.8	375
1980	50,000	100	3,554.0	974.3
1981	66,500	266	3,759.7	1,409.3
1982	73,500	294	4,050.2	1,212.4

FIGURE 4-4: SAWS - GEOGRAPHIC DISTRIBUTION



Church World Service (CWS)

Objectives:

1. To increase ration size for MCH and School Feeding programs.
2. To provide an adequate logistics system as part of the Haitian disaster preparedness network.

Accomplishments:

Program Expansion: 11,300 beneficiaries between FY '80 and FY '82  
(See attached table).

Increased Warehouse Capacity: 7,000 sq. ft. Completed in April 1982.

Enhanced Transport Carrying Capacity:

1 (9-ton) diesel truck

1 (diesel pick-up)

Expenditures to Date: (from October 1977 thru March 1982)

Warehouse Construction and Supplies	\$199,330.67
Inland Transport (mainland)	17,387.77
Inland Freight (La Gonave)	9,019.26
Vehicle Operation and Repair	2,439.61
Operation, Control and Maintenance of Commodities	13,867.86
Purchase of Vehicles	<u>33,278.06</u>
TOTAL	\$275,233.13
Balance (as of March 1982)	\$ 53,736.87

Completion Date: September 30, 1982.

Unfunded extension of one year to September 30, 1983 requested.

Table 4-8: Inland Transport Costs (FY 80-82) by Source

	<u>Dollars</u>	<u>Percent (rounded)</u>
CWS/SCH	\$ 6,000	(21)
Outreach	7,000*	(25)
GOH	11,400	(40)
Recipients' contribution	<u>4,000</u>	<u>(14)</u>
	\$ 28,400	100%

\* Does not include capital costs of trucks valued at \$35,100.

TABLE 4-9: CWS - Program Expansion - Title II Program

<u>Beneficiary Levels</u>	<u>MCH</u>	<u>SF</u>	<u>FFW</u>	<u>Total</u>
FY 1979	13,300	44,000	17,500	74,800
FY 1980	12,300	48,000	11,500	71,800
FY 1981	13,500	52,000	11,500	77,000
FY 1982	14,000	57,600	11,500	83,100
FY 1983	12,500	60,000	7,500	80,000

## 5. CASE STUDIES: RWANDA/CRS, RWANDA/SAWS, UPPER VOLTA/CRS AND BURUNDI/CRS

### 5.1. RWANDA/Catholic Relief Services

#### 5.1.1. Dates and Size of Grant:

The proposal for an Outreach Grant was submitted by CRS in August 1979 and signed in October 1979 for the period October 1, 1979 through December 31, 1980. The approved budget was \$80,000. There were three subsequent additions and the final cumulative Grant total was \$131,472.

#### 5.1.2. Objectives:

(1) Increase program coverage of pregnant and lactating women, children of pre-school age, and school age children by twenty percent over the life of this grant. This represents 15,000 people in the most vulnerable categories.

(2) A pre-requisite to the expansion of the food program is the increase in warehouse storage facilities. Since no warehouse space is available to rent, new facilities must be constructed.

(3) An end-use checker must be hired and provided with transportation to ensure an appropriate control.

#### 5.1.3. Project Components:

The major item in the budget was the construction of a new warehouse. There was also money for renovation of an old warehouse and for pallets. Support to an end-use checker was provided, including a new vehicle and operating expenses, and salary.

#### 5.1.4. Fulfillment of Objectives:

By the end of the Grant period a warehouse had been constructed and the increase in beneficiaries had achieved 97% of the objective. Within six months after the Grant period, the number of beneficiaries had surpassed the goals. Control of commodity distribution was improved by the addition of an end-use checker and a vehicle and a new system introduced to avoid stock disruptions.

### 5.2. RWANDA/Seventh Day Adventist World Service

#### 5.2.1. Dates and Size of Grant:

A project proposal was submitted by SAWS in 1979, amended and approved for a four year period from August 1980 through July 1984. The total amount obligated was \$897,137.

### 5.2.2. Objectives:

(1) To initiate a PL 480 Title II program in Rwanda consisting of school feeding, food for work, and general relief.

(2) To expand Title II activities to at least 14,000 additional recipients in the first year, with expectations of reaching up to 30,000 in three years.

### 5.2.3. Project Components:

The Grant was awarded to support the start-up and operating costs of a Title II program: the purchase and operating costs of vehicle for transporting commodities, warehouse rental and construction, and commodity management expenses.

### 5.2.4. Fulfillment of Objectives:

By the end of FY '81, the SAWS Title II Food for Work, school feeding and general relief programs were well underway and projected recipient levels had been reached.

## 5.3. UPPER VOLTA/Catholic Relief Services

### 5.3.1. Dates and Size of the Grant:

The project proposal was submitted by Catholic Relief Services in January 1979. The Grant was approved for two years from October 1979 through September 1981 for a total of \$674,915. Subsequent Project Amendments increased the first two year funding to \$857,698 and extended the Grant through June 1982, adding an additional \$408,000.

### 5.3.2. Objectives:

(1) To increase the number of recipients reached by the CRS/Upper Volta Food and Nutrition Program by 63.6% in two years.

(2) To improve the CRS/Upper Volta logistical and administrative control system to the level where no centers suffer from stock disruption or incompleteness by the last 6 months of FY 1981, and where there is a 98% record of accountability on all food shipments.

### 5.3.3. Project Components:

In order to achieve the objectives, funding was sought to help finance the storage, management and distribution of commodities, and to improve the administration of the program. The Outreach proposal was submitted at a time when transportation costs had increased significantly over the preceding years and the Upper Volta government was experiencing a financial crisis. Thus, with the planned increase in recipients, combined with escalating costs and the reduced ability of the Upper Volta government to contribute the necessary transport and warehousing, as they had previously, it was necessary to seek Outreach support.

The largest item in the Grant was for transporting the commodities. Outreach subsidized the charges outside a radius of 100 kilometers from the central warehouses, enabling centers to participate what otherwise would have been excluded because of prohibitively high transportation costs. The second largest item was warehousing. Because of the large increase in volume, the warehousing provided by the government, was no longer adequate. Outreach was to help improve administrative control by funding the additional local staff that were required to improve commodity management and accountability, and the necessary vehicles, operating costs and office equipment.

Additional monies had to be put into the Grant in during the second year of funding largely because of a more than 35% increase in the cost of transport during FY 1980. Other unanticipated costs included the purchase of U.S. vehicles rather than less costly local vehicles and expensive repackaging of damaged commodities.

#### 5.3.4. Fulfillment of Objectives:

By the end of 1981, the Upper Volta project had increased recipient levels by 62%. Improvements were made in warehousing techniques, warehouse management, distribution and accounting of commodities, and reducing stock disruptions. A 98% level of accountability was achieved.

#### 5.4. BURUNDI/Catholic Relief Services

##### 5.4.1. Dates and Size of Grant:

The first proposal for an Outreach Grant was submitted in November 1978. The original proposal was substantially revised and a three year Grant was signed in March 1980. The project was subsequently amended and the disbursement of monies began in March 1981 when the Amendment was signed. The approved budget for the three year Grant was \$601,730.

##### 5.4.2. Objectives:

The purpose of the Outreach Grant is to assist CRS/Burundi in expanding the Title II food aid program to reach the most vulnerable and poorest groups in the Maternal-Child Health category through an effective food and nutrition program. At the outset of the Grant, the CRS/Burundi MCH program was geared to reach 15,000 children in 32 preschool centers throughout Burundi. Specific Grant objectives call for CRS to expand its program by:

- (1) Increasing enrollment at existing centers...; doubling the number of enrolled children;
- (2) Including 25,000 mothers as recipients for the first time;
- (3) Expanding operations throughout the country to areas where greatest priority exists for health care and nutrition intervention...; initiating five new centers per year during 1981, 1982 and 1983;

- (4) Utilizing the CRS/Africa Growth Surveillance System at all program centers;
- (5) Promoting the implementation of the MCH program as a contractual assistance to families which accept the corresponding child growth obligations.

#### 5.4.3. Project components:

Close to half of the Grant was budgeted to support commodity transport costs. Several new vehicles were to be purchased and operated under Outreach to enable the MCH supervisors to visit the centers more frequently and assist with improving the program, and the end-use checkers to more closely oversee the commodity distribution. Salaries for end-use checkers, drivers, and a commodity manager were included, as well as some storage and commodity management costs.

#### 5.4.4. Fulfillment of Objectives:

By the end of the first quarter of 1982, expanding enrollment efforts had achieved nearly 100% of the period goal for children and nearly half of the goal for mothers. The program had been introduced into two new centers although three centers had been phased out. However, the combined enrollment in the new centers was greater than those that had been closed. The Growth Surveillance System had been introduced into all MCH centers and close supervision had helped to improve the program resulting in increasing parents' understanding of their obligation.

