PD-AAY-928

A.I.D. EVALUATION SUMMARY - PART I

1. BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS.
2. USE LETTER QUALITY TYPE, NOT "DOT MATRIX" TYPE.

IDENTIFICATION DATA

A. Reporting A.I.D. Unit:

Mission or AID/W Office USAID/BOLIVIA

(ES# _____)

B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan?

Yes [ ] Slipped [X] Ad Hoc [ ]

Evaluation Plan Submission Date: FY ____ Q 3

C. Evaluation Timing

Interim [ ] Final [ ]

Ex Post [ ] Other [X]

D. Activity or Activities Evaluated (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report.)

Project No.	Project /Program Title	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
	An Evaluation of the Bolivia P.L. 480 Title II Program				

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director

Action(s) Required	Name of Officer Responsible for Action	Date Action to be Completed
1. Identification and programming of local currency and OPG funding to provide complementary resources and T.A. to Title II Cooperating Sponsors.	Sal Pinzino	6/30/89
2. Develop evaluation and monitoring system for Title II program including baseline data to quantitatively measure impact.	Sal Pinzino and Steve Smith	12/31/89
3. Establish new policies on feeder road construction projects utilizing Title II Food for Work to ensure adequate ratio between capital and labor intensive inputs and future maintenance.	Sal Pinzino	6/30/89

(Attach extra sheet if necessary)

APPROVALS

F. Date Of Mission Or AID/W Office Review Of Evaluation: (Month) (Day) (Year)

G. Approvals of Evaluation Summary And Action Decisions:

	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
Name (Typed)	Salvatore Pinzino		N. Fantarello	G. Reginald van Raalte
Signature	S Pinzino		2/28/87	
Date	1/10/89			3/8/89

ABSTRACT

H. Evaluation Abstract (Do not exceed the space provided)

The Bolivia PL480 Title II Food For Work (FFW) program established itself as a highly visible and effective emergency and development activity in response to the El Nino drought in 1983-84. The program mobilizes $9.6 million of commodities per year programmed through four cooperating sponsors. This evaluation was conducted by DEVRES, Inc., based on personal interviews with cooperating sponsor staff, visits to over 50 project sites, and group interviews with over 500 FFW project workers and asset beneficiaries. The major findings and conclusions are:

- USAID/Bolivia conceived a responsive and powerful program which is creating employment for 44,000 workers per month, and contributing to Bolivia's development.

- A monitoring and evaluation system should be adopted by each cooperating sponsor.

- An independent quantitative impact study of development projects should be undertaken that would include a baseline and two rounds of follow-up data collection and analysis.

The evaluators noted the following lessons:

- Rural Programs are more effective when cooperating sponsors target geographically to areas of greatest economic need, and select project types that respond to felt needs common to the area.

- Complementary resources from PL480 Title I and Title III local currency generations, along with technical assistance to improve program management practices, are essential to make FFW development oriented.

- The monetization of PL480 Title II commodities can provide cooperating sponsors with resources necessary to strengthen management capabilities.

COSTS

I. Evaluation Costs

1. Evaluation Team

Name	Affiliation	Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. $)	Source of Funds
John Paul Chudy	DEVRES, Inc.	30	$62,047	PD&S
James Jones	"	25		ARD&N
Ivo Kraljevic	"	25		
Allan Lubina	"	25		

2. Mission/Office Professional Staff Person-Days (Estimate) 20 person days

3. Borrower/Grantee Professional Staff Person-Days (Estimate) 30 person days

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A.I.D. EVALUATION SUMMARY - PART II

SUMMARY

J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)
Address the following items:

- Purpose of evaluation and methodology used
- Purpose of activity(ies) evaluated
- Findings and conclusions (relate to questions)
- Principal recommendations
- Lessons learned

Mission or Office:	Date This Summary Prepared:	Title And Date Of Full Evaluation Report:
USAID/Bolivia	Dec. 30, 1988	An Evaluation of the Title II Food For Work Program, November, 1988.

Purpose of the Activity: The Bolivia PL480 Title II Food For Work (FFW) program took on great importance in the wake of the 1983-84 El Nino drought crisis. A small and obscure rural assistance program prior to the crisis, FFW became a highly visible emergency program during the period 1983 to 1986. The 1980's have been crisis years for Bolivia. As a result, FFW is a highly visible, much needed program which creates jobs for 44,000 workers per month, and contributes very positively to Bolivia's infrastructure and agricultural development. The PL480 Title II Food For Work program now marshals $9.6 million of commodities per year programmed through four cooperating sponsors: the Adventist Relief and Development Agency (ADRA), Food For the Hungry, International (FHI), Catholic Relief Services/Caritas (CRS/Caritas), and the Bolivian National Community Development Service (SNDC). The Bolivia PL480 Title II Food For Work program has three broad components - urban development, rural development, and a large rural and urban road construction component. Since complementary resources first became available to the FFW program in 1986, the four cooperating sponsors have invested a total of $3.8 million to augment their development efforts under FFW.

Purpose of Evaluation and Methodology: This evaluation was an assessment of the effectiveness of efforts made by USAID/Bolivia to redirect their FFW program away from an emergency focus toward a development focus following a 1984 study of the Emergency FFW Program and provision of funds to accomplish this redirection since 1986. Changes included (a) making financial resources from PL480 Title I and Title III local currency generations available to cooperating sponsors, and (b) awarding a grant to Planning Assistance, Inc., so that it could assist the four cooperating sponsors to improve their program management. The evaluation also reviewed program successes and limitations, program management, and the FFW program's impact on FFW workers and asset beneficiaries. Over 50 project sites were visited. Interviews were held with over 500 workers and project beneficiaries, and with representatives of the four cooperating sponsors.

Major Findings and Conclusions: The urban program has been an unqualified success. In Bolivia, where some would argue that urban migration is a desirable alternative to struggling for survival in isolated settlements on the harsh highlands, FFW has not only created employment for thousands of unemployed people, it has significantly contributed to the development of much needed infrastructure in the marginal urban areas.

The road component constitutes the single largest project type in Bolivia's PL480 Title II FFW program. Urban and rural efforts differ markedly. Urban roads and street projects are successful in generating employment, but are productively less efficient than private contractors would be, largely because most labor is untrained with no, or inadequate tools, and is not supervised using labor intensive management methods. Rural road activities are less successful in generating employment, especially in the case of large arterial roads (25 to 100 km) through the mountainous highlands. On these large roads, 70% of the costs are for heavy equipment.

The use of little manual labor is exacerbated by the sparsely populated countryside. Road maintenance is a major problem that in part can be helped by reducing the quantity of road miles built and concentrating more on the quality of roads built.

The post-emergency focus on development is most notable in the rural program. Here, the role of Planning Assistance has been instrumental in encouraging the cooperating sponsors to better plan their projects. Out of these efforts, an integrated development approach is evolving. Food production projects, especially greenhouses, and in some cases small livestock raising, represent important, and often, first time agricultural extension efforts in the rural areas of the highlands. Because FFW is self-selecting, and is availed of only by the truly needy, the agricultural extension projects being fomented through FFW are finding their way into poor areas where hitherto no sustained agricultural development efforts have penetrated.

The cooperating sponsors, especially CRS/Caritas and ADRA have widely dispersed rural programs that suffer from a lack of focus and area concentration and too many projects, and the lack of resources to plan and monitor them. FHI's integrated rural program represents a model for the other agencies regarding an approach to geographical concentration. By limiting the number and type of projects it must plan for and monitor, and concentrating on a geographic area of focus, an agency creates greater opportunities for success.

There is also a need to introduce monitoring and evaluation systems in all four agencies. Monetization of PL480 Title II commodities can provide the resources necessary for planning, monitoring and evaluation systems. These resources are especially needed in CRS/Caritas'program which is totally lacking in planning, monitoring and evaluation activities.

The administrative costs of ADRA and FHI pose a problem. Both agencies are meeting a large part of their administrative costs through Outreach Grants which will not be renewed when they expire this year. A mechanism other than monetization of Title II commodities, such as an OPG from AID's Health sector, should be found to help ADRA and FHI meet these costs.

Finally, considerable benefit could accrue to the program if an independent study to quantify the development impact were implemented. Findings would clearly demonstrate the contributions the program is making to Bolivia's development, and also provide a basis for discussing related issues such as the disincentive and dependency effects of the program.

Principal Recommendations:

(1) Cooperating sponsors should develop a strategic planning approach so that their efforts have a geographic focus, and respond to basic needs common to wide areas.

(2) A monitoring and evaluation system should be adopted by each cooperating sponsor.

(3) Cooperating sponsors should be encouraged to generate funds through the monetization of PL480 Title II commodities to meet the costs of planning, monitoring and evaluation systems.

(4) OPG funds should be made available to assist the cooperating sponsors meet some of their administrative costs when the current Outreach Grants expire.

(5) Productivity on urban road/street projects can be easily increased by providing adequate tools, especially wheel barrows, and organizing labor activities into supervised work gangs.

(6) Greater productivity on rural roads can be obtained by implementing one or more of the following: (a) improved planning of large arterial roads to determine labor and machinery needs, (b) contracting to private contractors machinery-intensive sections of large arterial roads, (c) giving priority to short (1-10 km) feeder roads, (d) planning for large arterial roads only when they are part of a larger integrated development package.

(7) An independent quantitative impact study of development projects should be undertaken, to include a baseline and two rounds of follow-up data collection and analysis.

Lessons learned:

(1) The provision of complementary resources to FFW from PL480 Title I and Title III local currency generations, along with technical assistance to improve program management practices is essential to make FFW development oriented.

(2) The monetization of PL480 Title II commodities can provide cooperating sponsors with resources necessary to strengthen management capabilities.

(3) Rural programs are more effective when cooperating sponsors target geographically to areas of greatest economic need, and select project types that respond to felt needs common to the area.

ATTACHMENTS

K. Attachments (List attachments submitted with this Evaluation Summary, always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc., from "on-going" evaluation, if relevant to the evaluation report.)

An Evaluation of the PL480 Title II Program by DEVRES Inc., dated November, 1988.

COMMENTS

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

1. The evaluation basically responded to USAID's questions concerning the Food for Work Program, especially in terms of employment generation and the impact of the program on poor urban and rural communities.

2. The evaluators spent most of their time in the field interviewing FFW participants, PVO personnel, and other key informants. The evaluation had a firm grasp of the management problems of the PVOs in implementing food for work projects.

3. The civil engineer, who evaluated the food for work feeder road construction projects, exhibited perfectionistic standards for the design and implementation of projects in the rigorous terrain of the Bolivian highlands. Implementing these recommendations in the design phase could double the present costs of road construction with only marginal results in road durability and maintenance savings. However, USAID is exploring alternatives to upgrade road construction without significantly increasing costs and to ensure adequate maintenance within the Bolivian Context.

4. The findings and lessons of the report, in general, conform to USAID's and the PVOs' own conclusions with the exception of feeder road projects.

XD-AAY-928-A

AN EVALUATION OF THE BOLIVIA PL480 TITLE II FOOD FOR WORK PROGRAM

AN EVALUATION
OF THE BOLIVIA PL480 TITLE II
FOOD FOR WORK PROGRAM

Submitted to: Sal Pinzino
Manager
Food for Peace Office
USAID/Bolivia

Sumbitted by: John Paul Chudy
James Jones
Ivo Kraljevic
Allan Lubina

DEVRES, INC.
7201 Wisconsin Avenue
Suite 500
Bethesda, MD 20814
(301) 951-5546
Telex: 440184

Contract No.: PDC-0085-00-6095-00
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November, 1988

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ACRONYMS AND ABBREVIATIONS

ADRA	Adventist Development and Relief Agency
AID	Agency for International Development
CARITAS	Catholic Charities of the Bolivian Catholic Bishops Conference
CCC	Commodity Credit Corporation
CORDEOR	Development Corporation of Oruro Department
CORDEPAZ	Development Corporation of La Paz Department
CRS	Catholic Relief Services
ESF	Economic Support Funds
FFW	Food For Work
FHI	Food for the Hungry, International
FSE	Fondo Social de Emergencia (Social Emergency Fund)
FY	Fiscal Year
GOB	Government of Bolivia
OFASA	Same as ADRA - local name for Adventist Development and Relief Agency
PA	Planning Assistance
PL480	Public Law 480
PVO	Private Voluntary Organization
SEMAPA	Municipal Services of Sewage and Potable Water
SNC	National Highway Services
SNDC	National Community Development Services
VOL AG	Private Voluntary Agency (same as PVO)
USAID	United States Agency for International Development

GLOSSARY OF TERMS

Alcaldia: Refers to either the city hall, municipal government, or Mayor's office.

Aprisco: A covered corral for sheep.

Asset Beneficiaries: Asset beneficiaries are those who receive some direct benefit from an FFW project although they did not receive food rations destined for the worker and his family. Direct benefits would take the form increased property values of residencies along streets which have been paved with stone pitching but would exclude general benefits such as reduced transportation costs to the population within the area of influence of a newly constructed feeder road.

Ayllu: Pre-colonial territorial-administrative political untis. Still prevalent in rural Bolivia.

Ayni: System of mutual aid through the exchange of labor.

Bano Antisarnico: Sheep (or camelid) dip.

Camelid: A generic term including llamas, alpacas, vicunas, and guanacos, all native to the Andes and southern South America.

Centro de Madres: Mother's Center; or a place in the community where young mother's meet to sew and discuss common problems. The term is sometimes loosely used to refer to the social group as well.

Consejo Tecnico: Technical Committee.

Constructor Civil: Builder.

Convenio: A formal, written agreement.

Estanque: Holding tank (for water).

HAM: The Honorable Office of the Mayor (Municipal Government).

HAM-BIRF: Honorable Mayor of El Alto- World Bank project.

Ingeniero Agronomo: A person with a university degree in Agronomy.

Investigacion en sistemas agropecuarios: Farming System Research (and extension).

Junta Vecinal: An association of neighbors to lobby for neighborhood improvements, or pressure group organized by neighborhoods.

Masamorra: Mudslide.

Muros defensivos: Defensive walls (for flood control).

Picaflor: Literally means "hummingbird". In FFW, the term is used to describe widely dispersed FFW projects. The image is that of a hummingbird flitting randomly about among the flowers, picking nectar now from here, now from there, never remaining long in any one place.

Perito Agronomo: An agricultural technician with two years of technical training in Agronomy (Perito= "expert" in Spanish).

Promotor: Promoter.

Provincia: Province (analogous to a county in the USA)

Recipients: Are those who have worked on FFW projects and have received food as payment. (Recipients may also be beneficiaries).
SERMAQ: Machinery Service (Private Contractor).

Solicitud: A formal, usually written request.

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EXECUTIVE SUMMARY

This report presents the findings of an evaluation of USAID/Bolivia's PL480 Title II Food For Work (FFW) program conducted by Devres, Inc. July 11 to August 6, 1988. The evaluation includes a review of completed and ongoing projects, related program management issues, and recommendations for program improvement.

The Bolivia PL480 Title II Food For Work program took on great importance in the wake of the 1983-84 El Nino drought crisis. A small and obscure rural assistance program prior to the crisis, FFW became a highly visible emergency program during the period 1983 to 1986. A USAID assessment of the emergency program in 1984 resulted in a redirection of the program away from an emergency focus toward a development focus, which included the provision of complementary funds from PL480 Title I and Title III local currency generations and the awarding of a grant to Planning Assistance, Inc. to assist the agencies to improve their program management practices. The PL480 Title II Food For Work program now marshals $9.6 million of commodities per year programmed through four cooperating sponsors: the Adventist Relief and Development Agency (ADRA), Food For the Hungry, International (FHI), Catholic Relief Services/Caritas (CRS/Caritas), and the Bolivian National Community Development Service (SNDC). Since complementary resources first became available to the FFW program in 1986, the four cooperating sponsors have invested a total of $3.8 million to augment their development efforts under FFW.

The 1980s have been crises years for Bolivia. Beginning with the drought crisis, the pain and suffering endured by Bolivia's people have not let up. Following the drought, came the closing of the mines and mass unemployment, then surrealistic levels of runaway inflation, and more recently two successive years of crop-killing freezes in the highlands. As a result, FFW continues to be a highly visible, much needed program which creates jobs for 44,000 workers per month, and contributes very positively to Bolivia's infrastructure and agricultural development.

The Bolivia PL480 Title II Food For Work program has three broad components--urban development projects, rural development projects, and a road construction component large enough to stand on its own which is made up of both urban and rural efforts.