### 5.5. Selected Outcomes

#### 5.5.1. Distribution

All of the projects cast their primary objective in terms of reaching increased numbers of recipients and all achieved, or came close to achieving their quantitative targets. The evaluation team was not able to study the characteristics of the new recipients or determine their relative need in terms of poverty or nutritional status. However, in an attempt to analyze the way in which Outreach affected the capability of the PVOs to reach out, the team compared the geographic distribution of the Title II programs before and after Outreach. (See Appendix 5-A)

An analysis of approximately 75% of the MCH centers in the Burundi/CRS program found that among those centers there was a significant shift outward the year after Outreach began. The "centroid" (total ton-kilometers of food transported, divided by the total tonnage of food transported) was 117 kilometers from the central warehouse in FY 1981 and 132 kilometers in FY 1983, representing about a 13% increase. This resulted from the combination of large increases in recipients attending existing centers in the most remote areas, compared with smaller increases in closer centers, and the establishment of several new centers in more distant areas. The Outreach Grant supported commodity movement costs, making this shift possible.

A study of the school feeding program in Upper Volta found that there was a large increase in participating schools outside 100 kilometers from the central warehouse, for which Outreach subsidized the transport. Using a straight line distance (which underestimates the actual distance by 20% to 30%), the data show a 10.8% increase in recipients beyond a 100 kilometer radius from the warehouse in Ouagadougou and a 9% increase outside 100 kilometers from the Bobo-Dioulasso warehouse. Although there was a far greater proportionate increase in recipients within 100 kilometers from Ouagadougou and Bobo-Dioulasso -- 71% and 28.9% respectively -- the team did not have information on the number of existing schools before and after the introduction of Outreach and therefore could not ascertain the proportion of schools served. Outreach did make it possible to reach more outlying schools (and the numbers would be increased if the actual, rather than the straight line distance were used). Moreover, nothing is known about the degree of "need" among recipients. It may be that a greater proportion of the "needy" were located closer to the central warehouses.

In the Rwanda/CRS MCH program, an analysis of more than three-fourths of the centers, representing 80% of the recipients, found that the distance between the centroid and the central warehouse did not change very much after Outreach. It was 75 kilometers in 1980 and 72 kilometers in 1982. However, the Outreach Grant did not subsidize transportation costs in this program. Outreach financed the construction of a new warehouse which enabled the program to serve a greater number of recipients but did not support extension into more costly to serve communities.

The Rwanda/SAWS Title II program, in which transportation of the commodities is subsidized by Outreach, was established in an area about 200 kilometers from Kigali where the central warehouse is located.

#### 5.5.2. Commodity Movement

The transport of food commodities from the central warehouses to the centers, schools, and other inland destinations presents a large cost to the PVO. For example, in Upper Volta these costs in 1981 accounted for slightly less than 60 per cent of the CRS Outreach budget. In terms of the total operating budget for Title II (though we are not quite sure of the exact amount), we would probably find inland transport costs accounting for up to 50 per cent. A small percentage reduction in inland transportation costs therefore has the potential to produce significant savings.

In Upper Volta, the PVO has achieved substantial savings in transport costs by managing and coordinating the transport operations that were formerly largely handled by the individual schools and centers. This was made possible by funds provided under the Outreach Grant which included hiring additional administrative staff.

At present, commercial trucking transports the food with CRS acting as the central agent. CRS sets both the maximum price of 32 CFA (about \$.09) per ton-kilometer for the food transport, and consolidates the many small shipments of food that go to individual centers into fewer larger, and therefore cheaper to transport shipments.

The maximum price of 32 CFA per ton-kilometer paid by CRS to the truckers is well below the maximum rate of 42 CFA (about \$.12) set by the Government and the rates charged by truckers for non-CRS shipments (See Appendix 5-B). If the schools and centers were to arrange for their own transport with these truckers, they would certainly not pay less than the Government rate. One can conclude, therefore, that the CRS management of the food transport results in a saving of at least 10 CFA per ton-kilometer.

In all likelihood the small centers would pay more than the Government rates. One important reason is that the individual centers do not have the bargaining power that a large organization such as CRS has. CRS can give the truckers thousands of tons of business (20,000 tons in 1981), whereas the small center cannot. Furthermore, CRS can arrange for a trucker to service several proximate centers at the same time. Thus, the shipments can move in large 30-ton payload trucks that are less expensive to operate than small trucks.

It may seem unreasonable that truckers would transport the food commodities at rates that are less than the officially published Government rates. This is especially true since this rate is quite low relative to African standards. (In Mauritania, for example, truckers charge about \$.20 for transport of food commodities.) One reason that a trucker may accept the low rate is that he is from the region where the food is needed. He may therefore be looking for a backhaul to carry from a large city, such as Ouagadougou, to his region. Such truckers are willing of course, to carry backhauls at below normal rates. Another reason may be that these local truckers create goodwill with the people in their region by carrying commodities that are destined for children at the local health centers and schools. Finally, many truckers may get psychic satisfaction from assisting the humanitarian work of the PVOs.

There is evidence that some centers and schools are difficult to serve because of the low price offered to the truckers. Actual vehicle operating costs over the bad roads in remote regions of Upper Volta are well above the freight rate offered by CRS. Though truckers willing to carry the food at such low rates are sometimes difficult to find, CRS can offer a trucker incentives by awarding him with an extra profitable route if he is willing to take a loss on the bad route. Making such arrangements take considerable management time, of course. CRS is therefore considering purchasing a few trucks for their own use that can be used to service areas that are especially difficult to reach.

If we assume that the total tonnage of food transported during a year is about 20,000 tons, that the average over-the-road transport distance is 142 kms, and that the saving in transport cost is \$.03 per ton-kilometer, it follows that the total saving from the better management of transport is at least \$85,200. These savings are, of course, only approximate, but give a good indication of the substantial economies that can be attributed to the transport coordination made possible by the Outreach Grant.

CRS Burundi is somewhat of a different case since their operations were already managed by a single commercial transport company prior to the start of Outreach. Therefore, their transport was already partially rationalized prior to the Outreach Grant since the commercial transport company could consolidate the many small shipments to individual centers.

At this time the PVO plays a passive role in the transport of food, and delegates the transport function to the commercial truckers. Service by the trucking company is good and supervision by CRS absorbs a minimum of scarce manpower. The rates charged for this service are about \$.50 per ton-kilometer which is high by comparison with Upper Volta (about \$.10) and Mauritania (about \$.20). However, the team was not able to get information on other commercial rates in Burundi.

CRS Burundi might be able to reduce transport costs by taking a more active role in managing the transport operation, for example, by actively soliciting bids for transport rather than dealing sole-source. Another alternative might be for CRS to operate its own truck fleet to transport all or part of the food. Additional staff, possibly funded under Outreach, would probably be needed. However, that might not be realistic considering the constraint imposed on the PVO by the political and economic environment in Burundi.

#### 5.5.3. Accountability

Before the OG provided the PVOs with the staff and vehicles enabling them to monitor, less timely information was available on the disposition of food and on the status of food inventories at the centers. Therefore, food could be lost during the trip from the warehouse to the center without the PVO's knowledge. And, food could be improperly disposed of at the center. Finally, those centers with poor administrative capability would, at times, fail to reorder food in time, resulting in stock-outs and interruptions. Though no empirical data are available, such interruptions in the food supply are believed to have an unfavorable effect on attendance.

With the means provided by Outreach funding, the improved monitoring capability has increased the accountability of food usage at the program centers, and has enabled better planning of food deliveries through better documentation of deliveries, consumption rates, and center inventories.

Quantification of the benefits resulting from the better monitoring is sparse. Some information is available from Upper Volta, however, where CRS claims a 98% accountability on all commodity shipments. Before the Outreach Grant made possible the hiring of several end-use checkers and food clerks, and provided transportation, we were told the accountability was lower.

#### 5.5.4. Warehousing

Construction of warehouses through an Outreach Grant obviously reduced the recurring costs of program operations by the amount of the warehouse rent. In addition, consolidation of several small and dispersed rented warehouses into a single large warehouse, as was done in Rwanda/CRS, and as

will be done for Rwanda/SAWS and Upper Volta/CRS, will reduce operating costs in several ways. Fewer guards will be required and warehouse management and handling will become cheaper because of the consolidated storage area. The location of one of the new warehouses in Upper Volta will be more convenient to the railhead, increasing the efficiency with which commodities can be transferred. The benefits of owning warehousing allows the PVO to plan ahead with assurance of adequate commodity storage capacity, rather than being dependent on the availability of leased space.

In 1982, CRS in Upper Volta must pay somewhat less than \$100,000 for 12,000 MT storage capacity (rental, warehouse operation, and secondary transport charges together total \$100,000). Rental charges are increasing at an estimated 15% to 25% per year. The planned construction of a new 12,000 MT warehouse is budgeted at \$800,000 in the new Outreach Grant. It is estimated that these construction costs will be amortized within six years.

In Rwanda, SAWS is building a warehouse. The new warehouse will have a capacity of 500 MT and is expected to cost \$132,000. At present, SAWS is leasing a 300 MT warehouse for \$16,000 per annum. At that rate it would cost \$26,665 to rent a 500 MT warehouse. With no escalation in rental costs, the payback period would be about 5 years.

## Appendix 5-A Effect of Outreach on the Geographic Expansion of Title II Programs

### 1. Upper Volta: Effect on Outreach on Geographic Expansion of School Feeding Program Services

Table 5-1 shows the number of students served by the CRS school feeding program in the year prior to and just after the Outreach Grant. The data are presented by Sous-Prefecture (Municipality) and show the geographic dispersion of the school feeding program in Upper Volta before and after the OG. Also shown is the kilometer distance (straight line) between each sous-prefecture and its central warehouse (Ouagadougou or Bobo-Dioulasso). Using straight line rather than actual distance will cause us to underestimate (by 20 to 30 per cent) the ton-kilometers of food transported before and after Outreach. But the percentage difference in ton-kilometers, a more important indicator of the change in cost of transporting the food will, of course, stay the same whether we use straight line or actual distance.

Analysis of these data show that, overall, the number of students served increased from 133,280 in the year prior to the OG to 166,029 in the year after, representing an increase of 25 per cent. Although there was a large increase in schools outside 100 kilometers for which Outreach subsidized the transport, the greatest increase occurred in those municipalities located within 100 kilometers of the central warehouse. For the Bobo-Dioulasso warehouse, the number of students served within a 100 kilometer radius increased from 15,103 before the OG to 25,873 after the OG, a 71 per cent increase. Beyond the 100 kilometer radius, the number of students served increased from 29,041 to 31,685, or only 9 per cent. Similarly, the number of students served by Ouagadougou before and after the OG increased by 28.9 per cent for those students living within 100 kilometers of the warehouse, but by only 10.8 per cent for the living beyond a 100 kilometer radius from the warehouse. (See Figure 5-1).

The above analysis shows that most of the increase in students during the year before and after the OG occurred within 100 kilometers of the central warehouse, and that the OG did not increase the level of service to outlying municipalities by very much. However, the team did not have information on the number of existing schools in each of the municipalities before and after the introduction of Outreach and therefore, could not ascertain the proportion of schools served. It is possible that a greater proportion of outlying schools participated as a result of Outreach. Moreover, little is known about the degree of "need" of the recipients. It may be that a greater proportion of the "needy" were located closer to the central warehouses.

We demonstrated above that the major increases in recipients following the initiation of the OG occurred within 100 kilometers of the two central warehouses. Another view of the impact of the OG on the geographic dispersion of food distribution is shown in Figure 5-2 which plots the increase in the school feeding "coverage" of the school age population in the ten departments (provinces) of Upper Volta. The definition of coverage is simply the fraction of the school age population actually receiving food, and is calculated for each department as the ratio of school feeding participants to the total

Table 5-1: SCHOOLS SERVED BY OUAGADOUGOU WAREHOUSE

Sous-Prefecture	Km	Students		Recipient Kilometers		Percentage Increase	Absolute Increase
		1978-1979	1979 1980	Before OG	After OG		
Barsalogho	131	605	635	79,255	83,185	5.0	3,930
Bogande	159	1,543	1,671	245,337	265,689	8.3	20,352
Bouisa	110	1,593	1,982	175,230	218,020	24.0	42,790
Bousse	48	1,567	1,980	75,216	95,040	26.4	19,824
Diapaga	352	1,448	1,620	509,696	570,240	11.9	60,544
Djibo	186	1,786	1,750	332,196	325,500	-2.0	-6,696
Dori	241	1,645	1,875	396,445	451,875	14.0	55,430
Fada	200	3,979	4,291	795,800	858,200	7.8	62,400
Garange	117	2,394	2,625	280,098	307,125	9.6	27,027
Gourcy	131	2,071	2,392	271,301	313,352	15.5	42,051
Kaya	97	4,187	,366	406,139	617,502	52.0	211,363
Kongoussi	103	3,205	,113	330,115	423,639	28.3	93,524
Koudougou	83	10,533	12,397	874,239	1,028,951	17.7	154,712
Koupela	131	3,140	3,550	411,340	465,050	13.1	53,710
Lee	145	4,082	4,484	591,890	650,180	9.8	58,290
Manga	90	2,546	2,608	229,140	234,720	2.4	5,580
Ouaga District	10	4,652	6,517	46,520	65,170	40.1	18,650
Ouaga Ville	10	7,498	10,844	74,980	108,440	44.6	33,460
Quahigouya	159	3,049	4,630	484,791	736,170	51.9	251,379
Oudalan	262	952	900	249,424	235,800	-5.5	-13,624
Pissila	117	630	649	73,710	75,933	3.0	2,223
Po	131	831	1,325	108,861	173,575	59.4	64,714
Reo	97	3,287	3,947	313,989	382,859	21.9	68,870
Sapona	41	1,692	1,882	69,372	77,162	11.2	7,790
Seguenega	131	1,824	1,903	238,944	249,293	4.3	10,349
Tenado	110	1,826	2,937	200,860	213,070	6.1	12,210
Tenkodogo	138	4,332	4,635	584,016	639,630	9.5	55,614
Tiebele	152	948	1,020	143,336	155,040	8.2	11,704
Titao	186	768	807	141,918	150,102	5.8	8,184
Yako	103	3,949	3,775	406,747	594,825	46.2	188,078
Zabre	159	1,768	1,962	28,112	311,958	11.0	30,846
Ziniare	34	2,649	2,818	89,998	95,812	6.5	5,814
Zorgho	97	2,237	2,601	216,989	252,297	16.3	35,308
TOTALS		89,136	108,471	9,729,004	11,425,404	17.4	1,696,400
TOTALS (TON KMS)			TON KMS	486,450	571,270	17.4	84,820

FIGURE 5-1: Relative and Absolute Increase in Recipients During the Year Immediately Following Outreach (1979/80)