The urban program has been an unqualified success. In Bolivia, where some would argue that urban migration is a desirable alternative to struggling for survival in isolated settlements on the harsh highlands, FFW has not only created employment for thousands of unemployed people, it has significantly contributed to the development of much needed infrastructure in the marginal urban areas. Indeed, while most workers on FFW projects participate because they need the income, others less needy participate because they want the urban services that completed assets will provide--a sewer, paved streets,

potable water, flood protection, all of which valorize adjacent properties. Municipal governments, following Bolivia's 1986 democratic reforms, have been strengthened by FFW through their direct involvement as a partner in the execution of urban projects.

The road component constitutes the single largest project type in Bolivia's PL480 Title II FFW program. Urban and rural efforts differ markedly. Urban roads and street projects are successful in generating employment, but are productively less efficient than private contractors would be, largely because most labor is untrained with no, or inadequate tools, and are not supervised using labor intensive management methods. Productivity can be easily increased by providing adequate tools, especially wheelbarrows, and organizing labor activities into supervised work gangs. Rural road activities are less successful in generating employment, especially in the case of large arterial roads (25 to 100 km) through the mountainous highlands. On these large roads, 70% of the costs are for heavy equipment. The use of little manual labor is exacerbated by the sparsely populated countryside. Greater economy and productivity could be obtained by implementing one or more of the following measures: (1) improved planning of large arterial roads to determine labor and machinery needs, (2) contracting to private contractors machinery-intensive sections of large arterial roads, (3) giving priority to short (1-10 km) feeder roads as FFW-supported road projects, (4) planning for large arterial roads only when they are part of a larger integrated development package. ADRA has been the largest FFW road builder, but has been weak in terms of planning road projects. FHI, meanwhile, has developed a systematic planning approach to road construction which should serve as a model to all cooperating sponsors building roads.

The post-emergency focus on development is most notable in the rural program. Here, the role of Planning Assistance (PA) has been instrumental in encouraging the cooperating sponsors to better plan their projects. Out of these efforts, an integrated development approach is evolving. Food production projects, especially greenhouses, and in some cases small livestock raising, represent important, and often, first time agricultural extension efforts in the rural areas of the highlands. Because FFW is self-selecting, and is availed of only by the truly needy, the agricultural extension projects being fomented through FFW are finding their way into poor areas where hitherto no sustained agricultural development efforts have penetrated. If these initial efforts are sustained, and followed-up by the cooperating sponsors and USAID, development impact should be significant. FHI has the best program in the rural areas through its integrated development modules. FHI should limit its rural program to the development modules. By limiting the number and type of projects it must plan for and monitor, and concentrating on a geographic area of focus, an agency creates greater opportunities for success. SNDC, while its program is small, is presently refocussing its rural program on micro-regions which equate somewhat to FHI's integrated development modules implemented by zones in a region. CRS/Caritas and ADRA have widely dispersed rural programs that suffer from a lack of focus and

area concentration and too many projects, and the lack of resources in the case of CRS/Caritas to plan and monitor them. FHI's integrated rural program represents a model for the other agencies regarding an approach to geographical concentration. At a general level, there is a need to strengthen planning, monitoring and evaluation as program management tools in all four agencies. A planning tool that not only identifies and prioritizes the community's felt needs, but helps define the appropriate community, is required. While planning is present at some level throughout the program and is strongest in the case of FHI, monitoring and evaluation tools are currently not used by any of the agencies. Successful execution of a plan, and knowing when, or if, the plan's objectives have been achieved would be some of the benefits of introducing a monitoring and evaluation system.

Monetization of PL480 Title II commodities can provide the resources necessary to put in place a planning, monitoring and evaluation system. Where such funds are not now being made available, the agencies should take steps to generate them. These resources are especially needed in CRS/Caritas' program which is currently totally lacking in planning, monitoring and evaluation activities.

Further inhibiting planning at the agency level is the lack of cross-fertilization of ideas, or exchange of experiences between and among the agencies. More needs to be done in this regard. A formal arrangement to facilitate the exchange of experiences among the agencies would be of considerable benefit to all involved.

At a broader level, the administrative costs of ADRA and FHI pose a problem for the program. Both agencies are currently meeting a large part of their administrative costs through Outreach Grants which will not be renewed when they expire this year. It is advisable that a mechanism other than monetization of Title II commodities, such as an OPG from the Health sector, be sought out to help ADRA and FHI meet these costs and keep their important programs going. It is also important that any steps taken to provide OPG funds or other resources to ADRA and FHI be extended to CRS/Caritas and to SNDC as well. Both CRS/Caritas and SNDC have maintained FFW programs without inputs from outside its normal administrative support channels, but their programs badly need additional inputs.

Finally, considerable dividends could accrue to the Bolivia PL480 Title II FFW program, especially to the rural food production projects, and to FFW in general, if the development impact of the program were to be quantitatively measured by someone from outside the program. The protocol should examine the primary and secondary effects of the completed assets, and should include baseline data, and at least two rounds of follow-up data collection at least one year apart. A serious effort to quantify the development impact of Bolivia's FFW program would demonstrate the program's contribution to development, and would provide a solid basis upon which to discuss related issues such as the disincentive effects of FFW.

I. INTRODUCTION

Starting with the 1983 El Nino drought crisis, the United States Government, in cooperation with Catholic Relief Services (CRS)/Caritas Boliviana, Food for the Hungry International (FHI), the Adventist Development and Relief Agency (ADRA), and the National Community Development Services (SNDC) began to import PL480 Title II food commodities to be distributed under an Emergency Food For Work (FFW) program. The Private Voluntary Agencies (PVOs) implementing the program undertook a variety of rural and urban community development projects intended to mitigate the effects of the crisis. In 1984, United States Agency for International Development Mission to Bolivia (USAID/Bolivia), along with the Title II cooperating sponsors, carried out a field assessment of the Emergency FFW program. The results of the assessment showed that technical assistance and complementary resources to the PVOs were needed if projects were to provide viable and sustainable assets to the community. The assessment recommended that appropriate planning, monitoring and evaluation of projects were also essential ingredients.

In 1986, Planning Assistance, Inc. was awarded a grant to provide management guidance and technical assistance to the PVOs to improve their FFW programs as a first step to implement the evaluation findings. Complementary financial resources were made available from PL480 Title I and Title III local currency generations. As Planning Assistance began its work in Bolivia, the emphasis of the FFW program was nudged away from being an emergency activity and encouraged to move toward being a development program. In 1988, USAID/Bolivia contracted Devres, Inc. to evaluate the progress made toward improving PVO FFW program management and performance as it relates to achieving FFW's objectives of creating jobs for the unemployed, and creating sustainable and viable assets at the community level. A four person team from Devres, Inc. consisting of a team coordinator, civil engineer, rural anthropologist, and agricultural specialist, carried out the evaluation between July 11, 1988 and August 6, 1988.

Using a scope of work provided by USAID, the team held interviews with Government of Bolivia representatives and agencies, the four cooperating sponsors in the FFW program, and Planning Assistance. Field visits were made to over 50 project sites in the Departments of La Paz, Oruro, Potosi and Cochabamba between July 14, and July 30, 1988. Urban, rural and road/infrastructure projects currently underway or recently completed by the four cooperating sponsors were visited. In addition to making technical assessments of the assets visited, the team also interviewed beneficiaries of the assets (those who benefit from the direct use of them) and the recipients of the FFW commodities who worked on the projects and received Title II commodities as payment. Most frequently, these were group interviews with between five and 30 recipients and/or beneficiaries at each project site visited. The 500 plus number of recipients and beneficiaries

interviewed in groups by the team were without exception forthcoming and eager to discuss all aspects of the FFW program. The report that follows discusses the major findings of the evaluation, presents case histories of some of the issues observed by the team, and offers recommendations for improving the PL 480 Title II program in Bolivia.

II. THE SETTING

Economic conditions in the rural areas served by the PL480 Title II Food For Work program have reached extremes of human deprivation. The drought of 1983 and 1984 eliminated entire herds of sheep and camelids. At about the same time, the country registered some of the world's highest inflation rates (11,750% in 1985), followed by an economic slump and high unemployment as mineral prices declined sharply on international markets. This year, severe freezes in parts of the highlands destroyed the potato crop, so that peasants in some communities have no seeds for next year's crop, and are without potatoes and chuno (naturally dehydrated spring potatoes), basic foods in the rural diet. Highland farmers and pastoralists have not often experienced such an unremitting sequence of catastrophes. Talks with these individuals in several rural communities suggest a demoralized and destitute people,

Peasant reaction to calamity has taken several forms, including migration to the cities and to the coca fields of Cochabamba. In some areas, as a result of killer freezes, peasants are coming to rely more on animals, less on agriculture, for a livelihood. During the Emergency Period, 1983 to 1986, FFW was the sustaining force for many people driven out of work by the closed mines, or left with empty grain bins because of the drought, floods or freezes.

Though moving away from an emergency focus beginning in 1986, the FFW program continues to play an important role in lives of many of Bolivia's poor in providing needed employment and food. Some current statistics suggest that this will continue to be the case for the near future in any event. Unemployment at the national level is currently estimated to be 21.1%, with underemployment surely surpassing 55%, though official COB data are not available (ECON/USAID data chart Bolivia 1980-1988). Food needs assessment data show that in 1988 Bolivia will have to import 255,000 tons of food grains to meet its domestic requirements of 991,041 tons (USAID FOOD NEEDS ASSESSMENT APRIL 1988).

Benefits from the FFW program are significant and dramatic in several ways. The urban FFW projects have helped alleviate unemployment and hunger in poor urban neighborhoods, produced infrastructure that have improved the quality of life in urban areas, and created assets that have enhanced the incomes of poor urban dwellers. On another level, one very positive spin-off has been political education. Though it was not planned as an objective of the urban program nor is it a goal of FFW, the urban projects, because they involve contracts between the neighborhoods in which the projects take place, the PVO implementing the project with the assistance of funds from the PL480 Secretariat (Title I and Title III), and the Alcaldias (mayors), have served to strengthen the role of the mayor's offices. In most cases, the mayors, through their entering into the contract,

have assumed the role of overseeing maintenance of the completed asset, and thereby are answerable to the neighborhoods, whose labor have represented a form of taxes paid for the services or benefits they will now receive from the completed asset. In a subtle way, the urban FFW program is playing a constructive role in promoting democratic principles.

The rural program is having an equally dramatic effect. The FFW projects that are promoting food production, such as the greenhouses and development modules being promoted by the PVOs, represent the first sustained interventions of formal agricultural extension programs into many areas, especially in the Altiplano and valleys of the Altiplano. It is important to keep in mind that FFW is inherently self-selecting. Only people with no employment options choose to work for food. From a programming perspective this means that the FFW projects take hold in the poorest communities, and from what the team has observed this is true in the case of rural Bolivia. The agricultural projects are especially promising because the FFW represents a form of risk capital which allows the peasants to invest in a new technology without fear of losing what little capital they may themselves possess. If the project does fail, they have had the benefit of the commodities they have received for working on the project; so it is not a complete loss. What is so significant about the FFW agricultural projects is that they are not failing. Indeed, they are, at least at this early stage, showing great promise for launching development in the most remote and poorest communities of the Altiplano and its valleys. In addition to providing the risk capital mentioned earlier, FFW is proving to be the entree into poor communities. Agricultural extension is the immediate companion of FFW that is solidifying the development role of the program in the communities. In nearly all the rural communities visited by the team, the FFW agricultural projects represented the first agricultural extension efforts ever in these communities. The positive response from the communities observed suggest that efforts to succeed these initial extension interventions with follow-on agricultural interventions and sustained extension visits will bring lasting development to these communities.

Road works represent an equally positive intervention for FFW. Given the logistical and organizational problems facing PVOs in implementing road projects, in addition to having to use untrained women as the major part of the workforce, the assets created under this part of the activity have been most impressive. Though production rates and other management issues in the roads activity have ample room for improvement, the assets being created and the employment being generated are making a positive contribution to Bolivia's infrastructure development.

III. MANAGEMENT SYSTEM OF BOLIVIA PL480 FFW PROGRAM

A. Roles and Functions of Principal Agencies

1. USAID

For the FFW program, the main focus for USAID/ Bolivia is the PL480 Title II program. Title II commodities are intended for humanitarian assistance to the country's needy and poor and are distributed through cooperating sponsors that are either U.S. based private voluntary organizations or cooperatives. Title II commodities have been programmed in Bolivia for many years, beginning in the 1960s. In Bolivia, the Title II commodities have traditionally been distributed under the Mother Child Health (MCH), Other Child Feeding (OCF), and School Feeding (SF) programs. During most of the period up to the debut of the Emergency FFW program in 1983-84, CRS/Caritas was the major cooperating sponsor. SNDC has had a small Title II FFW program since 1963. When the crisis struck, ADRA/OFASA, and FHI, became active cooperating sponsors. Prior to the Emergency FFW program, the entire Bolivia PL480 Title II program was valued at approximately $9.0 million per year based on Commodity Credit Corporation (CCC) values. In 1988, the PL480 Title II program will import $19.8 million in commodities for the regular Title II program, of which $9.6 million is FFW, and another $4.5 million for the Structural Adjustment program, for a total portfolio valued at $24.3 million. A breakdown of FY88 Title II FFW program levels excluding the Structural Adjustment program, is presented in Table 1.

USAID's role in carrying out the Title II program in Bolivia involves much more than the traditional function of providing guidance to cooperating sponsors on program policy and implementation regulations, and providing the Title II resources. From the start of the Emergency FFW program in 1983, on through to the present, USAID has been the initiator in getting the FFW program under way and bringing changes to it. It was largely USAID's encouragement that established ADRA/OFASA and FHI as FFW cooperating sponsors when Bolivia's need was greatest in 1983. USAID worked very closely with these two new cooperating sponsors to help them get their fledgling programs off the ground playing a vital role in initiating some of the early urban and rural road projects. USAID continued to work closely with CRS/Caritas, and SNDC, the long established cooperating sponsors, to strengthen their FFW programs. The 1984 assessment of the FFW program was undertaken at USAID's direction. USAID's close involvement in the 1984 program assessment was central to identifying the need for outside assistance to strengthen FFW program management, logistics and evaluation capacity at the PVO level. The grant awarded to Planning Assistance in 1986, was the direct outcome of the 1984 assessment, and USAID's close involvement in it.

Now, as in the early days, USAID, continues to work very closely with the voluntary agencies, and with Planning Assistance. Close contact is maintained with the PVOs. Meetings are usually held

TABLE 1

PL480 TITLE II FOOD FOR WORK PROGRAM IN BOLIVIA: FY88
PROGRAM DATA BY AGENCY FOR URBAN, RURAL, AND URBAN & RURAL COMBINED

		A	B=A*50	C=B*5	D	E	F
URBAN	AGENCY	No. Projects	No. Workers per/Month	No. Family Recipients	No. Asset Beneficiaries	No. MTS. Commodities	$ value Commodities
	ADRA	200	10,000	50,000	26,500	2,544	1,291,170
	CRS/Caritas	250	12,500	62,500	16,500	1,584	804,289
	FHI	0	0	0	0	0	0
	SNDC	0	0	0	0	0	0
	Sub-total	450	22,500	112,500	43,000	4,128	$2,095,458
RURAL							
	ADRA	50	2,500	12,500	63,220	6,069	3,080,230
	CRS/Caritas	150	7,500	37,500	37,620	3,611	1,833,512
	FHI	80	4,000	20,000	30,000	2,880	1,463,000
	SNDC	150	7,500	37,500	23,050	1,921	1,137,400
	Sub-total	430	21,500	107,500	153,890	14,481	$7,514,142
COMBINED							
	ADRA	250	12,500	62,500	89,720	8,613	4,371,400
	CRS/Caritas	400	20,000	100,000	54,120	5,195	2,637,800
	FHI	80	4,000	20,000	30,000	2,880	1,463,000
	SNDC	150	7,500	37,500	23,050	1,921	1,137,400
	Grand-total	880	44,000	220,000	196,890	18,609	$9,609,600

Source: USAID/La Paz

weekly. A similar level of contact is maintained with the Government of Bolivia agencies involved in the FFW program. These include the PL480 Secretariat, the Fondo Social de Emergencia or FSE, the National Community Development Service, and departmental and municipal entities.

The FFW program is highly visible in Bolivia. USAID's close involvement with the program at the planning and implementation level is largely responsible for that visibility. It is apparent that USAID's relations with Planning Assistance, the cooperating sponsors, and the Government of Bolivia entities are excellent. There is a noticeable level of harmony and agreement among the various actors in the Bolivia PL480 Title II FFW program, which is no doubt a direct result of USAID's active approach to carrying out its functions. And within USAID, there is considerable support for the program from top management which has been helpful in strengthening management throughout the program.