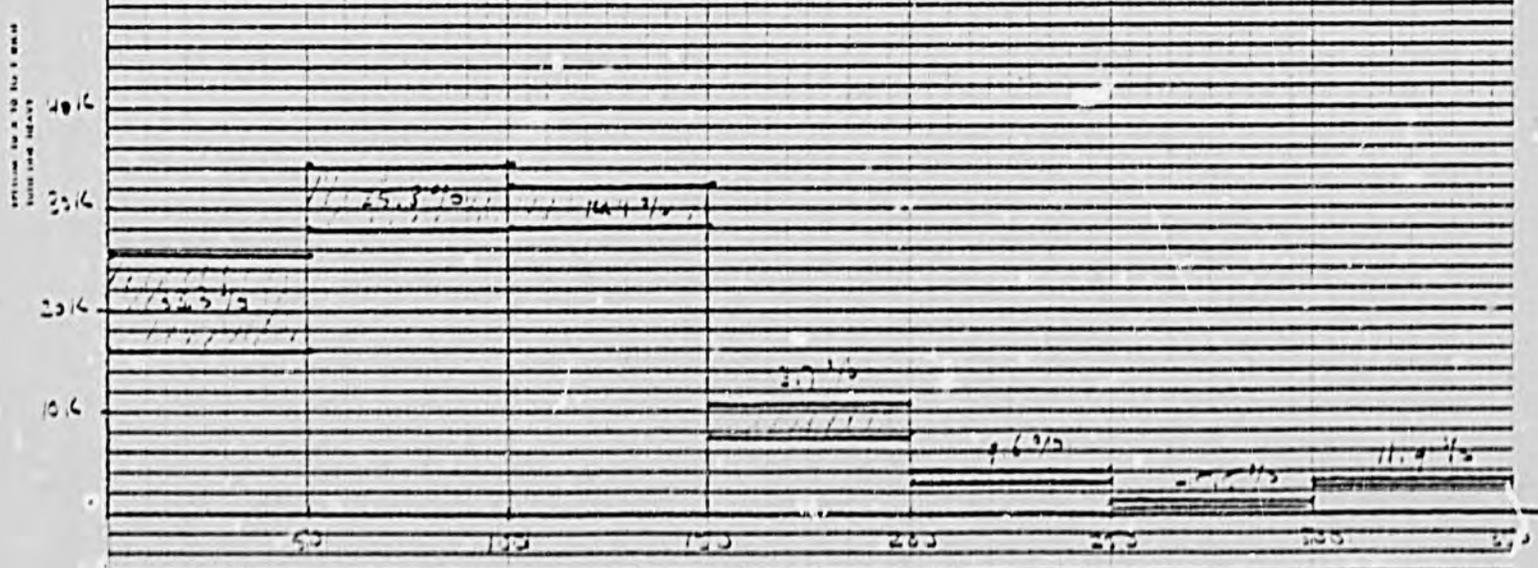
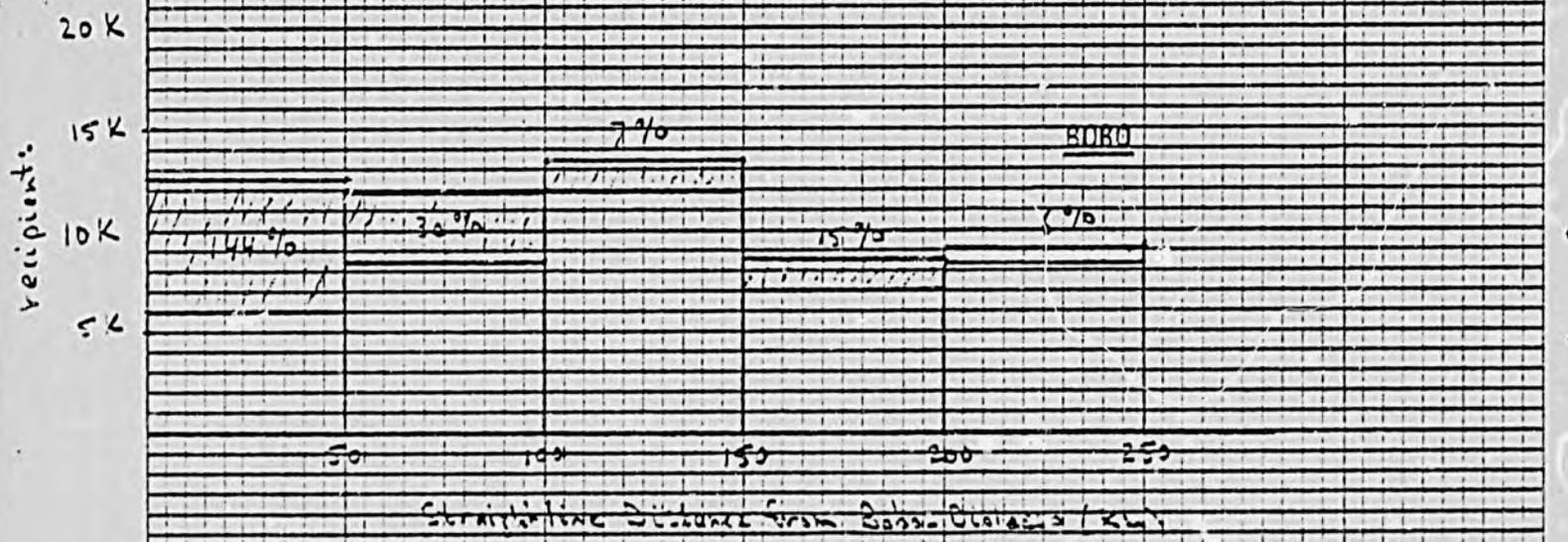
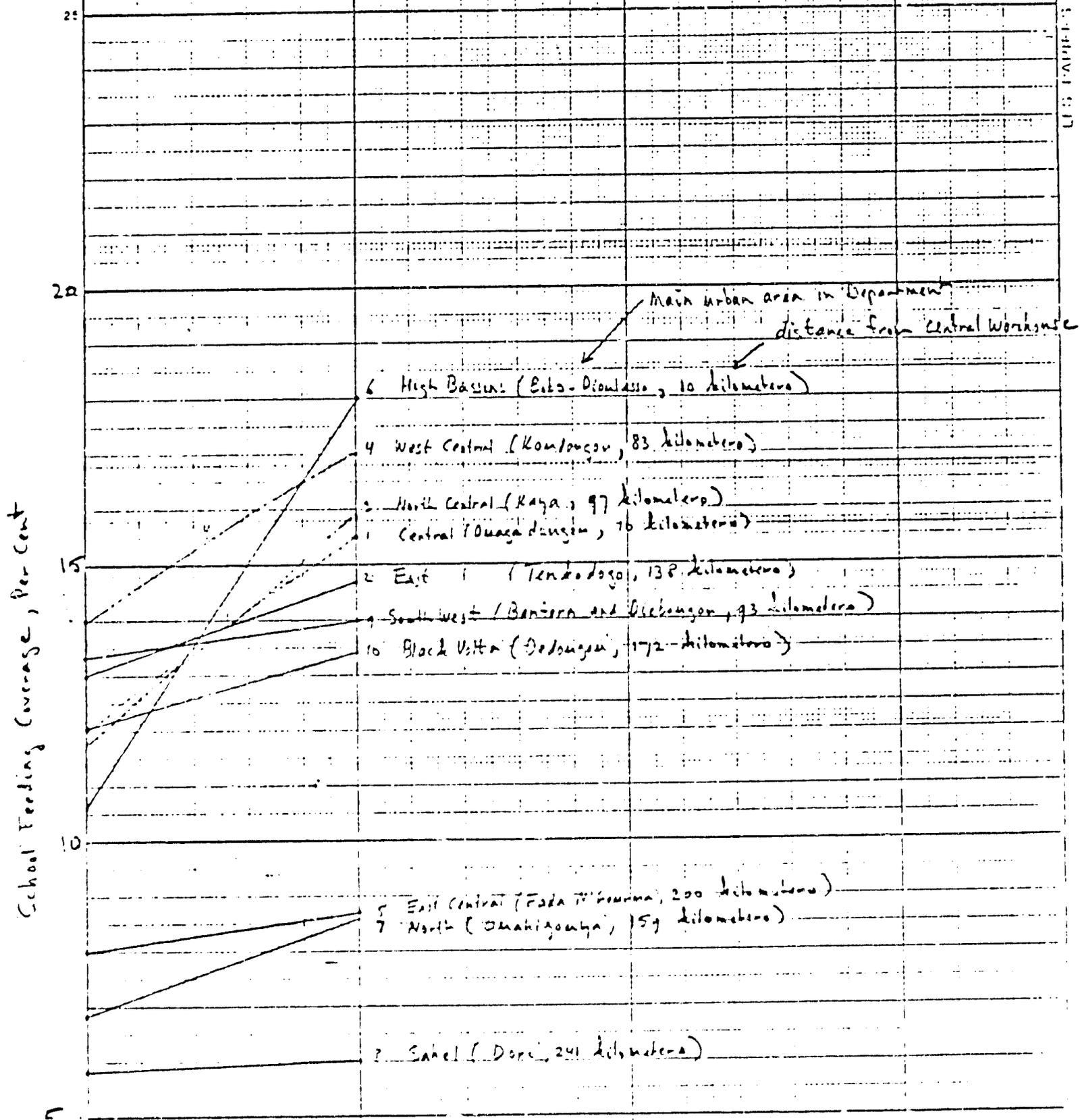


Figure 5-2

UPPER VOLTA

School Feeding Area  
 Increase in Coverage of School Population for First Year of Outreach

(Coverage in '78/'79 and '79/'80)



$$\text{School Feeding Coverage} = \frac{\text{School feeding recipients by department}}{\text{Total school population by department (estimated)}}$$

school age population. It can be seen, for example, that for the Sahel Department, the coverage during the 1978-1979 school year was about six per cent, i.e., 94 per cent of the school age population in that department was not served by a school feeding program. But, the inadequate coverage can not be attributed to defects in the food distribution system since an important reason may well be the lack of schools in the Sahel Department. (It is estimated that only 16% of school age children attend school in Upper Volta.)

In general, the coverage of the school age population by the school feeding programs is low. Before the UG the best coverage (14 per cent) was achieved in the West Central Department (Koudougou), and the lowest coverage was six per cent for the Sahel Department. The departments fall into two groups: those with an initial coverage (before the OG) of less than ten per cent, consisting of the remote departments of the Sahel, the North, and Dori; and those with a coverage of better than 10 per cent, consisting of the seven other departments. In general, it appears that coverage is correlated with the distance the department is located away from the central warehouse. The three most poorly covered departments, for example, are located far from the central warehouse.

After the first year of the OG, the coverage of the departments increased significantly for many of the departments, but especially for those located near the central warehouses. The High Basins Department, for example, within which one of the two central warehouses is located, increased its coverage from 10.6 per cent before the UG to 18 per cent after the first year of the UG; representing an increase of 70 per cent. The Central Department, where the other central warehouse is located, increased its coverage from 12.1 per cent to 15.1 per cent; representing a 28 per cent increase in coverage. There are important exceptions, however, and the inaccessible Department of the North (Ouahigouya) had an increase in coverage from 6.8 to 8.6 per cent; representing an increase in coverage of almost 27 per cent. Although the absolute level of coverage is still very low, it appears that a significant effort was made to improve the coverage in that poorly developed department. The Department of the South West is another exception to the trend that the most proximate departments underwent the best improvement in coverage. This department is located less than 100 kilometers from the central warehouse, but is generally known as one of the most affluent of all departments in Upper Volta. Because of its relative affluence, it may well be that this department was de-emphasized in the implementation of the UG since the coverage increased only from 13.3 to 14 per cent before and after the UG, representing an overall increase of six per cent.

## 2. Burundi: Effect of Outreach Geographic Expansion of MCH Program Services

Table 5-2 and Figure 5-3 show the number of recipients of food in the Burundi MCH centers for the year FY 1981, the latest year before the OG, and for FY 1982, the first year after the OG was introduced. For Burundi, the additional supervision provided by the OG became effective in October 1981. We can therefore say that FY 1982 was the first year that the effect of the OG could be perceived.

The information presented in these exhibits came from material that was put together, rather hurriedly, from the CRS files in Bujumbura. The available time permitted only the collection of data for two sample months of each year, June and December. The average for these two months was taken as representative of the average monthly attendance for the year. It is realized, of course, that this approach could introduce some error because, due to statistical fluctuations, a certain month may have been above or below average. This error is not believed to be large however.

Table 5-2 presents data for 34 MCH centers accounting for practically all MCH centers in that country. In FY 1981 an average of about 15,500 mothers and children received food at these centers each month. By FY 1982 this had increased to about 23,000, an increase of about 50 per cent. Within this overall increase, the subgroup of mothers grew most rapidly from about 3,700 in FY 1981 to 7,000 in FY 1982 -- a 90 per cent increase. Children increased from about 12,000 to 16,000 -- a 33 per cent increase.

Figure 5-3 presents the geographic distribution of the MCH center attendance before and after the OG. Included are only the 26 centers where the distance from the central warehouse was known. But these known centers account for more than 80 per cent of the total attendance.

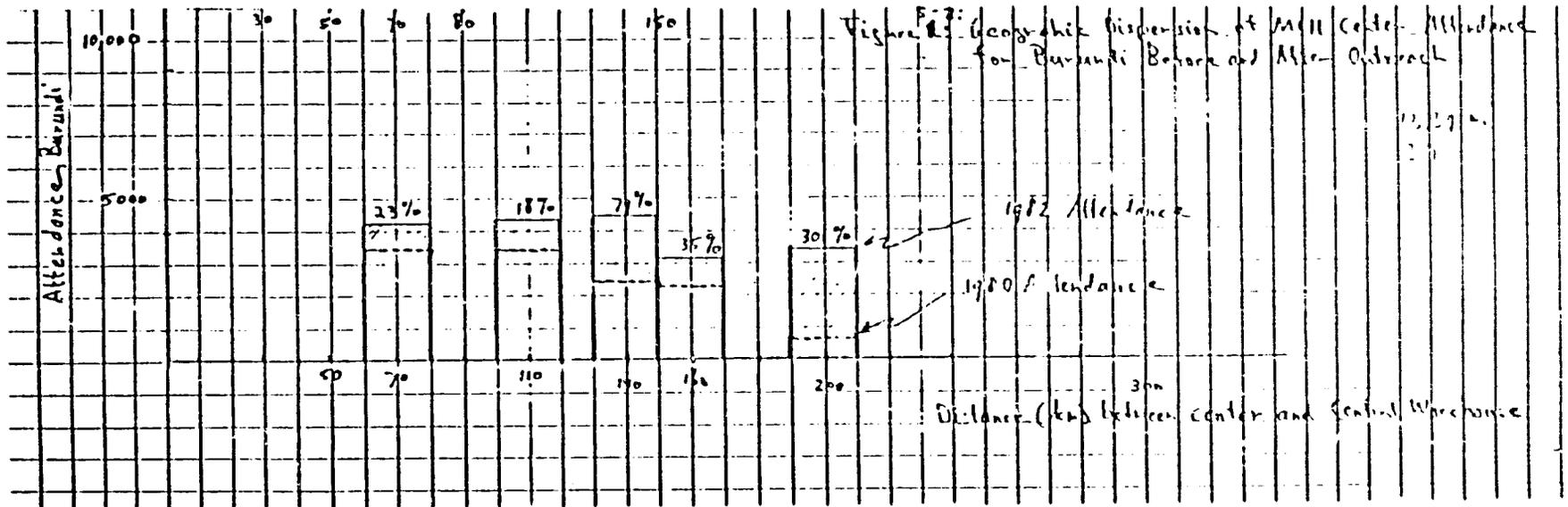
The "centroid" for all the centers is a concept that provides a useful indication of the food distribution effort. It is calculated by dividing the total ton-kilometers of food transported by the total tonnage of food transported, and is measured in kilometers. The centroid can be visualized as the point where all centers are concentrated. The distance from the main warehouse to the centroid represents a transport effort, measured in ton-kilometers, that is equal to that for the dispersed centers. For Burundi, the centroid was located 117 kilometers from the central warehouse in FY 1981, and at 132 kilometers in FY 1982, representing a shift of about 13 per cent. Thus, we can conclude that after the OG the focus of the MCH program shifted outward significantly (about 13 per cent) from the central warehouse. This is also demonstrated below by Figure 5-3.

The figure groups the centers into five clusters located an average of 70, 110, 140, 160, and 200 kilometers from the central warehouse and shows the attendance for the years before and after Outreach. The increase in attendance for each cluster after Outreach varies considerably, and shows the largest increase (300 per cent) for the most remote (200 kms from the central warehouse) cluster. The more nearby centers also show significant increases of about 20 per cent in attendance. In sum, both the centroid data and Figure 5-3 indicate a significant shift to include centers located further away from the central warehouse.

Table 5-2: Burundi - Attendance at MCH Centers Before & After Outreach

CENTRE NAME	CHILDREN					MOTHERS					ATTEND.		CHANGE %	VARIATION FROM CAPITAL (Kw)	
	JUL'6	DEC'60	JUL'61	DEC'61	JUL'62	JUL'60	DEC'60	JUL'61	DEC'61	JUL'62	1961	1962			
JENDA	298	320	423	452	547	37	305	364	0	0	1412	977	-29	70	
MUTUMB	309	554	663	680	1003	165	498	0	596	845	1715	3730	117	70	
KABULA	634	675	622	741	749						1277	1470	15	70	
DUKEYE	337	268	391	422	461						657	803	34	70	
KIZIMB	499	651	534	183	859	499	651	0	0	362	1036	1304	-25	80	
BIHETA	825	961	931	816	959	0	874	0	816	855	2766	3476	26	90	
MUTOYI	1053	731	417	340	840						1140	1100	3	100	
BASENY	443	511	412	812	1013	0	0	0	0	0	923	1025	98	110	
MUYEBE	377	484	495	487	505	350	461	482	0	473	1922	1405	-23	120	
RWIBAD	366	374	147	198	190					208	521	576	14	125	
RUKAGO	410	458	531	492	608						907	1100	11	130	
NOZI	388	377	260	853	1295	388	361	220	840	1105	1218	4073	236	140	
KIDUYE	172	195	232	271	0	0	181	189	253	0	777	524	-34	140	
KUMANG	462	0	703	831	118	0	0	598	0	853	1301	2542	95	150	
NKITA	215	217	205	223	222	0	194	173	196	176	789	837	6	150	
MUSONG	397	318	220	263	435	142	203	123	78	117	864	873	3	150	
BULURD	264	862	1079	674	1217	0	0	0	0	0	1761	1871	-4	150	
MADANO	0	0	283	273	511	0	0	310	264	511	593	1557	163	155	
MDOBOR	274	200	200	315	367	274	200	200	395	367	800	1444	81	157	
NYMURE	214	233	243	232	304	0	0	0	0	0	476	536	13	163	
RUTANA	154	224	115	243	255						359	478	47	165	
MUSENY		65	315	370	425	0	0	0	0	84	388	879	131	170	
RUMEZA	391	180	291	294	370	36	1	7	10	10	479	704	47	175	
MUYAGA	271	212	0	283	357	0	0	0	283	357	212	1280	504	230	
RUGANI			232	82	303					1093	232	1478	537	230	
MURGRE	0	0	0	0	881	0	0	0	0	859	0	1740		232	
MUDIMB	586	204	363	138	200						567	338	-40	NA	
KIGANG	493	505	40	248	0						545	248	-54	NA	
MUTAND	0	0	242	686	665						242	1351	458	NA	
IJENE	537	177	202	276	531	0	0	0	0	0	379	807	113	NA	
MATARA	331	370	364	329	138						734	467	-36	NA	
MAKETO	455	550	396	395	827	455	348	396	395	827	1690	2444	45	NA	
KARINZ	60	70	131	239	458	0	0	20	51	152	221	900	307	NA	
MUNANI	285	522	276	462	0						818	482	-41	NA	
TOTALS	11500	11468	11978	13603	18405	2346	4277	3082	4177	9294	30825	46085			
C+M TO	13846	15745	15080	17780	27699										
SUBTO.															
4-8											6719	8406	23	70	
9-13											7280	8562	18	110	
14-18											5074	7076	77	140	
19-23											4694	6323	35	160	
24-29											1642	6579	301	200	
30-37											5176	7037	35	NA	