Commodities imported into Bolivia under PL480 Title I and Title III have a more recent history. Title I programs are long-term, low-interest loans in which local currency generations may be used to support a variety of activities including development projects in the host country. Title III programs are grant programs whereby local currencies generated through the sale of commodities in-country are to be used to support development projects only. The first PL480 Title III agreement between the Government of Bolivia and USAID was signed in May 1978. The PL480 Secretariat was created along with the signing of the first Title III agreement to administer the use of the local currency generations. The Title I agreement, signed in February 1985, and amended in August 1985, programmed a total of $20 million of commodities. It was at this point that USAID, after its 1984 field assessment of the FFW program, entered into an agreement with the PL480 Secretariat to make available local currency generations to cooperating sponsors to complement their FFW projects. A total of $3.5 million was made available for PVO FFW projects, of which $2.0 million were disbursed.

In April 1986, the second PL480 Title III agreement was signed between the Government of Bolivia and USAID. With its latest amendment in June 1988, $60 million worth of wheat will be brought in under this agreement. The sum of $5.0 million has been earmarked for PVO Title II FFW support.

To manage this large and dynamic program, the USAID Food For Peace Office (FFPO) has one senior and three mid-management level staff, including one program manager, two administrative and logistics officers, and an accountant/book keeper. In addition, the FFPO receives considerable direct support from Planning Assistance in carrying out its responsibilities with the PVOs.

2. PL480 Secretariat

As pointed out above, the PL480 Secretariat, as it is commonly known, was created in 1978 to administer local currency generations from the first Title III agreement in 1978, the succeeding Title I, and second Title III agreements in 1985 and 1986, respectively. Of the $3.5 million designated from the Title I local currencies as support to the Title II FFW program, only $2.0 million were disbursed beginning in January 1986. As it turned out, inflation resulted in less currency generation than had been expected from the $30 million of wheat, and $1.5 million were deobligated. The PL480 Secretariat was essentially unable to honor its commitment to fund the entire $3.5 million. Out of the second Title III agreement, $5.0 were set aside to complement Title II FFW projects. In sum, the PL480 Secretariat has made $7.0 million available to cooperating sponsors in support of their Title II FFW projects. As of March 1988, $3.8 million had been disbursed to PVOs, leaving a balance of $3.2 million yet to be programmed. Of the $3.8 million spent, 80% went for direct project costs including materials, tools, and technical assistance. The remaining 20% was used to cover the PVOs' administrative and technical assistance costs directly related to the project for which the funds were approved.

ADRA, Caritas, FHI, and SNDC have all been beneficiaries of the PL480 funds for their FFW projects. Caritas has obtained a large amount of PL480 Title I and Title III funds for use in its strong urban program. Similarly, ADRA has used a large amount of PL480 funds in its urban program. However, an AID/Washington ruling earlier this year prohibits the further use of Title III local currency generations to support urban programs. At present, only ADRA and FHI are ongoing programmers of PL480 funds for use in some of their rural projects. SNDC and Caritas are both current non-active programmers of PL480 funds pending improvement in their administrative operations to meet PL480 reporting requirements. It is important to note than with the latest ruling limiting Title III funds to rural projects USAID will have to seek alternative sources of funding for the urban program. For the near term, USAID ha· made available $500,000 of Economic Support Funds (ESF) reflows to support urban projects during 1988. Beyond 1988, USAID will have to either obtain additional ESF funding, or monetize Title II commodities to replace the funds earlier made available through PL480 for the urban program.

3. ADRA/OFASA

The Adventist Development and Relief Agency became a PL480 Title II cooperating sponsor in 1984 with its entrance into the Food for Work program. Over the four years that followed the agency programmed 40,000 tons of Title II commodities in the FFW program, and has completed some 1000 projects. With its staff of 100 employees in six regional offices including La Paz, Cochabamba, Potosi, Trinidad, Cobija and Riberalta, ADRA carries out 28 project types ranging from Animal Husbandry to Street repair. Short Access Roads Construction and

Maintenance is its single largest project category (ADRA 1987 Progress Report). Major road construction is also an important component in its program.

Because of its heavy activity in road construction and encouragement from USAID, ADRA has become the largest cooperating sponsor in the FFW program. In 1988, ADRA will program $4.4 million of Title II commodities, almost half of the $9.6 million FFW program total. ADRA has also been the largest programmer of PL480 (Secretariat) funds, having used a little over $1.2 million as of March 1988.

4. CRS/Caritas

As noted above, CRS/Caritas has been a PL480 Title II cooperating sponsor in Bolivia for over 20 years. For most of the those years, it was the sole distributor of PL480 Title II in the country. Because its implementation network is through the Bolivian Catholic Church's 16 Dioceses, its programs reach into virtually every province of the country. A precursor to its current FFW program was initiated in 1972, whereby commodities were given for some work done, but it was really a dole program ayuda caritativa to poor families. It was not until the crisis of 1983-84 that CRS/Caritas' FFW program began to be less dole-oriented as result of the stricter guidance under the Emergency FFW program. CRS/Caritas' current FFW program has three components. The largest of these focuses on community development and infrastructure activities in rural areas. There is an urban program that is carried out in conjunction with local city halls in the cities of Oruro, Cochabamba, Potosi, Sucre and Tarija. The third category provides some supplementary food in support of training. CRS/Caritas' FFW program is the second largest in Bolivia and will command a little over $3.6 million of Title II commodities during FY88. Before AID/Washington's ruling eliminating the use of local currencies generated under the Title III program to support urban programs, CRS/Caritas was a generous user of PL480 (Secretariat) funds in its urban program. Up to the time of the AID ruling, CRS/Caritas had programmed almost $0.4 million of PL480 funds in its urban program in Cochabamba, Oruro, Potosi, Sucre and Tarija.

5. Food For the Hungry (FHI)

During the 1983 and 1984 Emergency Program, FHI distributed 10,000 metric tons of Title II Commodities. The agency became involved in the regular program in 1985 when it expanded its Title II activities to four categories of which FFW is the largest. In 1988, FHI is programming almost $1.5 million worth of commodities in its FFW program. It has the third largest FFW program and concentrates its efforts on integrated rural development in the departments of La Paz, Oruro, and Potosi. The objectives of its FFW program expressed in its three-year Operational Plan are to increase the income of participant families by 25% by the end 1989 and to increase family food production by 25% (agricultural and livestock) by the end of 1989. To assist in

reaching these objectives, FHI has put to use almost $339,000 of Title I and Title II funds from the PL480 Secretariat.

6. National Community Development Service (SNDC)

SNDC, like Caritas, works throughout the country. It is a Government of Bolivia entity whose mandate is to provide community development services mainly to rural areas of the country, but also to smaller urban areas as well. Its involvement in FFW, however, has been limited to five departments including La Paz, Cochabamba, Santa Cruz, Beni, and Pando. In the period June 1986 to December 1987, SNDC completed 686 projects in these five departments creating 16,000 mandays of work for which approximately 1000 tons of commodities were used. In 1988, SNDC will program almost 2000 metric tons of commodities valued at $1.1 million. SNDC's projects cover a spectrum of types with construction of roads, bridges and buildings being the largest ones. SNDC has used little of the PL480 Secretariat's funds to complement its projects largely because of administrative difficulties in reporting to the PL480 Secretariat. As of March 1988, SNDC had used only $85,150 of PL480 Title I funds.

7. Fondo Social de Emergencia (FSE)

FSE was created by the Government of Bolivia in 1986 as a means of funding public works projects to create employment. Twenty five percent of its funding is from the Government of Bolivia Treasury. Subscriptions from the international community and friendly governments account for the other 75%. The Fondo, as it is most commonly known, has supported only a few individual urban FFW projects to date. It will, however, be playing a larger role soon. In 1988, USAID provided FSE with $4.5 million in Title II commodities of which approximately $1.0 million will be monetized. Both the commodities and the funds generated from monetization will be used under a special structural adjustment program directed mainly at unemployed miners. Traditional FFW projects will be implemented, but half the payment received by workers (70% of whom must be unemployed miners) will be in cash. Since most unemployed miners are located in urban areas, this program will be largely urban-based. Success with the Structural Adjustment program may inspire follow-on activities assuring continued support to needy urban areas.

8. Planning Assistance

The grant agreement under which Planning Assistance is delivering services to USAID has as its goal the extension of basic child survival services and assistance in improving agricultural production and income to the poorest members of Bolivian society. The purpose of the Planning Assistance grant is to establish three strong, well managed, PVOs--ADRA, CRS/Caritas and FHI--which will effectively manage PL480 Title II commodities.

Planning Assistance's main activity has been training PVO staff in program management practices including long term planning, annual planning and budgeting, organizing and staffing, directing and controlling, and financial control and reporting. In addition to training, Planning Assistance is also charged with producing operations and technical manuals for all major areas of managerial practice and development interventions.

By all accounts, Planning Assistance is carrying out its mandate well. The PVOs report a favorable rating of the management training and direction received from Planning Assistance staff. ADRA, for example, has been especially pleased with the financial management and control assistance Planning Assistance has provided. Similar sentiments have been expressed by FHI, who feel that Planning Assistance have been most helpful to them in matters relating to program planning. CRS/Caritas, reports a more subdued level of enthusiasm, but this is due largely to the fact that Caritas has been unable to benefit from Planning Assistance's presence. Caritas, unlike the other cooperating sponsors, has yet to sign a letter of cooperation with Planning Assistance. The Caritas/Bolivia National Director told the evaluation team that Caritas would be interested in Planning Assistance's help provided it could obtain resources through monetization of Title II commodities to strengthen its technical personnel roster. CRS/New York will not permit CRS/Bolivia, the PL480 Title II cooperating sponsor, to monetize Title II commodities. The impression given by Caritas is that it would enter into an agreement with Planning Assistance if the current ban on monetization of Title II commodities were lifted. Caritas/Bolivia has a plan for three regional technical teams which would assist Caritas offices at the diocese level. These teams, the Director said, would be funded from Title II monetization. Planning Assistance guidance would then be requested to help the teams to improve project planning and implementation. Caritas has been unable to implement the plan because of the CRS/New York prohibition on monetization.

B. Analysis and Evaluation of Voluntary Agency FFW Programs

1. ADRA/OFASA

a. Institutional evaluation

The Adventist Development and Relief Organization (ADRA) is an agency of the Seventh-Day Adventist church dedicated to community development and disaster relief. ADRA has been working in Bolivia since 1964. Originally, the organization was dedicated primarily to emergency and humanitarian assistance. However, in 1983 ADRA/Bolivia assumed the role of a cooperating sponsor under the Title II PL480 emergency FFW program to build viable infrastructure based on food allocations. The transition from a humanitarian food distribution organization to a development entity has required major institutional changes and adaptations and well as a transition period where ADRA was

learning to adapt efficiently to its new role. The role of ADRA as a development agency is still in the formulation stage and adjustments are required as new experienced is obtained from both the successful and unsuccessful programs undertaken by the agency.

The recent change in development strategy from individual, isolated projects to an integrated approach is expected to increase development impacts. However, as integrated development is more complex, a greater emphasis will have to be placed on macro-planning, implementation, monitoring and evaluation if these projects are to be successful. At present, ADRA is very weak in planning, and its activities in project monitoring and evaluation are virtually nonexistent. The ability of ADRA to accommodate to its new role will determine to a large extent the success of FFW programs channeled through this entity.

b. Project planning

Project planning appears to be a major deficiency of the existing ADRA organization. ADRA is responsible for more highway and road projects than all the other entities combined. Nevertheless, highway planning to-date has been notably deficient. The emphasis on expeditious design and contracting procedures with minimal formal planning has resulted in delays in the execution of these projects. The road from Lambate to La Plazuela (ADRA Case No. 3) is currently behind schedule mainly because the volume of rock excavation was underestimated due to lack of geotechnical studies. The availability of local surplus labor for FFW inputs was overestimated because no formal surveys were made prior to initiation of construction. The fact that panning for gold in the river could be more attractive employment alternative that working for food rations, for example, was not considered. The absence of formal designs, plans, quantity and cost estimates made effective planning and programming of construction activities impossible.

As the development strategies for ADRA change from the individual project to the integrated approach, project planning will play an even more important role. The team feels that ADRA should plan fewer projects and concentrate on those projects which will make a significantly greater impact on the community, particularly in reference to food production. Food production should be the number one priority of FFW. Planning procedures will have to be expanded to include macro-concepts such as how FFW projects fit into the time plan of the various phases of other projects included in strategic planning.

c. Project implementation

Project implementation in the context used here refers to organization and control of the execution of the works. Unfortunately, in the case of the ADRA rural roads it was not possible to observe and evaluate the organization of labor brigades in the field because almost all of the work was being done by equipment. As

previously indicated, without formal plans and designs it is extremely difficult to introduce an effective organization because operations cannot be planned in advance. This results in delays and under utilization of resources.

On multi-project scheduling for integrated projects, project implementation and management will be even more critical if satisfactory results are to be obtained. Labor must be organized into work groups headed by a group leader who is responsible for maintaining discipline and promoting work productivity. These labor groups must be properly organized, sized, trained and equipped with hand tools. No evidence of this type of organization could be observed in the field. It would appear that this organizational capacity of field crews still has not been developed by ADRA and could present a problem in the implementation of integrated projects. This capacity will have to be developed.

d. Project control

Project control implies that in addition to employment of labor, FFW programs must be productive and efficient. This implies not only selection of the most efficient procedures, but follow-up in the field to insure that project productivity goals are being obtained. Although, on FFW projects, work is paid for in food, this food has economic cost and should be closely controlled. In order to control costs, it is necessary to determine bechmark production values which are reasonable and attainable. This has been done to a certain extent in the field as the issue of work rations is tied to productivity. For example, on most of the projects visited work crews were given certain tasks to accomplish in order to be eligible to receive the food ration. If the work was done earlier, the workers could leave. If delays were encountered, then payment of the ration was also delayed until the task had been completed.

e. Project monitoring and evaluation

Evaluation of the FFW program in general is essential to determine their social and economic impacts and also to enable operational or technical defects to be corrected. On-going monitoring during project execution is necessary to introduce improvements in organization and work methods. Evaluation of the project after completion will indicate whether the goals set have been met. Post project evaluation should include an economic assessment to determine if the over all project is economically justified.

Project monitoring during construction usually takes the form of periodic progress reports including items such as job progress, funds spent and anticipated funding requirements. These are currently produced under AID operational guidelines. These reports enable rates of progress to be determined and permit obstacles encountered to be identified and remedial action taken. Evaluation reports are generally prepared in the form of annual end-of-the-year summaries but are very

general and do not include sufficient detail on which to form a specific project assessment.

f. Financial constraints

One of the major constraints to institutionally strengthening ADRA appears to be the lack of sufficient funding to introduce the changes required. ADRA is largely dependent on internally generated revenues resulting from the sale of containers and participant fees as wells as an Outreach Grant from AID/Washington, which expires at the end of 1988, to cover administrative and project costs. This constraint will be alleviated somewhat by a recent decision which would allow ADRA to monetize some Title II food which could be used for alleviation of these costs in addition to purchase of materials necessary to complement FFW programs. However, Title II funds generated through monetization are to be used only for direct project costs and cannot be used to cover administrative costs, which up to now have largely been covered by the Outreach Grant. When the grant expires, ADRA will face a serious funding problem (see part C. below for a further discussion of this issue).

g. Physical constraints

ADRA appears to be over-extended geographically, with the result that personnel assigned cannot effectively design, control or monitor the projects efficiently. A visit to the Potosi office, where only one supervisor is assigned to the entire region, indicated this was an impossible task.

As part of the new policy to concentrate on integrated development projects, there will undoubtedly be a retraction in the coverage required in comparison to the previous system whereby individual projects scattered over a wide area were prevalent. This made control difficult. This problem will have to be addressed once the regional projects for implementation have been selected.

Being over-extended is, in part, a result of ADRA's need for revenues to cover its administrative costs. A large program enables ADRA to collect more revenues from empty container sales and participant fees. A retraction of ADRA's program coverage is therefore related to the administrative costs of running its office and program. ADRA's home office in the U.S. should pick up more of its administrative costs than it now does in order to allow it to concentrate on integrated development projects.

Recommendation #1: The ADRA rural program suffers from the picaflor approach--efforts dispersed in too many small projects, with little or no strategic planning to address fundamental problems (e.g., a lack of water) common to wide areas, or to integrate different projects within an area. ADRA must plan strategically, so as to focus its efforts on marginal zones, and on projects that respond to basic needs (such as the lack of

water) common to wide areas. SNDC uses the concept of "micro--region" (see the section on SNDC) to refer to such areas where they integrate projects over a period of five or six years. This strategic approach would mean fewer projects and more larger ones. ADRA, with USAID's assistance, should seek out OPG funding in order to have resources to secure the necessary staff, technical assistance and materials to plan and implement the strategic approach. Planning Assistance should help ADRA develop a planning scheme for the approach. In addition, ADRA should consider monetizing some of its PL480 Title II commodities to allow it to purchase materials and technical assistance to complement FFW in its projects. Finally, ADRA's home office should pick up more of its administrative costs so that it can direct more time and energy to improving its projects.

2. CRS/Caritas

a. Evaluation of Agricultural Program

Catholic Relief Services (CRS) and Caritas are the main Catholic voluntary agencies conducting food relief in Bolivia. Catholic Relief Services is an arm of the Catholic Church of the United States. Caritas, from the Latin word for "charity," is an instrument of the Bolivian Conference of Bishops charged with administering and dispensing charity. In the context of the PL480 program in Bolivia, Caritas is often thought of as the counterpart of CRS. Caritas implements PL480 FFW projects with commodities received from CRS, which is ultimately responsible to USAID.

Whereas CRS has only a single office in La Paz, Caritas has an office in each of the country's sixteen dioceses as well as an office in La Paz. The Caritas structure is decentralized: each diocese office has a director, although the bishop is president and is the ultimate authority in the diocese. The bishops have great autonomy. Each diocese conducts its food-relief efforts largely in its own way, resulting in differences among the several dioceses in this regard. The analysis and discussion to follow refer to the diocese of Oruro, where the evaluation team received the greatest exposure to Caritas' rural FFW projects.

The current FFW strategy of Caritas/Oruro is to reduce activities in the rural areas because people are leaving them for the cities (and for the Chapare). There is a preference for projects in larger rather than smaller communities, and for projects that endure--irrigation canals, catchment reservoirs, sheep dips, and roads, to cite a few. Conversely, the construction of schools and health posts is disfavored, since the scarcity of rural teachers and nurses often results in the structures remaining unused. Greenhouses continue to be favored; Project Concern has collaborated by financing several of the sun roofs.

The Caritas structure for projection into the countryside includes one agricultural technician (perito agronomo) and one supervisor, both Aymara speakers and both based in Oruro. It also includes the Department of Promotion, which offers a single five-day course yearly in Oruro to leaders of the Centros de Madres scattered about the department. The course is conducted in a locale furnished by the Ba'Hai Church; the women and their young children lodge in the locale. Course subjects include nutrition, health and hygiene and agricultural and livestock production. Caritas technicians with some knowledge of the subjects teach the courses. The agricultural technician lectures the women on agricultural topics, including the production of vegetables in greenhouses. The instruction remains theoretical, however, for there are no local demonstration sites.

The Centros de Madres, with which Caritas works through the Mother-Child Program (Program "F"), are Caritas' main entry to the rural community, and every effort is made to use them as extension vehicles. As one Caritas employee put it, "The Centros de Madres are the integrating force of the community. The women meet every week or two to sew, or to discuss common problems. Men also sometimes participate in these meetings. The women are the economic motor of the country."

In theory, rural promotores are also part of the projection structure. These are community leaders selected by Caritas to promote new technologies in their communities. However, out of 14 provinces, only two, Totora and Sajama, have promotores, and these, it seem, date from 1983 when Caritas conducted training courses in the countryside. No courses have been conducted in the rural areas since. The leaders of the Centros de Madres are sometimes also thought of as promotoras, which they are. Caritas does neither formal project planning nor evaluation. Monthly reports on projects completed--the quantity of food given and the number of beneficiaries--are prepared and sent to the Caritas central office in La Paz. Also sent are the requests (solicitudes) that generate the projects. These requests are made to Caritas in Oruro by communities, or individuals from them, that wish assistance with a particular project. Caritas officials review the request without visiting the community--there are no resources for such visits. If the project seems feasible, a formal solicitud is prepared and those making the request are told to begin work on the project. They are reminded that the project belongs to them, not to Caritas, and they are told that if the work is good, workers will be given, when they finish the job, an allotment of food at a rate of one ration (one ration=40 kg/worker) for twenty days of work, or its equivalent. The food is an incentive, not a payment, so the allotment does not have to approximate the daily wage. Workers are told that Caritas will inspect the work once completed and will assign a food value to it.

These inspections are conducted by the supervisor, usually on weekends. Any technical assistance, during construction or afterward, is provided by the agricultural technician. Technical assistance beyond his competence has on occasion been supplied by other public and

private agencies operating in the area, always free of charge; Caritas has no resources to contract technical assistance. There are other limitations to the provision of technical assistance, among them the existence of only two all-terrain vehicles at the Caritas/Oruro office.

The team asked the director of Caritas/Oruro to identify his most pressing needs. These include a building in which to conduct training courses in Oruro, vehicles, money to increase office salaries and to contract technical personnel and seeds (vegetable and alfalfa) appropriate for the highlands. As for seeds, Caritas now sells vegetable seeds (from the United States), at half their local market price, to women of the Centros de Madres who cultivate them in greenhouses and sell the seedlings to members of their communities.

The team could find no current evidence of duplication of effort and clashes between Caritas and other voluntary agencies implementing FFW activities. Historically, however, overlaps of agency operating zones have led to tensions. In recent times, agencies have entered into formal agreements (convenios) that parcel zones among them. These agreements have largely eliminated such tensions. There does remain some resentment on the part of Caritas of other voluntary agencies because of their superior economic position--higher salaries, ample operating resources and access to complementary funding for projects and programs. This resentment is deepened by the fact that some of the voluntary agencies are, at least in tone, Protestant, and sometimes arrantly evangelical in a basically Catholic setting--albeit a setting that becomes more nominally Catholic as one moves into the most remote areas of the countryside.

The following synthesizing comments relate to the team's visits to several rural FFW projects in Totora and Sajama provinces. These visits were brief and interviews with peasants often took place under less than ideal conditions. The observations on which the comments are based, therefore, are necessarily superficial. The projects visited include irrigation works, sheep (or camelid) dips, covered corrals (apriscos) and greenhouses.

The promotion of vegetable culture represents a major thrust of Caritas in the rural areas, and people talked readily about it, especially about problems. Several complained that the sun roofs did not last, that they were too expensive and thus could not be bought from the sale of local products. There are several types of sun roofs--with bubbles and without, for example--and there was some debate as to which was the most durable, or which was the best buy. There were complaints of low germination rates (only 50% in one case) of vegetable seeds and of the high cost of seeds purchased on the market. One farmer, noting that merchants in Oruro mix uncertified seeds with certified ones in order to increase profits, asked for help in purchasing certified seeds more directly.

There were several requests for more technical assistance in the production of vegetables. One woman complained of leaf-eating worms, and a man volunteered that soils in some areas were not suited to vegetables. Some discontent was registered with communal greenhouses, which Caritas has promoted through the Centros de Madres as a first step toward replication at the household level. Tensions seem to have arisen from an unwillingness on the part of some of the communal participants to do their share of the production labor. Several farmers expressed a strong desire for individual family greenhouses--and the team encountered a few of these--but the cost of the sun roofs seems to be a major obstacle today.

The Centros de Madres are a useful vehicle for introducing vegetable culture to rural communities, and a lack of resources obliges Caritas to focus its extension efforts strongly on the Centros. The fact that farmers want individual greenhouses attests to the substantial interest in vegetable production in the area. It should be said that not all vegetable production is in greenhouses. There are farmers that plant vegetables in open fields during the summer season, but their knowledge of horticulture is derived largely from the greenhouse experience. There is clearly a liking for vegetables in the diet, and their cultivation seems to be an idea whose time has arrived. The highland areas are relatively pest free, and the nutritional benefits of vegetables are considerable.

The communities visited by the team produce both crops and livestock (sheep and camelids), though one or the other usually predominates. Because of adverse weather in recent years, including killer frosts, some of the communities seem to have shifted their economic dependence toward livestock. And livestock diseases, we were told, are a serious problem. There is a chronic lack of veterinary products available to the communities and a dearth of knowledge of how to apply them. The sheep dips clearly respond to a need felt by the communities. However, one sheep dip was constructed on the edge of a stream and the toxic flush contaminated drinking water. (It is not certain that this dip was a Caritas FFW project.)

Caritas has also promoted rabbit production, for meat and fur, in some of the communities. The idea is that rabbits and vegetables go together, since rabbits thrive on vegetable remnants. Some of the herding communities, however, have a long tradition of consuming mutton and llama meat. Random questions put by the team in several group interviews failed to elicit evidence of a meat shortage. It is unlikely that persons reasonably endowed with sheep and llamas will have much interest in rabbits. Again, however, the team's presence in the area was too brief for it to pronounce any final judgements here. But the matter is worthy of some further consideration.

Peasants registered yet other problems and needs. Some of the women complained of a current lack of markets for woolen products, and one man argued eloquently for more attention to health care, since health is the basis of work and all progress.

Without a doubt, the greatest felt need of all, and one expressed with urgency in virtually every community visited by the team, was for a reliable source of water--for the herds, for the gardens, and for human consumption. As one peasant poignantly remarked, it does little good to build a greenhouse if there is no water nearby.

The field visits strongly suggest that the two kinds of projects that most respond to farmer felt needs and interests are water provision and vegetable production, in that order.

b. Issues and Conclusions

- In the CRS-Caritas organizational scheme, responsibility is divorced from implementation: Caritas implements, but CRS initially receives the food and is ultimately responsible to USAID. This arrangement is a recipe for friction.

- The role of CRS vis-a-vis Caritas, and relations between the two institutions, are not well defined.

- Caritas is fundamentally a charitable organization, not a development one. The mission of the Catholic Church and years of tradition make for this orientation, notwithstanding efforts to change it from 1983 forward. Many of the issues and problems here mentioned derive ultimately from this orientation.

- Decentralization of decisions to the level of the diocese is both a boon and a curse, as things now stand. It is a boon since decisions taken at the diocese level can better respond to regional differences, which are substantial in Bolivia. It is a curse since, under conditions of limited development resources and the power and autonomy of the bishops, consensus regarding the rational allocation of those resources among the several dioceses is difficult to achieve. There is resistance by diocesan authorities to central planning, even where such planning is sorely needed. There is currently a need for central planning in regard to where resources are to be focused--in what dioceses, that is--and how (in a broad sense) they are to be used.

- Caritas' efforts are dispersed, its projects in general of small scale. This picaflor syndrome is what one might expect of a resource-poor institution whose mode of response is reactive rather than proactive. There is a need for planning and for a focusing of limited resources and efforts both at the national and diocesan levels in order to achieve the maximum development effect. In some cases, this will mean leaning toward larger projects. However, this is not to say that Caritas FFW projects have not responded to felt needs

and thus contributed, each in its own small way, to rural wellbeing. Indeed, the team feels that its projects have so contributed.

- The structure and procedures of Caritas are inadequate for an effective development projection into distant rural areas.

- Only a single five-day course is given yearly, part of which deals with agricultural and livestock production. It is given in Oruro, only to women, and is not complemented by practical demonstration.

- There is no sustained Caritas presence in the countryside to push extension, to give feedback and to provide technical assistance in a timely fashion. Technical assistance in general is weak, provided only by a single agricultural technician (perito) based in Oruro.

- There is no diagnosis of a community's agricultural and livestock system before committing resources (food, mostly) to a project there. Caritas responds solely on the basis of a request from a community, site unseen. Although such a request may reflect a need felt by the community, the particular project embodied in that request may not be the best (the most efficient, or even in the long-term best interests of the community) way to address that need. One should know a community fairly well before embarking on projects there.

- Although Caritas does a respectable job with the resources at hand, the institution suffers from a chronic lack of resources.

- The Oruro office has only two all-terrain vehicles.

- Employee salaries are low.

- Physical facilities are lacking or inadequate.

- There are no resources to complement food in development projects--for materials and technical assistance.

- Caritas has no (formal) planning and evaluation procedures.

- Caritas has yet to use help from Planning Assistance, but says it would do so if it had resources from monetization of Title II commodities that would allow it to improve its program.

Recommendation # 2: That Planning Assistance assist CRS, Caritas, and USAID to better define their roles vis-a-vis

each other. Special attention should be given to the CRS-Caritas relationship, with a view to easing tensions between those institutions.

Recommendation # 3: That funds be made available to Caritas by the PL480 Secretariat (Title III) after it has improved its planning, monitoring and evaluation activities, or by USAID, through the monetization of Title II commodities, for the express purpose of projecting itself more effectively into the countryside. The funds should be used for planning (at both the national and diocesan levels), for technical assistance, for the purchase of vehicles and other equipment, and for the judicious purchase of materials to complement food in their development projects. Specifically, Caritas should select marginal areas of each diocese and focus its efforts there; it should, that is, be proactive in those areas. This would address the picaflor syndrome and, in some cases, would mean initiating larger projects that serve larger areas such as "micro-regions," (see section on SNDC). Caritas could continue to be reactive in other areas, as it is now. In the proactive areas, Caritas should maintain a permanent presence--at least an agricultural technician (perito level). This extended presence can be achieved by models akin to that of FHI. In all cases, even in the reactive ones, Caritas should visit a community before committing itself to supporting projects there. USAID, or the PL480 Secretariat, might wish to release funds for the new scheme only in two or three dioceses initially. Planning Assistance should help Caritas develop methods and a structure for planning, both at the national and diocesan levels, so that efforts and resources can be effectively focused on certain dioceses, and on marginal areas, such as micro-regions, within those dioceses.

Recommendation # 4: That CRS/New York should permit CRS/Bolivia to monetize PL 480 Title II commodities in order to comply with the above recommendation. USAID/Bolivia and CRS/Bolivia must argue this point in the strongest of terms with CRS/New York. Caritas cannot project itself effectively into the countryside without a substantial increase in financial resources. It cannot improve its overall project management adequately to satisfy PL480 Secretariat requirements for complementary funding without these resources. It cannot function effectively as a development institution in the rural areas. Above all, it cannot effectively complete any of the rural projects on its roster without an increase in financial resources to allow them to do so.

3. Food for the Hungry (FHI)

a. Evaluation of agricultural program

Food for the Hungry International (FHI) is heavily involved in agricultural development activities, which are part of its

integrated rural development programs that embrace both nutrition and health. FHI is a small institution whose mission is the promotion of development in economically marginal areas. The team visited FHI projects in Pacajes Province, La Paz Department, and in parts of Oruro Department and in Tomas Frias Province, northern Potosi Department.

Pacajes, especially hard hit by the drought of 1983-1984, is the major livestock (sheep and camelids) production zone of highland Bolivia. Northern Potosi is an extremely isolated area of the country, reached by narrow, hazardous dirt roads that rise and twist and fall through a highly accidented terrain. FHI is focusing considerable effort on this long-neglected and highly marginal zone, and is currently the only development institution, public or private, working there. Most of the discussion and analysis to follow is based on visits to projects in rural Oruro and in northern Potosi, which fall under the FHI Oruro office.

The FHI structure for projection into the countryside includes two full-time technical persons based in Oruro: an agronomist (ingeniero agronomo) and a nutritionist. A veterinary doctor and other specialists, such as builders, are contracted as needed. Six salaried promotores, all men, are posted permanently to rural areas where FHI is active. They spend from 20 to 23 days at their posts, and the remainder of the month in Oruro, where they report on project activities and receive instructions at the FHI office. These promotores are variously trained as rural teachers and agricultural technicians (peritos), and most of them are from rural backgrounds. They speak the local languages, either Quechua or Aymara or both. A full-time agronomist (ingeniero agronomo) is also permanently posted to Caripuyo, in northern Potosi, consistent with FHC's focused effort there. The Oruro-based agronomist and the nutritionist circulate among the project areas, ideally visiting each about once a month.

FHI's extension efforts turn importantly on its Development Modules. Usually erected on communal grounds, these modules include components such as greenhouses (some for vegetables, others for tree nurseries), rabbit hutches and pigstys. The modular complex also includes a classroom in which community leaders are instructed by promotores on the subjects of health, nutrition, and agricultural and livestock production. The modular components reinforce the instruction. The promotores receive instruction from FHI technical personnel.

Although FHI does not rely exclusively on the modules for technology transfer, they are designed to play a vital part. Each module serves several communities. In the ideal scheme, technologies move from module to community (or other collectivity) to individual household. At the community level, FHI works through the Centros de Madres, which are seen as apt vehicles for the transfer of technology to the community.