Figure 5-3:



3. Rwanda: Effect of Outreach and Geographic Expansion of MCH Program Services

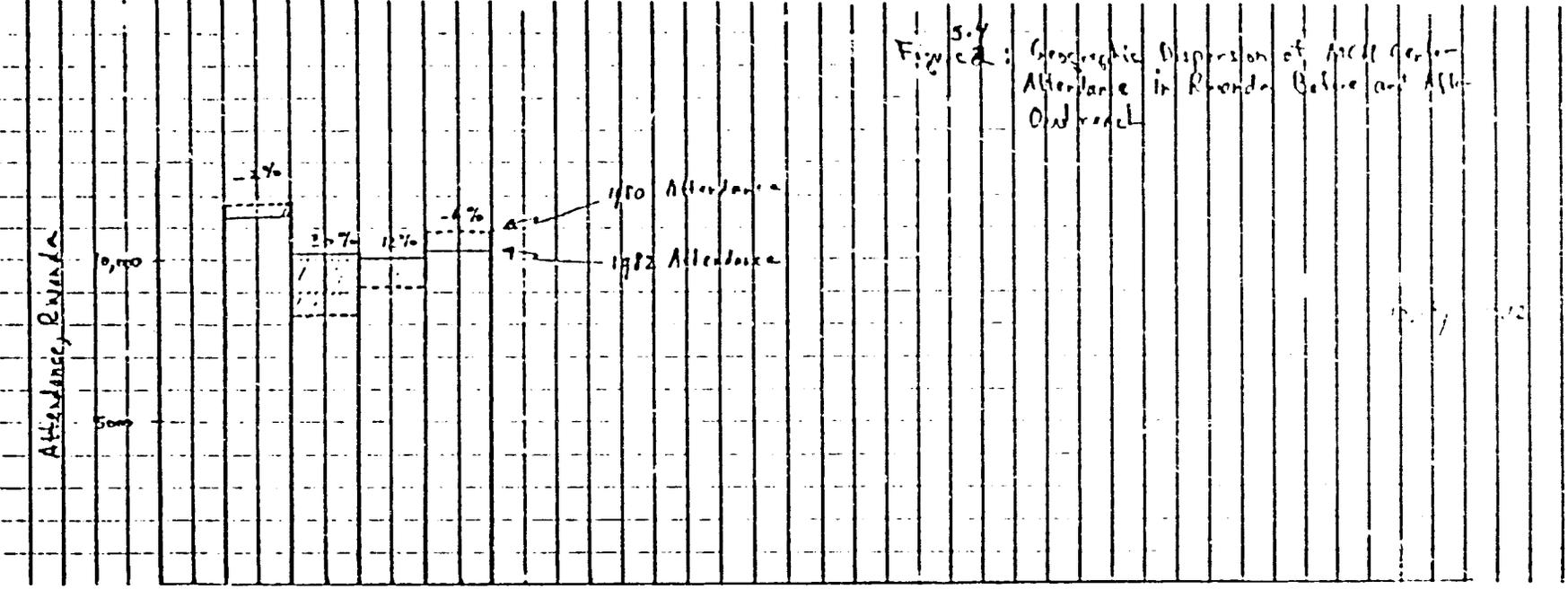
Table 5-3 and Figure 5-4 show the attendance at the Rwanda MCH centers for 1980, the last year before the OG, and for 1982, the first year of effective operation under the OG. Data are presented for 69 centers that could be identified on a map, and for which the distance from the central warehouse in Kigali could be determined. Also shown are the number of recipients for the 21 centers that could not be located on the map. In total, the 90 centers account for almost all the MCH centers in Rwanda, and the 69 identified centers account for 30 per cent of the total recipients.

During 1980 the MCH centers were attended by about 45,000 recipients. This increased to about 52,000 by 1982, representing an increase of about 15 per cent. But a calculation of the centroid for the centers indicates that the increase was not associated with any geographic extension of the services. In fact, the average distance between the centroid and the central warehouse stayed practically the same (57.3 kilometers in 1980 and 55.7 kilometers in 1982). This is corroborated by the bar chart in Figure 5-4 showing the increase in attendance for the centers clustered at 30, 50, 70 and 80 kilometers from the central warehouse. It is of interest to note that, although Burundi and Rwanda are almost the same size (10,800 and 10,200 square miles) and have roughly the same population (4.5 and 5 million), Rwanda has about twice the number of MCH centers as Burundi. But the Rwanda centers are located only half as far from the central warehouse as those in Burundi.

Table 5-3 Rwanda - Attendance at MCH Centers Before & After Outreach

CENTER NAME	ATT. '80	ENR. '80	ATT. '82	ENR. '82	ATT. INCR. PERCENT	ENR. INCR. PERCENT	KILOMET.
BUSANZA	292	216	495	822	70	281	8
BUTAMWA	288	438	661	974	130	122	10
RUTONGO	557	902	488	978	-12	8	13
SHYORONGI	550	754	498	663	-9	-12	13
KAMONYI	911	1056	704	954	-23	-10	15
REHERA-RU	621	903	595	531	-28	-30	18
MUGINA	873	1179	753	1199	-14	2	20
RWESERO	959	1204	591	591	-38	-51	20
KAYENZI	683	995	751	847	10	-15	23
MUYANZA	549	662	768	881	40	33	28
RILIMA	207	353	610	700	195	98	30
RULI	705	939	652	779	-8	-17	30
RULINDO	1254	1422	1406	1421	12	-0	30
RUTOBWE	934	1006	810	863	-13	-14	30
RWANKUBA	475	754	291	613	-39	-19	30
KANYANZA	667	1034	708	1128	6	9	35
KABGAYI	1006	1195	661	934	-34	-22	38
BUREHE	706	806	865	1069	23	33	40
BYUMBA	0	0	734	797			40
NYAGAHANG	652	789	556	761	-15	-4	40
KIZIGURO	547	1053	736	1347	35	28	43
GITUZA	302	302	270	556	-11	84	46
KIGOMA	89	89	306	388	244	336	46
MUSHISHIR	1025	1148	832	876	-19	-24	46
NIMBA	934	1198	849	1331	-9	11	46
IZAZA	308	401	612	843	99	110	48
BUNGWE	520	855	414	645	-20	-25	51
EATAGARA	434	822	664	931	53	13	51
MUYENZWE	664	1010	526	687	-21	-32	51
GITWE	239	239	971	1210	306	406	53
MURAMBA	767	862	562	863	-27	0	53
NKOMERO	636	1501	704	1051	11	-30	56
NYABISIND	310	439	449	535	45	22	56
NYANGE	0	0	519	657			56
KIBUNGO	317	592	455	593	44	0	58
SHYIRA	57	223	434	509	661	128	58
BARE	264	403	699	279	424	-31	61
RUSATIRA	308	599	198	242	-36	-60	61
RWAZA	0	0	998	1134			61
KINONI	452	777	699	909	55	17	63
NYAKINAMA	725	1698	560	1101	-23	-35	63
BIRAMBO	441	640	506	625	15	-2	66
KIRUHURA	909	1291	625	689	-31	-46	66
RUGABANO	391	576	452	580	16	1	66
RUKIRA	480	648	435	628	-9	-3	66
GITARE	825	703	555	666	-33	-5	68
JANJA	1140	1333	1297	1255	14	-6	68
RUMENGERI	319	425	504	914	58	115	68
BUSOGO	742	805	537	645	-28	-20	71
KADUKA	927	1053	835	975	-10	-7	73
RUBENGERA	784	933	392	482	-50	-42	73
SAVE	755	275	466	839	-38	205	73
CRETE-ZAI	639	859	593	714	-7	-17	76
CYANIKA	1091	1201	594	697	-46	-42	76
SIMBI	593	980	929	1246	57	42	76
KIREHE	329	498	362	617	10	24	78
CUSP BUTA	631	869	0	0	-100	-100	81
GIKONGORO	0	0	477	603			81
MUGOMBA	590	909	583	963	-1	6	84
KIGEME	403	568	950	1176	111	107	86
MIBUGA	498	500	314	475	-17	-21	86
BIRUYI	593	759	860	1137	45	50	89
MUGA	0	136	404	589		333	89
NYUMBA	602	751	448	811	-26	3	89
NYUNDO	594	722	351	577	-41	-37	89
MUGONERO	520	590	821	1493	49	153	91
CACUBA	323	323	221	367	-32	13	94
KIREHO	1061	1453	870	1225	-18	-16	96
MIBIZI	1663	2118	1055	1344	-37	-37	142
TOTALS	39862	52328	42490	56624	7	7	