The team visited several projects in the geographic areas indicated above. The projects include irrigation works, sheep dips and greenhouses. The discussion and analysis to follow are based on those quick visits.

Peasants expressed great interest in the greenhouses, which have been a major thrust of FHI over the years. The greenhouse is the modular component that seems to have enjoyed the most popularity among the peasants. FHI has promoted greenhouses at the community level, and there have been many replications at group and individual family levels. About 90 were reported for the Huanuni area, where FHI has provided technical assistance. These seem to be owned and managed collectively either by barrios or by groups of families. In one community, there were several family greenhouses, which date from the drought of 1983. These were introduced by the FHI nutritionist. The replication of greenhouses, however, seems to date from an earlier time--in some cases from the drought of 1983-1984. Because of the current economic crisis, farmers said that they did not have the resources to buy the materials, especially the sun roofs. FHI has also promoted and given technical assistance to the production of vegetables on a larger scale in open fields during the summer rainy season. There was also the usual debate on what kind of roof lasted the longest and which one was the best buy. Several farmers said that the nylon roofs did not last.

In one community, FHI had developed four greenhouses for 38 families--about nine families to each. There were two greenhouses in another community, each serving about 15 families. According to the FHI agronomist, this is the upper limit for a three-by-eleven-meter greenhouse. With more than 15 families, the harvest share of each is too small, and there are clashes between families over work obligations. Still, several farmers wanted greenhouses at the family level rather than at a collective level. FHI provides the Centros de Madres with current vegetable seeds.

With regard to livestock, FHI is trying to introduce rabbits (for meat and fur) and thoroughbred swine--Yorkshires and Hampshires. The team's comments on rabbits made in the context of Caritas' programs apply here. In Pacajes, a major sheep and camelid production zone, it is highly unlikely that herders will adopt rabbits. There is no meat shortage there, and the preferred meat is mutton and llama. However, FHI seems to have registered some success in the promotion of rabbits in communities near the mines. Two facts may account for this: first, these are livestock-poor zones, so there is likely to be a meat shortage; and second, there are many Quechuas in this zone who may be more receptive to rabbits since there is a tradition among them of raising and eating guinea pigs, which, arguably, are something akin to rabbits. With the exception of a few aberrant communities on the lake, Aymaras have no guinea-pig tradition. There may also be some receptivity to rabbits in northern Potosi, where there are few animals

and many Quechuas. It might be advisable to give further thought to the promotion of rabbits. Also, guinea pigs may be a better candidate for promotion if the main goal is to provide meat.

As for swine, one can only say that a substitution of thoroughbreds for creole pigs involves considerable attitudinal and behavioral adjustment on the part of target farmers--an adjustment that they may not be willing to make unless there is a strong incentive. Indeed, there have been some classic failures of efforts to replace creole pigs with purebreds. In the area of Caripuyo, in northern Potosi, creole pigs scavenge freely, and thus require no farmer attention. The new breeds, by contrast, will require special pens, lots of prepared food, and time-consuming management practices. Will farmers deem all this worthwhile, especially if the pigs are used only to supply the household with meat and lard? Ten farmers have purchased purebred piglets from the Caripuyo module to date. FHI should closely monitor farmer receptivity to the new pigs.

The team visited on-farm sheep dips and also saw a tree nursery in a greenhouse in the Caripuyo module, but has no comments regarding these.

Farmers and herders from Pacajes as well as those from Oruro and northern Potosi cited reliable water as their greatest need. The team was impressed by the urgency with which this need was articulated by those we visited everywhere.

b. Issues and conclusions

- The structure now in place to promote agricultural and livestock development in the countryside is fundamentally sound.
- Although FHI does diagnose community needs and current crop and livestock systems so as to tailor new technologies to fit them, there would seem to be room for improvement in this process.
- There is no formal scheme for internally evaluating the impact of projects.

4. National Community Development Service (SNDC)

a. Rural program

Servicio Nacional de Desarrollo de la Comunidad (SNDC) is a public community-development agency belonging to the Ministry of Agriculture and Livestock. SNDC is the only public agency currently participating in the PL480 program. It further differs from the private voluntary agencies in the extent of that participation: whereas the private agencies implement the full range of PL480 Title ii subprograms, SNDC participates only in the FFW subprogram.

In addition to a central office in La Paz, SNDC maintains departmental offices, each with dependent zonal offices. It is from the zonal office that SNDC projects a presence into the countryside. The discussion and analysis below are based on the evaluation team's visit to the Patacamaya zonal office, in the town of Patacamaya, Loyaza Province, La Paz Department. The projects visited all fall within Loyaza Province.

A zonal chief directs the Patacamaya office, and beneath him is an administrative assistant. The chief of an SNDC zonal office may or may not be a technical person. The Patacamaya office also has an agricultural technician (perito level) and a builder (constructor civil). Each zonal office typically has three promotores; the night watchman may on occasion function as a promoter if qualified. The Patacamaya office now has only two promotores; one recently resigned to take a better-paying job elsewhere (promotores receive about B.120/month--U.S.$50). SNDC loses qualified staff at all levels to the private sector, or to international organizations, because of low salaries. The promoter is a key outreach person: he spends more than 20 days per month working with SNDC projects in the countryside, and the remaining time in the zonal office reporting and receiving instructions.

The Patacamaya office has no vehicles. At one time, SNDC provided its promotores with motorcycles, but then discontinued the practice after several promotores were killed in motorcycle accidents. Promotores working in Loyaza Province move about irregularly as best they can--by foot and truck and bus. Per diems are low and insufficient.

SNDC owns the Patacamaya office which is part of a small complex that includes living quarters for personnel. But this is unusual; zonal offices and staff quarters are more often rented. SNDC favors the rental arrangement because the zonal office should be moved every five or six years to be closer to shifting areas of development focus. SNDC would prefer that zonal offices and staff quarters be built with external financing, and then turned over to the community after the five or six years of use. The departmental offices provide technical support to the zonal ones. The departmental offices employ civil engineers, hydrologists, architects, agronomists, economists, sociologists and other specialists, although some offices have a greater variety than others. La Paz Department seems to offer the greatest variety.

SNDC today has two approaches to responding to community development needs. There is what might be called the traditional approach, which SNDC has used for several years. Then there is the new approach, which has been in operation for about a month and which is a vital part of current SNDC restructuring efforts. First, the traditional approach.

Under the traditional approach, either a promoter will detect a community need and report it to his zonal office, or a village commission will carry a request to the zonal office. The zonal office then dispatches the agricultural technician, or the builder (or both) to the community to gather further information. Based on this information, a report describing the project is drafted by the zonal office and sent to the departmental headquarters, where it is reviewed by the Technical Committee (Consejo Tecnico) of the Projects Office. If the project is a large one (e.g., an irrigation system) technical personnel from departmental headquarters visit the community and ultimately play a key part in the technical design of the project. Once the departmental technical staff approves the project, it is sent to the departmental director for approval, and from there to the departmental official in charge of monitoring FFW activities. When all parties have cleared the project for execution, the zonal office is notified and work begins.

The new approach to addressing community development needs turns importantly on the concept of a Micro-Region. A micro-region includes several communities that have about the same ecology, the same economic base, and the same traditions and needs. The promoter remains a key person in the new approach. In theory, he knows the rural communities and has some notion of which might reasonably constitute a micro-region. He typically selects such a group of communities, convenes their leaders (ancestral or otherwise), discusses projects with them, and asks them if they want to participate in a micro-region. If they do, he prepares a profile of the micro-region and presents it to the zonal chief. The profile may contain several suggested projects, and since there are three promoters, the chief may receive more than one profile. The chief then sends these profiles to departmental headquarters, where they are reviewed by the technical staff of the Projects Office.

The Projects Office must decide which micro-region(s) to work in. A visit to the region(s) may be required to take this decision. Once the decision is taken, a multidisciplinary team (an economist, a sociologist, and an agronomist) is dispatched to the micro-region, where it remains for several days collecting information. The team then prepares a report and submits it to the departmental director. If he gives it a favorable review, the national head of the SNDC Projects Office and a representative of the international donor (here, someone from the USAID PL480 Title ii office) are invited to review the report.

If all reviews are still favorable, a technical team is again dispatched from the departmental office to the micro-region to consult with community leaders about setting priorities for the several projects contained in the micro-region plan. It is imperative that these leaders play a key part in setting the priorities. This accomplished, the technical team returns to its departmental headquarters where it begins to design the first project for the micro-region. Once approved by the departmental director, the project

design is sent to La Paz for approval by the national Projects Office and by the international donor. When approved at all levels, the project is ready for execution. SNDC will not execute more than one project per micro-region per trimestre.

Training and technical assistance in the use of infrastructure works such as irrigation systems will be provided by the promoters in conjunction with zonal and departmental technical support personnel.

It is important to note that SNDC does not intend the new approach to replace the traditional one. Both approaches will continue, but they will differ in the kinds of projects they support. The traditional approach will continue to respond to community needs for simple infrastructure items such as sheep dips and covered corrals (apriscos). These needs will not be addressed in the context of micro-regions, though requests for such assistance from communities already part of micro-regions will be considered on the same basis as those from communities not part of micro-regions.

The micro-region approach will focus on large infrastructure projects--irrigation systems, bridges, and roads. The idea is that by concentrating resources on large projects in carefully selected micro-regions where SNDC will remain active over a period of five or six years, the development gains will be self-sustaining, and ultimately greater. As mentioned earlier, the micro-region approach is a cornerstone of the current SNDC restructuring. It has the support and enthusiasm of several young, well-educated Bolivians who wish to return SNDC to the respected status it once widely enjoyed.

The team visited several SNDC FFW projects, all in Aymara communities of Loyaza Province, La Paz Department. In the area of Sixilla Alta, a valley region near La Paz with mild climate and severe water problems--raging torrents in the summer, drought in the winter--, SNDC has built defensive walls (muros defensivos) to protect roads and gardens from the destructive force of the summer floods. But these walls are made of stones compacted with tree branches, and usually do not last beyond a single flood season. There is a need for a more substantial wall, one made of concrete. SNDC, however, has no funds to purchase materials such as concrete. And so FFW is used to continually rebuild the protective walls.

In the same area, SNDC has used FFW to construct an irrigation system serving six communities. The long dirt canal snakes slowly along a ledge on the steep slope, with occasional aqueducts of split and hollowed eucalyptus boles spanning the gorges, thereby shunting the deeper folds in the mountain side. If cleaned regularly, these log aqueducts will last thirty years. An incipient mudslide (masamorra--these are common in the area, and can be quite destructive) in one of the folds, however, threatens the aqueduct there as well as the ledge trail along the inside of the fold. An aqueduct of steel and concrete, with footbridge as part of the same structure, would solve

this problem. But again, SNDC has no funds to purchase these materials.

SNDC has built another irrigation system, this time on the valley floor, in the nearby community of Chivisivi. The system has increased the cultivation potential in this zone, which produces a variety of fruit for highland urban markets. In the community of Cuivivi, which has a progressive, well-organized leadership, SNDC used FFW to build a larger school, with attached living quarters for the teacher. The community provided the labor, the stucco, and the corrugated tin roof. In the same community, SNDC also used food to build a single system for irrigation and potable water. Again, villagers supplied the labor, the plastic pipe leading from a catchment area high above the village, and concrete for the holding tank (estanque) situated on a rise next to the school. Before this system was completed, villagers were forced to draw salty water from the nearby river. The village leadership is now talking of building a health post and a new cemetery--this time on the village side of the river whose current rages destructively in the rainy season. If the projects the team observed in Loyaza Province are typical of those of SNDC, there is already a preference for large projects. There are no greenhouses here--and probably no community interest in them because of the favorable year-round climate. The projects visited seem to respond well to community needs. Given its resource limitations, SNDC has done surprisingly well.

b. Issues and conclusions

- SNDC is severely handicapped by a lack of resources and thus cannot effectively carry out its development mandate. Low salaries, insufficient operating funds, and a lack of equipment such as vehicles limit SNDC's reach into the countryside. Further, SNDC has no access to resources to complement food in its development projects.

- The restructuring of SNDC around the concept of micro-regions is a positive move, but little will come of it unless the resource handicap is removed.

- The micro-region approach places a lot of responsibility on the promotores, and also on the zonal offices. It is reasonable to ask whether the current technical capacity at the zonal level (where nobody is trained beyond perito) is adequate to handle this new approach in the best and most efficient way.

Recommendation # 5: That funds be made available to SNDC, either by the PL480 Secretariat (Title III) or by USAID, through the monetization of Title II commodities, for the express purpose of projecting itself more effectively in the countryside. The funds would be used for direct project costs including purchase of vehicles and other equipment, and for the judicious purchase of materials (e.g., steel, cement)

to complement food in their development projects. USAID, or the PL480 Secretariat, might wish to release funds for use in only three or four zonal offices initially. Also, in its new micro-region approach, SNDC should consider posting at least one technical person (e.g., an agronomist) beyond the perito level to the zonal offices.

C. Planning, Implementation, Monitoring and Evaluation

Although there are considerable differences among all four PVOs in their capacity to plan implement, monitor and evaluate projects, there are enough similarities to warrant a section that deals with each one of these topics in general. The observations on the project cycle (planning, implementation, monitoring and evaluation) as well as the recommendations on each aspect of the project cycle are intended for all four agencies.

1. Project planning

One of the strengths of the FFW program is its bottom up planning approach. With the exception of FHI's Development Modules, and most of the urban projects, the overwhelming majority of the projects are "planned" by the community or participants. A serious constraint to the bottom up approach is the low levels of literacy and technical know-how of the members of the communities, which limits their ability and capacity to do project planning. The agencies, with limited resources and technical capacity, have not been able to maximize the strength of the bottom up approach.

This actual approach to planning takes the simple form of a request by the community to the PVO for support in the implementation of a project. A simple diagram of the project along with the list of participants and beneficiaries is presented to the agency. The agency reviews the proposed project, sometimes visits the community to do an on the spot check, but more often due to the lack of capacity of the agency, simply approves the project, and signs an agreement with the representatives of the community.

Implementation begins as soon as the project has been approved, and often before it is approved in cases where the participants see their project as urgent. Lack of resources and technical personnel are an important, but determining factor in the lack of project assessment and planning on the part of the agencies. The agencies, in general lack a methodology and a vision of local development. This lack of an approach to local development has been characterized as the hummingbird (picaflor) approach. Interesting and apparently sound projects are picked by the agency in this or that community, without any regard to the overall context, the economic feasibility, or potential impact. Often, several projects are undertaken in the same community without seeing the inter-relationship of the projects or the priority in which they should be undertaken. FHI, among all four agencies, is perhaps the least deficient in this regard, especially in its Development

Modules. However, along with the rest of the agencies, FHI lacks a general development approach outside of its Development Modules.

In part, the hummingbird syndrome is due to the evolution of the FFW program from an emergency program to a development program. In the early days, food had to reach needy people, and the project was more a justification for the distribution of food than a development effort. And presently, the basic human needs of any community receiving FFW are so great, that any project tends to alleviate a need to some extent. As the FFW program becomes increasingly more a development program, attention and resources should be employed to help the agencies become technically able to assist the community plan, implement and maintain a project.

> Recommendation #6: Planning Assistance should assist the PVOs develop a planning tool for use at the community level that would help shift program focus away from isolated projects toward a community development plan. The plan would prioritize community needs, explore the realities of implementing a project, its potential impact, and the consequences of undertaking the project. Part of that planning tool might include the formation of a core group of short-term consultants that can work with the personnel of all agencies in developing their capacity to plan, implement, monitor and evaluate standard technical packages by type of project. For example, irrigation projects operate best when seen as systems effecting river basins, needing operations and management manuals, and extension work to produce peak agricultural production.

2. Project implementation

Projects are implemented by the participants or communities, with the exception of urban projects where municipal agencies are included, and some rural projects where a third agency may be included. The vast majority, however, are implemented by the community members themselves, with little or no agency participation. The agencies tend to reduce their role in this project phase to inspecting completion of the project in order to distribute the FFW rations.

As with planning, the communities need some assistance in the implementation of projects. This assistance is technical, i.e. the right cement mixture, the correct use of fertilizers, the type of seeds. At present, the agencies lack the resources (human and material) to provide this kind of assistance.

A more serious aspect of project implementation, however, is the lack of attention to institution building at the local level. Most projects are undertaken by action groups. These action groups disband after the project has been completed. Problems of maintenance emerge shortly thereafter. Sometimes the community has some form of informal organization to manage a project such as the distribution of water in an irrigation system and its regular maintenance. Often, the

communities begin to improvise with some organizational form, where none existed before, or where the existing institution is no longer adequate to the needs of a larger project. A local community alone may no longer be the adequate institutional basis to maintain a road or an irrigation system. All projects need institution building or strenghtening. Projects that integrate communities almost always need new and more encompassing institutions than the communal one.