Figure 5-4:



Appendix 5-B

TABLE 5-4: A SAMPLE OF LONG DISTANCE TRANSPORT CHARGES PAID TO TRUCKERS IN UPPER VOLTA, 1982

<u>ORIGIN</u>	<u>DESTINATION</u>	<u>KILOMETERS</u>	<u>TONNAGE</u>	<u>COMMODITY</u>	<u>TOTAL PRICE (CFA)</u>	<u>PER TON-KM (CFA)</u>	<u>REMARKS</u>
Ouagadougou	Dori (North)	275	30	Corn Seed	354,000	43	return empty
Ouagadougou	Dedougou (west)	227	30	Pellets	293,520	43	return with bagged tree crops (Karite)
Ouagadougou	Gaoua	400	30	Corn Seed	511,500	43	return with millet
Ouagadougou	Fada	235	30	Cement	303,600	43	return empty
Ouagadougou	Ouahagouya (northwest)	181	30	Fertilizer	235,560	43	return empty
Ouagadougou	Diapaga	43	30	Beer	550,560	43	return with phosphate

SOURCE: Interviews with transport operators in Ouagadougou and CRS.

## Appendix 5-C

### FINANCIAL JUSTIFICATION OF THE WAREHOUSE LEASE VS BUILD DECISION

The purpose of this Appendix is to illustrate that for developing countries, a decision to invest in a warehouse should not be based on rent alone. In fact, if rental savings were the only source of cost reduction, the decision to invest in a warehouse would, in many cases, not be feasible. Fortunately, there are usually many other cost reductions that will result from an investment in a new warehouse. Including these cost reductions, as shown below, can generate sufficient savings to justify the warehouse investment.

#### COST AVOIDED THROUGH CONSTRUCTION OF A NEW WAREHOUSE

In this section we will estimate the costs that are avoided by consolidating a number of smaller and older leased warehouses into one modern and large purchased warehouse. The cost savings that is easiest to identify is, of course, that of the eliminated warehouse rent. This saving, however, is offset by the cost of the warehouse investment. Other cost savings are less easy to estimate but, as we shall see, very important savings are those resulting from more efficient warehouse operation.

**Fixed Labor Cost Savings:** We will assume that there are four old small warehouses that are replaced by a single large modern warehouse. Each small warehouse requires three watchmen ( $3 \times \$1500/\text{year} = \$4500/\text{year}$ ), three warehousemen ( $3 \times \$2400/\text{year} = \$7200/\text{year}$ ), and one assistant manager ( $1 \times \$3000/\text{year} = \$3000/\text{year}$ ). The total fixed labor cost under the old warehouse configuration is therefore  $4 \times \$14,700 = \$58,800$  per year.

The new warehouse will need only six watchmen ( $6 \times \$1500/\text{year} = \$9000/\text{year}$ ), six warehousemen ( $6 \times \$2400/\text{year} = \$14,400/\text{year}$ ), and one manager ( $1 \times \$7500/\text{year} = \$7500/\text{year}$ ). The total fixed labor for the new warehouse is therefore \$30,900 per year, or \$27,900 less than that for the old warehouse configuration.

**Warehouse Supervision Cost Savings:** Even though the older warehouses managed by assistant managers, it will be necessary for central management to closely supervise the warehouse operations. We will estimate the cost of the supervision by the cost of the operation of the vehicle necessary for management to visit each warehouse. This approach may ignore the value of time of management, and may therefore yield an under estimate of the savings made possible through warehouse consolidation.

It is assumed that each warehouse is visited once per week, and that the vehicle used for inspection is driven 100 kilometers during the visits. Assuming a vehicle operating cost of \$.50 per vehicle kilometer, the cost of the inspections can be estimated at  $52 \text{ weeks} \times 100 \text{ kilometers per week} \times \$0.50 \text{ per vehicle kilometer} = \$2600$  per year.

**Indirect Transport Cost Savings:** Indirect transport charges are those for the port of entry to the central warehouse. If the port of entry is the rail head, as is assumed for our case, the indirect transport charges may be significant. Assuming an annual throughput of 20,000 tons/year, an average distance between the railhead and each of the smaller warehouses of 10 kilometers, and a transport cost of \$.15 per ton-km, the cost of indirect transport can be calculated at  $20,000 \text{ tons/year} \times 10 \text{ km/ton} \times \$.15 \text{ per ton-km} = \$30,000$  per year. With the well-located new warehouse alongside the railhead, the indirect transport charges will be close to zero.

**Spoilage Cost Savings:** We may assume that the modern warehouse will cause less spoilage than will the older warehouses. Spoilage of food is usually a real financial cost (in addition to being, of course, an economic cost) since, for example, the cost of food eaten by rats is not recovered by the PVO.

We will assume, conservatively, that spoilage of food in the older warehouses is one-tenth of a percent higher than the spoilage in the new warehouse. With the cost of delivered food at about \$800 per ton, and an annual throughput of 20,000 tons per year, the savings in spoilage costs can be calculated at  $20,000 \text{ tons/year} \times \$800 \text{ per ton} \times .001 = \$16,000$  per year.

It should be noted that the savings in spoilage costs can be very significant, and that the estimate of the difference in the annual percentage of spoilage is critical. For example, the assumption that the difference in spoilage would be one-half of a percent, a quite reasonable assumption, would increase the spoilage cost savings to \$80,000 per year--or almost equal to the savings in rent.

**Savings in Handling Costs:** The costs of handling the food (in and out movements, and stacking in the warehouse) will be less in the modern warehouse than in the older warehouses. We will assume that this cost is 10% higher for the older warehouses, and that the handling cost is \$1.50 per ton for the modern warehouse. Thus, the savings in handling costs will be  $20,000 \text{ tons/year} \times \$1.50 \text{ per ton} \times .1 = \$3000$  per year.

## FINANCIAL ANALYSIS OF THE WAREHOUSE INVESTMENT DECISION

Normally, a financial analysis is done in terms of constant dollars. This assumes, however, that the rate of inflation is approximately the same for the various timestreams in the analysis. But in our case the rate of inflation is high, and is different for the various timestreams of savings in rent, fixed labor, indirect transport cost, spoilage, supervision, and handling. We have therefore presented the analysis in terms of current dollars. Table 5-5 presents the results.

Column 1 of Table 5-5 shows the period of the analysis to be 50 years, the normal lifetime assumed for an investment such as a warehouse. Columns 2 through 7 give the savings in rent, fixed labor, indirect transport expenses, spoilage, supervision, and handling that result from the investment in a new warehouse. The values of the savings for the first year are as calculated above.

Table 5-5: Financial Analysis of the Warehouse Investment Decision.

WAREHOUSE YEAR	WAREHOUSE RENT	UTIL. FEES	OPERAT. COST	EQUIP. COST	SAVINGS	EXCHANGE RATE	TOTAL SAVINGS	INVESTM.	SAVINGS EXCL RENT	SAVINGS EXCL RENT		
											PERIOD	TRANS.
	CFA, MILL	CFA, MILL	CFA, MILL	CFA, MILL	CFA, MILL	CFA, MILL	CFA, MILL	THOUSND	THOUSND	CFA, MILL	THOUSND	
1	34.30	9.27	10.29	5.4	0.89	1.03	62.57	343.00	179.50	800.00	27.27	79.50
2	41.16	10.72	11.63	7.14	1.02	1.17	73.05	452.07	161.58		31.89	70.53
3	49.39	12.00	13.41	9.28	1.18	1.34	86.80	595.83	145.68		37.41	62.78
4	59.27	13.45	15.45	12.06	1.35	1.53	103.31	785.31	131.55		44.04	56.07
5	71.12	15.04	18.00	15.48	1.56	1.74	123.14	1035.04	118.99		52.03	50.27
6	85.35	16.87	20.70	20.38	1.79	1.98	147.07	1364.18	107.81		61.72	45.24
7	102.42	18.89	23.80	24.50	2.06	2.26	175.93	1797.99	97.85		73.51	40.88
8	122.99	21.16	27.37	34.45	2.37	2.58	210.82	2369.75	88.97		87.92	37.10
9	147.40	23.69	31.40	44.78	2.72	2.94	253.10	3123.33	81.04		105.62	35.82
10	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
11	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
12	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
13	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
14	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
15	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
16	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
17	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
18	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
19	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
20	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
21	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
22	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
23	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
24	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
25	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
26	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
27	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
28	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
29	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
30	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
31	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
32	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
33	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
34	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
35	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
36	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
37	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
38	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
39	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
40	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
41	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
42	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
43	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
44	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
45	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
46	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
47	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
48	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
49	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
50	176.90	26.54	36.20	58.22	3.13	3.35	304.42	4116.54	73.95		127.44	30.96
NPV TOTAL												
0.08	1511.46	251.52	328.40	455.96	28.40	30.81	2606.56	1254.39	434.39	1093.09	534.01	
0.10	1143.02	194.53	251.67	337.95	21.77	23.68	1972.66	1064.16	264.16	829.60	454.07	
0.12	893.75	155.89	199.86	259.41	17.29	18.86	1547.05	928.02	128.02	631.30	396.79	
0.14	722.31	128.40	163.29	204.86	14.12	15.45	1248.52	825.81	25.81	526.21	353.74	
0.16	594.14	108.31	136.49	165.60	11.81	12.95	1031.29	746.03	-53.97	435.16	325.09	
0.18	501.49	92.98	116.25	136.47	10.05	11.06	868.30	681.80	-118.20	366.81	292.96	
0.20	428.65	81.04	100.55	114.32	8.76	9.59	742.84	628.78	-171.22	314.19	270.54	