If an agency's FFW program moves toward a micro-regional approach to development, the need for institution building or strengthening will become an urgent one. Maintenance of all projects requires the strengthening and building of local institutions, i.e., local governments. Weak institutions is a serious constraint to development in rural and urban Bolivia, and the FFW program offers and opportunity to address this problem. While it would be impossible for the FFW program to solve this problem, it can contribute to building and reinforcing local institutions of government. Without some form of permanent local institution, public works may not be adequately maintained. The durability of projects depends ultimately on the local community's ability to generate resources to maintain the projects. Road, irrigation systems, and other projects that integrate micro-regions can be used to build local government institutions beyond the communal ones. Some technical assistance during the implementation of projects is needed in communities where no previous experience exists in the use of new materials or inputs. The PVOs should assess whether this need exists. The help of existing technical assistance development institutions could be sought during this phase, such as the regional development corporations, the National Roads Service (SNC), and other PVOs.

3. Project monitoring and evaluation

Again, with the exception of the beginning of a Monitoring and evaluation (M&E) system by FHI in its development modules, none of the agencies does any M & E of its projects. In its present shape, the project is inspected when finished simply to distribute the FFW rations. In general, the agencies try to visit the project sites during implementation to review project progress. This visits range from daily presence in some ADRA/OFASA road projects to a one time inspection of the completion of the project before food is distributed. The team's impression of many FFW projects, especially the ones directed at food production, show great potential for meaningful impact. All four of the agencies need a monitoring tool to aid them in managing the implementation of their projects, and an evaluation tool to capture project impact downstream.

> Recommendation # 7: That USAID, through Planning Assistance, develop a simple monitoring and evaluation system that can be used by each agency to monitor the implementation of its projects, and to capture their impact. In the planning of the project, specific bench-marks should be built in that will permit the community and the agency to spot

implementation problems and look for solutions, as well as a number of indicators to evaluate impact after completion. A "community" file, rather than a project file should be kept. FHI is implementing a community file, which could be used a model for the other agencies.

D. PVO Administration Costs

One area of program management that affects all of the cooperating sponsors except SNDC is the matter of administrative costs for both line and support staff, and project development. Presently, ADRA and FHI are receiving support from AID/Washington funded Outreach Grants which are supporting a large share of their respective national and regional office line and support staff, and project development costs. In the case of FHI, about two-thirds of these administrative costs are covered by the Outreach Grant. ADRA is less dependent, but only because of its large program from which it recovers empty container funds and participant fees to meet some of its costs. Nonetheless, for both these agencies, the Outreach Grants have been key to their being able to hire trained people to run their large programs, and to allow them to no small extent to hang out their shingles in Bolivia. These grants expire at the end of FY88, and AID/Washington has said that it cannot extend them further. This may be just as well as the Outreach Grants to ADRA and FHI affect their neutrality as so-called private voluntary agencies. With ADRA's U.S. headquarters covering only the salary of the national director in Bolivia, its Bolivia PL480 Title II operation is almost entirely dependent on AID financing. FHI is in similar straights, with clearly two-thirds of its operation costs dependent on AID financing. Without the AID support, these two organizations would not be able to carry out the FFW program in Bolivia.

The programs operated by both ADRA and FHI are having development impact. Efforts to seek a solution to the administrative cost needs of these PVOs should be expended. First, both ADRA and FHI should be encouraged to obtain more administrative support from their home offices. Second, the USAID might wish to pursue OPGs for each of these agencies from related sectors such as Health and Nutrition as way of meeting these local costs (State 168142). In addition, the USAID could consider monetizing a percentage of Title II commodities to cover some of these costs. This could be done by creating a Monetization Committee with one agency serving as the monetizing implementer and the committee making the decisions about disbursements to agencies. Care would have to be taken however, to assure that funds from monetized commodities were used only for direct project costs such as materials, tools, transport, technical assistance, and related administrative costs necessary to assure these inputs arrived on site.

It is important to keep in mind that PL480 Title II commodities, whether distributed in kind, or monetized, are intended to directly benefit the host country's poor population. Inherent in this is that a PVO that wishes to be a cooperating sponsor is able to provide for its

basic administrative costs from its base of support in the United States.

For CRS/Caritas, the Outreach Grants to ADRA and FHI have in effect created an uneven playing field in terms of being able to implement good FFW projects. Because of the AID financing ADRA and FHI have been able to respond measurably to Planning Assistance's improved project management and planning initiatives. The essential element here is being able to hire trained people to carry out the aspects of improved project planning. CRS/Caritas has not had access to this resource, and its FFW program, especially in the rural areas, is virtually void of any planning, monitoring and evaluation. If efforts are made to encourage OPG funding for ADRA and FHI, efforts should be made to include CRS/Caritas in the package. This would go a long way to assure that all three agencies were being dealt with equally and were being given the same resources to carry out their FFW programs.

> Recommendation # 8: That the USAID explore the possibility of obtaining OPG funding for ADRA, FHI and Caritas to assist them in meeting their administrative costs; that the USAID monetize a calculated percentage of Title II commodities to meet administrative costs directly related to implementing projects; that the USAID encourage ADRA and FHI to obtain more administrative support from their home offices.

E. Disincentive Effects

The evaluation team had no mandate to assess the macroeconomic impact of the PL480 program, or even the microeconomic impact on individual firms and producers. Such a formal assessment would involve much technical analysis. Furthermore, it would have to treat the three titles of PL480 separately, for each title uses commodities in a different way and would likely have different macro- and microeconomic effects. Nevertheless, we will hazard some general remarks based on our observations.

Two major criticisms are often levelled at the PL480 program, especially at Title II. First, it is argued that commodities entering the country, whether placed on the market through monetization or distributed in kind to families through FFW, create disincentives to agricultural production somewhere in Bolivia (namely, among individuals and firms that would otherwise produce such commodities). Second, it is argued that commodities distributed in kind to families, say through FFW, create a dangerous dependence--the recipient families, that is, lose the incentive to be self-sufficient through their own production. Before we address these two arguments, a few remarks about the current economic plight of peasant farmers and miners in Bolivia are in order.

The team visited many rural and urban communities during its month in Bolivia. Some of us have worked for several years with rural and urban populations in Latin America. In the countryside, we found by Latin American standards (Haiti excepted) a peasantry living under

conditions of extreme deprivation. Drought, inflation, economic slump, and killer frosts have in turn lashed the rural areas with devastating force. Today, hunger stalks the land. Peasants are demoralized, and are desperately searching for ways to survive--by migrating to the cities, or to the coca fields of Cochabamba. Conditions in the mining centers are hardly better.

The first argument, that the distribution of PL480 Title II commodities creates disincentives to national agricultural production, strikes the team as theoretical under the extreme economic conditions now prevailing in the country. This argument, which conveniently ignores these conditions, is based on an abstract and facile application of economic theory. Where, one asks, would such marginal individuals obtain the purchasing power to make their demand for food effective in the marketplace, and thus stimulate agricultural production?

There is somewhat more merit to the second argument. Certainly, a casual and careless distribution of food to families could produce a dangerous dependence. However, we did not find this happening. In most cases, the food is being used to erect major infrastructure --roads, irrigation schemes, and dams, and to promote agricultural production. Such infrastructure enhances the long-term production potential of communities and regions, and provides a structure within which individual families have the incentive to help themselves--to grow and market vegetables and other products, for example. In this way, development becomes self-sustaining. Even smaller works, such as sheep dips and roofed corrals (apriscos), can result in dramatic production increases over the short term.

In summary, the evaluation team believes that both arguments against the PL480 Title II program are not valid and further study is required to determine if disincentives and dependency effects are in fact occuring in Bolivia.

F. Road component issues

While most of the road construction projects under FFW are being implemented by ADRA, the other agencies, especially FHI, and to a lesser extent, CRS/Caritas and SNDC are also implementing road projects. Therefore, the issues and recommendations that flow from the following discussion are intended to apply to all four of the agencies. During the 4-week evaluation period site visits were made to each of the following roads:

Road	Length (km)	Responsible PVO
La Paz Ring Road	5.4	ADRA
Lambate-La Plazuela	65.0	ADRA
Cruce Socara-Caripuyo	53.0	FHI
Petacaya-Yura	5.0	ADRA

In addition, inspection trips were made with ADRA on about 30 kilometers of stone laid resurfacing city streets in El Alto and about 10 kilometers of similar work with CARITAS in Potosi. During the visit not only FFW projects were visited but also the major trunk roads connecting La Paz-Potosi-Sucre-Cochabamba-La Paz were traveled to obtain a general indication of the condition of the existing highway network. The total distance traveled over both trunk and feeder roads exceeds 3000 kilometers.

There are four major issues to be addressed in the road component:

- Does the road component of the FFW program in Bolivia as currently being implemented meet program goals established with regard to:

  -- Creating large scale employment of rural and urban poor?

  -- Development of viable road infrastructure which will form the basis self-sustained development at the community, district and regional levels?

- Does a viable "technical package" exist for urban and rural roads in the project areas? Are variations in the package appropriate to variations in topography, materials, weather patterns, and economic and demographic characteristics of the area to be served by the road? Does quality control need to be improved? Are road planning and design procedures currently employed by the PVOs adequate?

- Are current construction packages whereby Title II FFW labor is combined with Title I and Title III payment for equipment rental cost and time effective or should other contract modes be considered? Is the labor to equipment ratio currently being employed appropriate considering the overall objectives of the PL480 Program? Are construction programs being completed expeditiously under current systems? If not, what changes are required?

- The absence of road maintenance at all levels in Bolivia is notorious. Does the current FFW Program as conceived adequately address this problem? Does the program contemplate appropriate post-construction, road maintenance inputs which will insure that roads built under the program will not be allowed to deteriorate to the point that the capital investment made in road infrastructure is lost?

1. <u>Program objectives</u>

The issue of whether PL480 Program objectives, in particular

the Title II, FFW component are currently being satisfied needs to be approached separately in the urban and rural setting.

a. Urban roads

Site visits to road construction project such as the La Paz Ring Road (ADRA Case No. 2) and stone laid resurfacing programs of city streets in La Paz, El Alto, Oruro and Potosi have indicated the urban roads program is working extremely well. Massive employment of urban poor, the greater part women, is very effective. Conversations with workers indicted general gratitude and satisfaction with the FFW program and a desire for continuous employment. The road projects being implemented seemed to be well selected and designed to provide positive benefits to the neighborhoods and communities. The work programs in the field generally seemed to be well organized with specialized groupings under a foreman for each of the major work items. Low but attainable production standards have been set which apparently were being enforced.

The productivity of the labor on stone laid resurfacing projects of city streets appeared to be quite low, i.e. about one third of what normally could be expected from a private labor contractor (CRS/Caritas Case No. 1). This is due to a combination of factors; employment of unskilled women, lack hand tools and wheelbarrows, and delays in material deliveries. Preliminary estimates indicate that under the Structural Adjustment program where displaced miners are utilized for road surfacing and payment made partly in food allowances and partly in cash, productivity rates could be tripled and probably exceed those currently being achieved by private labor contractors.

The extent to which the utilization of women on city street resurfacing projects effected productivity could not be determined. However, in Cochabamba, reports were received that women who had been working on FFW projects had become so well trained that they were being employed by private contractors on skilled and semi-skilled jobs in construction. Furthermore, women were more reliable and less subject to political or other types of manipulation. Also, from the humanitarian point of view, women are often sole heads of household and FFW food allocations often the only source of family subsistence. In some cases women tried to hide pregnancy in order to be able to continue to work on a FFW project. When such cases were discovered, these women were removed from direct labor tasks and assigned support responsibilities such as cooking or watching children. Finally, the selection of workers on the basis of sex could be considered as discriminatory and not in accordance with current concepts of human rights.

In Potosi, it was observed that women were employed as cooks and in some cases assigned to watch over young children permitting other mothers to work directly on construction activities. However, this was not generally the case on most sites visited. In fact a major cause of reduced productivity was the sight of a women carrying stones in her

apron because no wheel barrow was available while a baby is strapped to her back and a second child hangs from her pollera (skirt). Another commonly voiced complaint was the lack of immediate firs aid in the case of minor accidents.

In a few instances city streets were resurfaced prior to the installation of underground water, sewage and drainage pipe. The stone surfacing had to be removed and relaid to permit placement of these installations.

Recommendation #9: The urban program is proceeding very well; however, productivity of crews, composed mostly of women, should be increased. Where appropriate hand tools and in particular wheelbarrows cannot be obtained from the local city administration, then provision should be made under FFW monetization for their purchase. Better coordination of material deliveries with work programs is required. Increased productivity could be obtained if food allowances were substituted in part by cash payments. To the extent possible, street resurfacing should be coordinated with programs for placement of water, sewage and drainage installations to obviate the need for redoing the stone resurfacing. Women participation in urban road and other infrastructure programs appears to be desirable not only from the humanitarian point of view but also women are making a positive development input in urban projects, some type of day care center are required close to working mothers. Neighborhoods benefiting from the project could contribute with temporary space. Education institution (public and private) could be asked to setup education programs for the pre-schoolers. The provision of basic first aid kits to each working group should be incorporated into the programs. A person or volunteer should be designated and given training in basic first aid procedures.

b. Rural roads

Unfortunately, the current PL480 road projects in rural areas do not seem to be as effective as urban projects in meeting program objectives.

On field visits to the sites previously indicated, no sign of massive employment of labor was noted. In fact, not more than perhaps a dozen campesinos could be observed actually working on any given road although far larger numbers have been reported on previous stages of construction. Furthermore, there was no indication of an organized constructive effort such as observed in urban areas where labor was divided into specialized work groups with each work group directed by a foreman who was responsible for the quality and productivity of the group. Labor participation in rural areas appeared to be "recruited" rather than the "spontaneous" participation noted in urban areas. The

work of promoters in obtaining communal support for FFW road programs in rural areas was indispensable.

In some areas campesino labor prefer to engage in other forms of remunerative activities such as panning for gold in rivers which appeared to be more lucrative than working for food rations. There was the question therefore whether food allocations under FFW programs were always sufficiently attractive to other sources of employment. Finally, in the isolated, mountainous regions through which some of these roads passed, there was a question of whether there really was enough surplus labor available to sustain a major labor intensive oriented roads program.

The question arose whether FFW labor intensive procedures were really applicable in the difficult, mountainous terrain of the highlands. Approximately 70 to 80 percent of the cost of road construction in these areas is in equipment while only 20 to 30 percent is expended on labor and materials. Most planning manuals of labor intensive rural road work advise that for roads to be considered for labor intensive work, the ratio should be the inverse, i.e. at least 70% of the cost of the project should be attributable to labor.

The roads selected for construction under the current FFW program were carefully picked to include only those connecting major development centers which had considerable potential for growth. Furthermore, road alignments were established so as to connect major rural communities between terminal points so as to give these communities and outlet for their products. However, no formal feasibility studies were undertaken to determine economic parameters on which to base project feasibility. The general impression obtained was that the amount of traffic to be generated by the construction of the road itself would not justify the high cost of construction in mountainous terrain of the Bolivian highlands. What probably is needed is an integrated approach whereby road investments are supplemented with agriculture inputs and other related infrastructure investments so that the full economic potential of the area served by the road can be developed.

Recommendation #10: On rural roads more advance planning is required particularly in the difficult highland area to determine if labor intensive construction methods under FFW programs are really applicable. This should include an analysis of total labor requirements for the projects and an evaluation if this requirement can be met by the surplus labor available taking into account the seasonable variation of the latter. Furthermore, it may be that other sources of employment are more available to local campesinos for which a food ration does not provide sufficient work incentive. In such cases, FFW projects should not attempted. Furthermore, prior to selecting a road project for construction, an attempt should be made to quantify costs and benefits to arrive at parameters which would indicate if the

road project was really feasible. Road construction is necessary for development; however, roads alone will not insure this development. Complementary investments in agriculture, cattle, and other rural infrastructure are required. In order to produce maximum development impact, road construction should not be considered in isolation, but rather as a part of an integrated development program be it at the community, district or regional level. Instead of attempting the construction of major arterial feeder roads having lengths of 50 or 100 kilometers or more, it may be better to let the construction of these roads out to the private sector and utilize FFW programs for the shorter 1 to 10 kilometer roads required to connect minor population centers to the main feeder road. A higher input of labor could be used due to lower design and quality standards. Outlying communities would be highly incentivated to provide labor which would enable them to get their surplus produce to market.