The rates of inflation assumed for the various time streams of savings (cash flows) are as follows: annual rent (20%), fixed labor (12%), indirect transport (15%), spoilage (30%), supervision (15%), and handling (14%). Column 8 gives the total savings in million CFA per year. The composite rate of inflation of the total savings time stream works out to about 19%.

Column 9 gives the exchange rate of CFA for \$ for each of the years. The rate of devaluation is high. It has been around 32% over the past several years, and is assumed to continue at that rate. If the rate of devaluation slows down, the financial justification will become more favorable.

Column 10 gives the annual savings in dollars for each year. It is apparent that, though the annual savings in terms of CFA increases at a rate of about 17% annually, the savings measured in dollar terms actually decrease at a rate of about 9% per year. This should not be surprising given that the rate of inflation in the local currency is less than the rate of devaluation.

Column 11 gives the cost of the investment in the warehouse (\$800,000). The investment is made at the beginning of the first year. Though the time period of the analysis is 50 years, it is assumed that the cash flows stabilize at the tenth year. This was done because it becomes too difficult to estimate what the rates of inflation and devaluation will be after that time. They may well decrease after the tenth year, and it is certainly hoped that this will be the case. On the other hand, they may increase. It is therefore assumed that, after the tenth year, the savings and exchange rate remain constant.

The financial rate of return of the cash flows given in Table 5-5 is about 15%. Since this is above the opportunity cost of dollar capital, the investment in the warehouse is a financially sound decision.

If only the savings from rent are considered, however, the financial rate of return would be less than 5%. Therefore, if the savings from the mitigating factors such as lower fixed labor costs, reduced handling costs, etc. did not exist, it would not be sound to invest the \$100,000 in a warehouse. In that case it would be wiser to invest the \$100,000 in an alternative investment, and to use the return on that investment to pay the rent on the older warehouses.

The above analysis has shown that the decision to invest \$100,000 in a new warehouse was a sound decision. However, the justification was based on the elaboration of all cost savings that would result, including the savings in rent. The justification can not be based exclusively on savings in rental costs.

Appendix 1: List of Interviews (Partial)

Washington, D.C.

Bureau for Peace Food for Peace & Voluntary Assistance, AID

Nancy McKay, Program Analyst, PPE  
William Pearson, Chief, Program Office, Food for Peace  
Louis Stamberg, Deputy Director, PPE  
Hope Sukin, Nutritionist, PPE  
Carolyn Weiskirch, Outreach Grant Officer

Bureau for Africa, AID

Hunter Farnham, Program Analyst

Seventh Day Adventist World Service

Richard O'Fall, Executive Director  
David Syme, Deputy Executive Director

Haiti

SAWS

James G. Fulfer, Director  
Olive Fulfer, Director of Community Health  
Ginette Isaac, Training Officer  
Fred Emmanuel, Food Controller  
Jack Michel, Supervisor  
Mark Bonzil, Supervisor

CWS

David Cutrell, Director, Service chretien d'Haiti and CWS representative  
Patricia Larson, Assistant Program Supervisor, CWS  
Benony St. Martin, Material Aid Supervisor

CARE

Brian Cavanagh, Assistant Director  
Judith Collins, Acting Director  
Beti Astolfi, Administrator, Feeding Program  
Sami Boulos, Water Engineer  
Philippe Stephenson, Vehicle Coordinator  
Raymond Jean-Jacques, Warehouse Manager - Port-de-Paix  
Pierre Augustin - Inspector  
Theodul Nemoren - Warehouse Manager

CRS

Serge Picard, Program Director  
Constant Auguste, Administrative Assistant  
Raymond Etienne, Program Assistant  
Father Drendonne Brousseau, Director of Secours Catholique, Les Cayes

AID

Phyllis Dichter, Assistant Director  
Ann Fitzcharles, Office of Private Voluntary Development  
Michael Baldwin, Office of Private Voluntary Development  
Frank Temmel, Engineer  
Joel Cotten, Evaluation Office  
Sue Gibson, Health Office

OTHER

Father Farde Philippe, Port-de Paix  
Sister Jacqueline Dionne, Bonneau  
Sister Monique Guillemette, Croix St. Joseph  
Sister Yolande Richardson, Charite de San Louis, Pemel  
Dr. Jacqueline Gautier, Director of GOH Health Center, Cavaillon  
Dr. Jon Rohde, Chief of Party, Management Sciences for Health Inc.  
Attilio Petracchi, Deputy Representative, World Food Program  
Pierre Dorismond, Director, ONAPAM (GOH)

Upper Volta

Catholic Relief Services (partial list)

Peter Strzok, Director  
Francoise Crelerot, Food and Nutrition Supervisor  
Patrick Dougherty, Program Assistant  
Barbara Fagley, Food and Nutritional Supervisor  
M. Gustaf, Logistics Supervisor  
Mme. Kam, Food and Nutritional Supervisor  
George Quadraogo, Logistics Supervisor  
Gregoire Quadraogo, Accountant  
Yembi Dieudonne Ouedraogo, Representative, Bobo-Diouloosso Office  
M. Phillipe, Logistics Supervisor  
Susan Wright, Administrative Officer

USAID

Emerson Melaven, Mission Director  
Howard Thomas, Chief, Office of Human Resources Development

Field Visits

Koudougou - met with Ministry of Rural Development officials and Young Farmer Training Center Coordinator

Reo - met with Sector and Prefecture officials and visited a Young Farmer Training Center

Tenkodogo - visited a Primary School

Abidjan, Ivory Coast

REDSO/WA

Buddy Dodson, Regional Food for Peace Officer

Kinshasa, Zaire

David Piraino, former Director, Catholic Relief Services, Rwanda  
Albert Postle, former Program Assistant, Catholic Relief Services, Upper Volta

Burundi

Catholic Relief Services (partial list)

Robert Burke, Director  
Joanne Csete, MCH Supervisor  
Laetitia Niragire, MCH Supervisor  
Albert Mpenzi, Logistics Supervisor  
Justin Mugabo, Logistics Supervisor  
Dative Ngarambe, Accountant  
Associate Rurangira, Logistics Supervisor  
John Winkle, Independent Transporter

REDSO/EA

Robert Kidd, Regional Food for Peace Officer

USAID

George Bliss, AID Affairs Officer  
William Egan, General Development Officer  
Michael Sullivan, Assistant General Development Officer

Field Visit

Mutumba - visited Nutrition Center

Rwanda

Catholic Relief Services (partial list)

Paulene Wilson, Acting Director  
Patrice A. Flynn, National MCH Supervisor  
Peter Gisimea, Logistics Supervisor  
Antoine Ruzigamanzi, Logistics Supervisor

Seventh Day Adventist World Service (partial list)

Wally Amundson, Director

REDSO/EA

Robert Kidd, Regional Food for Peace Officer

USAID

Eugene Chiavarolli, AID Affairs Officer  
Mary Becchi, Assistant Program Officer

Field Visits

Shyrongi - visited a Nutrition Center  
Gikongoro - visited a Food for Work Project

New York City

Catholic Relief Services

Keneth Hackett, Program Director, Africa Region  
Sister Ann Dugan, Project Coordinator  
Oscar Ratti, Contract Officer

CARE

Fred Devine, Deputy Executive Director  
Ray Rignall, Director, Program Department  
Bill Langdon, Assistant Director, Program Department  
George Kraus, Program Officer for Latin America