2. Technical package

One of the major issues to be considered is whether the technical package currently being applied to rural road construction is appropriate or whether it should be changed to produce an optimal combination. Furthermore, should one set of design standards be applied to all rural road construction undertaken by FFW or should these be varied based on other factors such as terrain, population, expected traffic and climate? The discussion that follows is considered appropriate.

The basic consideration in developing design standards for a road project is to try to minimize the total annual cost of the road as a function of three major cost parameters.

- Road Construction Costs
- Road Maintenance Costs
- Vehicle Operating Costs

These factors are inter-related and cannot be treated independently. For most roads, say with Average Annual Traffic (ADT), values of above 10, the predominant cost element is vehicle operating costs which depends primarily on surface roughness which is determined by the quality of maintenance. Road maintenance in turn is a function of the design and quality standards to which the road was constructed. The "optimal" standard will depend on the lowest total cost alternative which can be determined by models such as the World Bank "Highway Cost Model" or the less sophisticated Corps of Engineer's "Paver Model". The trade off between construction of a large number of low quality roads with high maintenance costs versus a lower number of kilometers of higher quality roads with comparatively low maintenance costs has been discussed for years. The correct strategy can only be determined

after application of a total cost analysis utilizing the procedures described above.

The current strategy applicable to FFW road construction in Bolivia appears to be to get the "biggest bang for the buck" by building as many low quality roads as possible under minimal design standards. In fact, there seems to be a sort of informal competition between entities involved in feeder road construction as to who can produce the least expensive road. Most of these roads probably are necessary. However, considering the probability of a minimal or non-existent maintenance input after construction, the question arises whether this policy should be changed to produce less quantity and more quality roads. The Rural Road Division of the National Highway Department (SNC) voiced serious criticism when interviewed concerning the FFW roads program particularly for this reasons. The SNC feels that under this program a lot of low quality roads are being "dumped" on the SNC for maintenance and that these roads to a certain degree will be non-maintainable even if the SNC had resources to do the job - which they do not. Furthermore, although not specifically mentioned, the feeling was that the SNC was currently being left out of the road construction even though they ultimately hold responsibility for their maintenance.

Conversations with AID and other personnel have indicated that the SNC is one of the better Bolivian Ministries. The highway department is not politicized. Personnel seem to be well qualified technically. The organization appears to be decentralized technically (although not financially) as district offices are able to assign available resources to projects without central office approval. If given sufficient resources the roads department should function efficiently.

Recommendation #11: The current strategy for building a large number of low quality roads under the FFW program would appear to have to be reoriented toward more quality construction and less quantity. The probability of minimal maintenance inputs after construction would require higher initial road construction standards, particularly more emphasis on better alignment, improved drainage, slide preventive measures, and perhaps better quality road surfacing to insure all weather operation. These standards should not be fixed but should be adjusted as required by local conditions. Where road construction is inexpensive, initial construction to a two lane facility could be considered instead of the current one lane roads being built in the highlands. Quality control during construction should be improved. Design standards should be tested in the approximate "cost model" to determine if an "optimal" combination of the road cost inputs will result. Finally, the SNC who is ultimately responsible for the maintenance of these roads should participate in all phases of the road package - from setting initial standards to design and

construction supervision. The SNC should have the prerogative to reject for maintenance purposes all roads built to inadequate design or quality standard resulting in excessively high maintenance costs. The PVOs who are currently implementing road programs should work in coordination with the SNC. The possibility might be considered of reducing design costs by the installation of a Computer Aided Design (CAD) program in the SNC which could be utilized by the PVOs in implementing elaboration of road designs and plans. Benchline costs for CAD designs and plans, exclusive of field surveys, are only on the order of $200 to $300 per road kilometer exclusive of major structure.

3. Construction package

Effective implementation of the FFW roads program requires that the appropriate construction package be utilized which should consider the following elements:

- The basic objective of the FFW program which is to benefit rural and urban poor and at the same time produce viable road infrastructure.

- The trade off between construction costs and time, i.e., although labor intensive oriented construction procedures may be less expensive, the construction period may be so long that more expensive but less time consuming capital intensive projects channeled through private contractors may be the best alternative.

- The proper labor/equipment mix. Very few road projects can be completed utilizing 100% labor. The proper mix of labor and machines must be introduced to optimize the cost/time trade off.

- Quality concepts, i.e., to what extent is quality sacrificed (if any) by the introduction of labor intensive FFW concepts as opposed to mechanized construction operations.

The current construction package in the Bolivian highlands on major feeder road construction currently consists of a combination of unskilled labor provided through Title II FFW, with rental of construction equipment (with operator) from a contractor which is paid by Title I and Title III funds. Basically the system seems to be acceptable. A comparative cost estimate of what is considered to be a typical highland feeder road is given in Table 2. The results indicate the following:

Contract Mode	Average Cost/Km.
a. FFW labor combined with equipment rental from a contractor.	$23,400
b. Contract through the current SNC program for small contractors using capital intensive procedures.	$38,100
c. Contract let by competitive bidding to the private construction sector based on capital intensive procedure.	$35,300

The analysis would indicate that savings exceeding 50% can be obtained by combining FFW with equipment rental. However, a more complete, statistically based analysis would have to be made to confirm this. Construction costs vary considerably based on terrain, haul distances, market competitiveness and other factors so that it is difficult to obtain comparable bid prices.

The time element in the current FFW/equipment rental procedure appears to be excessive. Production rates vary from less than 500 meters per month where heavy blasting is required to 8 or more kilometers per month where only common excavation is encountered. An average production rate would probably be on the order of 2 to 3 kilometers per month (see **ADRA Cases No. 3 and 4**). The amount of equipment utilized is a bare minimum consisting of two rented tractors and one purchased air compressors with jackhammers for drilling blast holes the tractors have no rippers. Local FFW campesino labor are utilized for blasting which is probably the major deterent to progress in mountainous terrain. Equipment rental is paid on a meter/hour basis with a minimum guarantee of hours per month. No comparative estimates are available for production rates channeled through equipment intensive procedures utilized by the SNC or private sector contractors; however, considering that the current feeder road construction procedures consist mainly of excavating a five meter wide track from the existing terrain with no haul, embankment or compaction and the fact that no select material surfacing is placed over the existing subgrade, production rates on the order of 6-8 kilometers per month could normally be expected. There would be an appreciable time savings if road contracts were 100 percent mechanized.

No formal plans, quantity or cost estimates are currently produced by road construction (**ADRA Cases No. 2 and 3**). Road alignments are determined by map studies, field recognizance and compass readings. The alignment is not staked out in the field, rather the tractor operator is instructed where to go. No geophysical studies are made to locate and stabilize or avoid potential slide areas although local residents in the area are consulted verbally. No select material is currently placed over the natural subgrade material which is considered sufficiently rocky to support anticipated loadings, a somewhat suspect assumption. Non-reinforced, 40cm diameter centrifugally spun drainage

TABLE 2

COMPARISON OF CONSTRUCTION COSTS

PROJECT: Socaro - Caripuyo Cross Road vs. SNC vs. SERMAQ Co.
SECTION: Caripuyo - Janko Janko
LENGTH : 19 + 800 kms
July 1988 (US$1.00 = Bs.2.40)

ITEM DESCRIPTION	UNIT	QTY	UNIT PRICE $	COMM. INPUT $	INPUT FHI $	INPUT PL480 $	TOTALS FFW $	Unit prices obtained from SNC Don Diego to Pto. Siles Rd. UNIT PRICE SNC $	TOTAL SNC $	Estimated unit prices obtained from contractor SERMAQ PRIVATE CONTRACT $	TOTAL PRIVATE CONTRACT $
1 EXCAVATION											
1-1 Sand	m3	43,420						3.04	132,000	1.50	65,100
Tractor	hrs	500	83.00			41,500	41,500				
Opening	m3	2,100	3.00	6,300			6,300				
1-2 Fracture Rock	m3	43,198						3.04	131,300	3.50	151,200
Use Ripper	hrs	62	83.00			5,146	5,146				
Use Tractor	hrs	786	83.00			65,238	65,238				
1-3 Solid Rock	m3	46,615						9.19	428,400	9.00	419,535
Compressor	hrs	2,590	30.00			77,700	77,700				
Tractor	hrs	848	83.00			70,384	70,384				
Skilled Labor	hrs	2,590	2.90			7,511	7,511				
1-4 MATERIALS											
Explosives	kg	5,600	1.80			10,080	10,080				
Guide	m	31,200	0.30			9,360	9,360				
Detonators	pcs	5,800	0.15			870	870				
Drill Rod	pcs	62	93.50			5,797	5,797				
Shovels	pcs	50	6.50			325	325				
Hand Rods	pcs	50	6.50			325	325				
Wheel Barrows	pcs	10	55.00			550	550				
2-0 DRAINAGE PIPE											
2-1 Box Culvert Sct 0.60x0.60	m	100	55.00			5,500	5,500		5,500		5,500
2-2 5 m Fords	m	60	300.00			18,000	18,000		18,000		18,000
3-0 DIV. DITCH	m	22,000	1.74	38,280			38,280		38,280		38,280
4-0 TOPOGRAPHICAL SUPPORT	hrs	500	0.30	150			150		150		150
5-0 EMBANKMENTS		23,900	3.90	93,210			93,210	Included in unit prices for excavation			
6-0 OFFICE SUPPLIES					200		200		200		200
7-0 DRIVER					900		900		900		900
8-0 FUEL & LUB. Transport					500		500		500		500
9-0 DRILL RIG	pc					5,173	5,173	Included in unit prices for excavation			
TOTALS				$137,940	$1,600	$323,459	$462,999		$755,230		$699,365
Cost per Km							$23,400		$38,100		$35,300

pipe is utilized as standard. This small diameter pipe will be subject to clogging, and difficult to clean manually, increasing maintenance costs. Environmental consideration such as dumping large quantities of cut material over the side of cuts into valley streams and the possibility of dustings of the natural subgrade material under traffic are not considered. Drainage appears to be lacking in some areas. Longitudinal drainage ditches are not lined and generally appear to have insufficient capacity. No attempt has been made to apply a template to these ditches during hand construction to insure the proper ditch section is maintained. Some consideration is being given to placement of gabions across water channels to reduce velocities on streams which cross the road; however, these erosion control devices need to be expanded. Consideration is being given to placement of lined diversion ditches at the top of cut slopes; however, this construction is not yet being implemented.

A better construction alternative is being proposed by Food for the Hungry International (FHI) for the construction of the Socara-Caripuyo Road (See FHI Case No. 1). The procedure will eliminate many of the inconveniences contained in the ADRA contract procedures and baring major surprises during construction should function satisfactorily with an engineered road built within a reasonable time at a not the lowest cost but at a competitive price.

Recommendation # 12: The current construction package of combining non-skilled labor under FFW with equipment and operator rental from a private contractor appears to be a viable contract mode which results in costs saving of over 50% if compared with standard equipment intensive contracts. However, construction time under the current system appears to be excessive due mainly to use of unskilled labor for blasting and a minimal equipment component. With the proposed increased emphasis on quality rather than quantity in road construction, the current ADRA construction procedures should be modified to include variations to be implemented by FHI on the Socara Road. The optimal trade off between cost and time can only be determined by a feasibility analysis for each road undertaken whereby the stream of benefits and costs are discounted at the proper rate and shadow prices utilized. For major projects this analysis should be made with a sensitivity evaluation on construction time to arrive at proper equipment/labor mixes. The proposed FHI method should be adopted by all the agencies engaged in road construction as a basic guideline for construction packages with modifications as required based on results from the feasibility evaluation

4. Maintenance

Rural road maintenance is always a major problem. Rural roads seem to be constructed with relative ease by a great number of entities but the maintenance of these roads is invariably deficient or non-existent. Bolivia is no exception.

The current unpaved, rural road network in Bolivia is on the order of 15,000 kilometers of which perhaps 10 percent of 1,500 kilometers received what can be considered regular but deficient maintenance. The other 90% of the rural road network including probably most of the FFW roads are not included in the program.

The SNC under current laws is responsible for the maintenance of all main and feeder roads in the country with the exception of city streets which are maintained by the local city administration. SNC is precluded from constructing any new roads and must limit its activities to maintenance, rehabilitation and improvement of existing roads only.

The SNC has recently received considerable amounts of equipment through a Japanese grant and credits from the Andean Corporation. The equipment, however, is considered to have little impact on unpaved rural FFW roads as it undoubtedly will be used to rehabilitate, reconstruct and improve the existing trunk road network which has been allowed to deteriorate due to lack of maintenance.

The PVOs are making an effort to introduce road maintenance practices as part of their construction programs. Roads currently being built are being maintained by equipment available and through hand labor for which food allocations are given. Furthermore, communities upon implementing a FFW project are required to sign a statement guaranteeing the maintenance of the facility on a voluntary basis.

The GOB has a road maintenance activity called "prestacion vial" whereby campesinos are required to work three days of the year without payment on road construction and maintenance. The program is administered through the SNC but is relatively ineffective because campesinos are allowed to pay Bs 15.00 for the three days work instead of working. These funds are utilized to support equipment intensive operations through the purchase of spare parts, fuels and lubricants. Even when the campesino arrives to work, the voluntary basis incentives are so slight that little effective work is performed. Furthermore, the application of the "prestacion vial" seems to vary throughout the region. In some areas there appeared no real attempt to enforce the law while in others it was applied in some areas where the SNC maintained offices.

There appears to be considerable doubt therefore that roads currently being built under the FFW program will be maintained particularly when these programs cease and maintenance must be done on a voluntary basis. Road maintenance is a continuous affair. Incentives and communal spirit have to be very strong for labor to be applied on a continuous voluntary basis. Furthermore, on many of the highland roads, maintenance will consist of removing of major slides and repair of washouts which the must generally done by machine methods. Campesinos are not likely to purchase cement or other materials required for road maintenance from what little disposable

income they have. Furthermore, this income should be used to increase agricultural production and not road maintenance. It is considered highly unlikely, therefore, that adequate provision is currently being made for maintenance of FFW roads once they are completed.

Recommendation #13: That USAID and the PVOs consider one of the following two options; and assess their progress after two years to determine if efforts expended toward maintenance support continuation of investments in road construction using FFW resources. Obviously maintaining the status quo is not satisfactory. Long and short term options must be presented:

The Long Term Maintenance Option

The ideal long term situation would be to institutionalize within the SNC a decentralized rural roads maintenance division. In some countries this division is completely separate from the paved, trunk road maintenance section. This division would consist of labor intensive component provided with hand tools who would be paid a nominal amount (not voluntary) for work performed. Small amounts of complementary equipment would be required to support labor intensive operations. These units would be decentralized and strategically located throughout the area to be served. if not already available, a rural road maintenance management system would have to be developed, tried perhaps on a pilot basis and then implemented over the entire region. The time frame on this system would be on the order of 4 to 5 years. Under this system maintenance funding would be given priority over new construction.

The Short Term Solution

The current "prestacion vial" system could be expanded and improved. The time of service could be extended from three to say seven days a year. FFW food allocations would be given for work performed instead of requiring voluntary service. The program would continue to be administered through the SNC who would supply the minimal equipment required to make the program successful. The project would first be implemented on FFW road projects and if successful expanded to include other rural roads. It should be mentioned that the rate of return of road maintenance projects is far higher than that achieved on road construction, for which reason the diversion of FFW resources to road maintenance can amply be justified.

The No Maintenance Option

In the event after a reasonable time period say two to three years, it is found that roads built under the FFW program are not being maintained and that the investment made in road infrastructure is being lost, the road construction component of FFW should be discontinued and these resources diverted to more viable infrastructure construction.

5. Distribution of road user benefits

One of the principal complaints voiced by campesinos, mainly women, in rural areas was that the cost of transport of food allocations from warehouses located in the major cities to the community was excessive. Under current practice, the campesinos must pay for this as an out-of-pocket cost. Some of the communities are isolated and located at considerable distances for storage centers making such costs prohibitive which becomes a major disincentive for participation in FFW road construction programs. The community generally claims that the roads being built and maintained with their efforts are principally benefiting truckers who collude among themselves to establish artificially high freight prices. The communities receive no direct benefit from road construction. This, however, can be considered slightly overstated because figures from the field indicate the freight charges previously incurred utilizing animals are considerably in excess of those currently charged by private and public transport owners. There are transport economies being introduced. On the other hand there are concrete examples of where truckers have banded together in some communities to fix artificially high freight prices.

The general solution proposed for this situation is to increase competition between truckers by increasing competition allowing more truckers to enter the market. This in practice is difficult to achieve because th small market in these rural communities generally limits competition to say one to five private truck owners, who usually set prices between themselves. Maximum development benefits from road construction projects can occur only if savings in transport costs are passed on to communities in the form of increased farm gate prices. This results in more disposable income and allows for more intensive farming of traditional crops or substitution by higher value cash crops. The chain is tenuous and can easily be broken unless freight charges are based on competitive, market prices. If not, then the benefit of new road construction takes the place of increased profit for the truckers and not in greater income for the campesino.

Recommendation #14: Analytical procedures are currently available to calculate reasonable freight charges for all types of vehicles under different terrain conditions and varying degrees of road surface roughness. These theoretical rates can be compared with actual freight charges in the communities to determine if collusion is taking place and artificially high rates being charged. If collusion is detected then steps legal or otherwise should be taken to reduce these charges. The other alternative would be to encourage various communities to join together, purchase a truck and compete directly with the established private truckers. In addition, communities might be encouraged to ask the truck owners to donate all or part of the transport of FFW commodities into the community as their contribution to the project.

IV. FFW PROGRAM IMPACT

A. Urban Improvement Projects

The definition of "urban" in Bolivia is unique and includes several concepts. For census purposes, urban is defined as any nucleated settlement with 2,000 or more persons. For political and administrative purposes, urban is defined as a city; of which there are 9 departmental capitals, and some 100 capitals of provinces. For educational purposes, Bolivia has two separate and distinct systems: the urban and the rural. In common use, urban is usually restricted to the 9 cities which are departamental capitals. Culturally, urban has a connotation of higher status, better living, a desirable place to live.

By the census definition (nucleated settlements of 2,000 or more inhabitants), Bolivia is now estimated to have over 50% of its nearly 7 million people in urban centers. La Paz, the largest city is estimated to have around 1 million inhabitants. Urban centers in 1950 had less than 30% of the population. in effect, the urbanization of Bolivia is a recent phenomena.

Only a small fraction of the "urban residents," even in the main cities of La Paz, Cochabamba, and Santa Cruz, have what can be considered basic urban services, such as potable water, sewage, paved streets, and electric lights. As the current City mayor of La Paz asserts in a televisions add, "La Paz is a big city with the problems of a small hamlet". the TV add captures the characteristic of the growth of urban Bolivia, which is a small urban core with all urban services surrounded by many "hamlets" with few or none of the basic urban services.

The FFW urban improvement projects aim to bring services to these "hamlets", or "marginal urban areas". Many, if not most of these "marginal urban areas", are populated by recent rural migrants which adds to the rural characteristic of the urban areas and weakens the distinction of urban and rural.

The FFW urban program has been successful in alleviating hunger and generating employment, improving the quality of life, and enhancing the incomes of poor urban dwellers. Most urban projects last from one to 2 months with an occasional project lasting up to 9 months. The largest number of the urban projects work with groups of 30 to 50 recipients, again with an occasional large work project that can employ up to 900 recipients. Estimates of the number of beneficiaries is sometimes difficult. For example the construction of a market, the fixing of a street, the building of a hospital, the estimated number of beneficiaries may be underestimated. Recipients and beneficiaries are frequently the same group of people, but not always. The fact may also contribute to some underestimating of beneficiaries.

1. FFW urban program recipients: some characteristics

A distinction between FFW recipient and beneficiary is being made in this evaluation. Recipients are individuals who have labored on FFW projects and have received FFW commodities. Beneficiaries are individuals who receive benefits from completed assets. This distinction is helpful in keeping track of the recipients, however, with frequency the same individual is both a recipient and beneficiary. In fact, the urban FFW program aims to provide both benefits to the same individual. This objective, however, is not always feasible, nor should it be a selection criteria for recipients.

a. Motivation to participate

There are two distinct types of recipients in FFW projects:

- The first category is made of women and men who turn to FFW projects out of need. They are unemployed or underemployed people who work for the food. A recent study based on a small sample of FFW projects in La Paz, El Alto and Oruro estimates that some 36% of the recipients belong to this category. The work in FFW projects outside of their immediate neighborhoods and have participated in up to three projects (projects last between 1 to months).[1]

- The second category, while also made up of people in need of the food supplements, participate in the program out of the need and desire to improve their living standards. The need for some kind of basic urban services, i.e., streets, potable water, sewage, schools, is a strong motivator of neighborhood participation in urban improvement projects. This category according to the same study accounts for up to 64% of the recipients.

Because of the location of urban projects in poor neighborhoods, both categories are often found in any given project. Even poor neighborhoods are somewhat heterogeneous, and not all people in a neighborhood have a need for the FFW rations. Some urban improvement projects, such as the provision of sewage or potable water service, require the participation of all beneficiaries regardless of their socioeconomic status. The cited study reports that over 50% of the recipients gave the following reasons for participation: "can't find any other work" and "need to earn food". Some 68% indicated that they participated because it was "good for the neighborhood".

b. Sex and Age

The urban FFW program has attracted predominantly women participants. The study cited above found in the sample of projects evaluated 96% and 90% of the recipients in the cities of La Paz and Oruro respectively were women. Eighty five percent of the

recipients in La Paz and 97% of the recipients in Oruro were under the age of 42.[2]

This pattern of participation is reported in the other cities, though the percentage of men tends to increase in smaller cities.

Among the reasons given for such massive participation are that women participate in the FFW program to supplement the meager income of the husbands, and that in marginal neighborhoods, it is culturally expected that the woman should provide and prepare the food of the household, while the man is expected to generate cash income for other needs. A considerable number of women (up to 20%) are heads of the households (this includes women whose husbands are working in rural areas and single mothers, divorced or widows).[3]

c. Women's role

Formidible level of female participation in the FFW program is having an important impact in changing the stereotyped roles of women in the labor force. Construction related jobs have hitherto been the exclusive domain of men. The FFW urban program experience in all areas of construction is opening new work opportunities for women. Several cases were reported to the team of private construction firms in La Paz, Cochabamba, and Potosi, of hiring women out the FFW groups. These are generally women who have acquired some construction skills and have demonstrated their ability to work effectively on FFW projects where the private firms had some role. The visible participation of hundreds of women in urban projects is contributing to a society-wide redefinition of the stereotypes of women's and men's roles. This is an important FFW program impact.

2. Urban FFW program impacts

FFW projects have an immediate and apparent impact. There is a great variety of projects and little information to differentiate impacts among different categories of projects and recipients. The following qualitative observations are the most apparent and support the claim of success in the FFW program.

a. Alleviation of unemployment and absolute poverty

There is no question that the urban FFW program has helped cushion the impact of the severe economic crisis in Bolivia. In every one of the urban projects visited, the beneficiaries of the FFW program expressed their appreciation of the FFW program in glowing terms. Expressions such as "God sent help", or "it saved my children from starvation" are common, as are the celebration of anyone visiting the work sites who is perceived a responsible for the program. For most recipients the participation in the program was born out of need for work and need for food. Often for people who lost their jobs, the FFW rations were the only income for the household during a period of time in which they sought other sources of income. Most commonly,

however, the FFW rations are a very important contribution to the household's meager income. The FFW program continues to be an important supplement to poor urban households and a cushion to the slow economic recovery of the country.

b. Improvement in the quality of life

Urban FFW projects are contributing to significant improvements in the quality of urban life. The laying of cobble stones on the streets, the provision of potable water and/or sewage to marginal neighborhoods, the construction of urban parks, the canalization of small streams and rivers, the construction of bridges, among other projects, are all having a notable impact in the cities.

The coincidental timing of urban FFW projects with the resurgence of Alcaldias (mayors offices), and the organization of neighbors into Juntas Vecinales action groups have all contributed to creating a favorable climate for the improvement of urban areas. FFW programs pioneered the massive use of unemployed labor. This approach is now being followed by other programs such as the Fondo Social de Emergencia (Emergency Social Fund) or FSE. In effect, the small and limited technical capacity developed by the Voluntary Agencies is now being tapped by the FSE in cities such as Potosi, where the Caritas urban technical team is now working with funds provided by the FSE.

c. Enhancement of income

Urban improvement projects have an immediate effect on the value of real estate in a neighborhood. They also facilitate the emergence of small businesses such as grocery stores, restaurants, barber shops and so on. Improvement of streets facilitates mass transportation by opening up new transit routes, which translates into less time going in and out of the neighborhood.

3. Urban FFW strengthens institutions

Within the urban institutional framework, the institution responsible for the maintenance of the work is the Alcaldia or municipal government or one of the municipal agencies such the Potable Water and Sewage Agency (SEMAPA). Eventually, it is these institutions that have to become responsible for the maintenance of the works for FFW projects.

For over two decades, jobs in the city halls were mere political appointments for central government nominees. During this time the city halls lost whatever institutional capacity they had in acting as local governments. The present shape of the cities is the best evidence of their lack of capacity to provide basic urban services. Municipal governments were weakened through the endemic tendency of institution duplication. Development corporations and autonomous municipal agencies were given functions originally reserved for the city halls or municipal governments. The resource generation capacity

of the municipal governments was managed with short-term political goals in view rather than fiscal prudence to assure maintenance or construction of urban services.

The free election of local governments (city councils and mayors) ushered in with the tax reform act of 1986 initiated a process of restoring the city halls to their intended roles and functions as local governments that provide services to their residents. The municipal governments have, however, a long way to go before they can became effective service agencies. The fact that over 50% of the population now lives in urban centers has not been lost on the politicians, who know that services can be translated into votes. Except for the municipality of La Paz and El Alto, which have the support of the World Bank, all municipal governments are only beginning to emerge from over two decades of mismanagement. FFW is playing a key role just now in restoring life to municipal governments.

Their resurgence is closely related to their ability to generate resources through taxes and to provide services. At present, municipal governments find themselves caught in a vicious circle: lack of resources make it difficult to provide services, and the lack of services make it difficult to collect taxes or user fees. Municipal governments in smaller towns are in far worse shape than the ones in departamental capitals. They lack any technical capacity either to execute works or to generate resources.

What the FFW program is doing in this respect, while limited, is important. It provides the municipalities with investment in public works (streets, potable water, sewage systems, parks) at no or little cost. In essence, the FFW program provides the municipalities and their agencies with start-up or risk capital.

While it is not an expressed purpose of the program, urban FFW projects have been able to exert leverage that forces the municipalities to assume their responsibilities through the agreements that are signed to carry out the projects. Without strong local governments, the urban projects are unlikely to be properly maintained and therefore are unlikely to became durable public works.

4. Success of the urban FFW program

Based on visits to urban FFW projects, as well as a review of the documentation, a number of issues emerge that are common to all urban projects. As has been indicated urban FFW projects are universally considered as successful. Some of the reasons for this success include the following:

- Motivation to participate in urban FFW projects is based on need for the food rations and the desire to improve the quality of life. Improvements in the quality of urban life have a direct relation to the value or real estate, which provides an additional and important individual motivation.

- The structure and function of the FFW projects is based on action groups with limited objectives, clear goals and do not require a permanent organization or the creation of permanent institutions. While some criticize this characteristic of the FFW projects pointing out the lack of permanence of the groups or their limited goals, it should be made clear that the FFW projects are successful precisely because of their limited objectives and goals, and the limited duration and role of the groups. Urban centers, in contrast to rural areas, have specialized institutions charged with providing services and maintaining infrastructure that should be strengthened. The temptation to duplicate the functions of older and existing institutions should be avoided. Rather, all available resources should be directed to strengthening existing institutions so that they can perform their functions in a sustainable manner. Institution duplication lies at the root of the weakness of most institutions in Bolivia.

  The FFW program should be seen as providing additional resources to the city halls and municipal agencies in the form of investments in labor for the improvement of the urban environment. It is also a form of taxing citizens that may not otherwise contribute because of lack of monetary resources.

- The focus of the FFW projects are public goods. This focus makes it easier to mobilize people since the cost/benefit can be more easily distributed and understood by the participants. Some of this public goods projects result in private gains, such as potable water and sewage systems, yet they benefit entire neighborhoods. Thus, the distribution of benefits tends to be equitable, at least in the neighborhood where they take place. Public goods, by their nature, present less problems of cost/benefit distribution and can easily justify collective participation.

- FFW Projects are self-selecting. It would be impossible to interest higher income groups in FFW projects. These groups may prefer to make monetary contributions to urban projects (taxes and fees). Lower income groups have an abundance of labor and very scarce monetary resources. Thus, their physical participation is in fact their contribution in the only resource the posses. Poor urban residents are paying taxes and fees in the form of labor. The benefits of this contribution benefits the common good and the individuals and the individuals themselves. The food is a catalyzer of collective action and an incentive.

In summary, urban FFW projects provide an appropriate mechanism to build basic infrastructure needed in most urban areas of Bolivia. The

need for infrastructure is so great that the urban program need not change from its present objectives and goals. As long as the dual need of a food supplement and basic services persists, urban FFW projects will be assured enthusiastic participation of recipients willing to invest their labor in public works. The amount of urban improvement needed is so great that sufficient work remains for many times the present size of the program.

It is opinion of the team that the FFW program should maintain its focus on public goods and its highly appropriate mechanism of social mobilization, the action group. In heterogeneous neighborhoods some residents may be willing to contribute to the cost of the works in ways other than manual labor. Since food is not full payment for a usual day's work, but an incentive for the urban recipient to contribute with his/her labor, the market cost of the days labor should be established. It might be appropriate to consider requesting neighborhood residents who are direct beneficiaries of the urban project and who do not work on the project to contribute an amount equivalent (in cash or kind) to the labor of the FFW recipients.

5. The FFW rations

There is an expressed preference for working for tasks rather than days. Tasks allow the beneficiaries to work with members of the household accomplishing the task in less time. Some prefer this modality because it allows them to earn up to two rations of food, while others have more time for the household chores or other activities.

The VolAgs have all experimented with task payment of rations, and as was observed in CARITAS/Potosi's operation, they have learned to adjust the work to the food rations in such a way that the task reflects an amount of work equivalent to the 20 days required. While it is a preferred method of payment, rations for tasks also depend on the availability of commodities. Consequently, it is difficult to make a uniform policy decision. If the VolAgs want to pursue this payment modality the discretion should be left to them within basic minimum and maximum parameters to allow for regional differences in productivity and size of the task.

Given the scarcity of housing, the lack of employment and the tradition of extended families, most of the FFW recipients live in large households. The nuclear family is but a small part of most urban poor urban households. Households are made up of a nuclear family plus uncles aunts, nieces, grandparents, god-children (ahijados, compadres), in-laws and so on. It is common to find up to 10 people who are related in some way sharing a room and a cooking pot.

This is one of the reasons for the voiced preference of work for tasks rather than days. Task work makes up for the nuclear-family size ration by allowing various members of the household to work on project finishing the task quickly, and creating an opportunity to work for a

second ration in the same month. Presently, rations are given on the basis of nuclear families. This situation gives rise to two problems: a) FFW indirect food recipients are grossly underestimated, and b) the rations are diluted among a larger number than intended. It is the dilution of rations in large households that leads to the complaint that the rations are insufficient.

> **Recommendation #15:** That the USAID, with the PVOs, consider establishing a task-payment schedule that allows for regional productivity differences and ration sizes based on a set of minimum and maximum parameters. In addition, the USAID, in collaboration with the PVOs, should study the phenomenon of rations destined to the nuclear family being consumed by considerably larger urban households, and determine if it is feasible to increase the ration size.

6. Documenting the impact of urban FFW program

The lack of project documentation and evaluation does not allow quantitative statements about the impact of the urban FFW program. At times the benefits seem so obvious, that everyone takes them for granted. It should be relative easy to document some of these impacts. The establishment of a monitoring and evaluation system would go a long way to capture the story of FFW in the urban areas.

B. Rural Program Impact

1. Background

Rural FFW projects follow a long tradition of collective action in rural Bolivia. This tradition of collective or communal participation was capitalized on by the SNDC for many years, until the crisis of the 80's politicized and weakened the institution. The community development effort worked on a formula that required the communities to put up 50% of the cost of the project in labor and local materials matched by 50% of the cost in outside materials by SNDC, which were donated.

The FFW program works in this rural tradition of communal or collective effort. The main difference has been the lack of resources by the agencies to donate materials not available locally. This has put a bigger share of the burden on the communities. They have to find ways to purchase the materials or find substitutes, since the only aid they receive is food.

The positive and unintended consequences of this lack of resources deserve recognition. FFW projects may in fact be more sustainable, since communities are forced to work with what they have or can obtain without any donation. For example, a school's roof is now made of straw and mud (local materials readily available) rather than corrugated tin, which must be purchased or obtained as a gift.

Being forced to take charge of the project's costs forces communities to use more local initiative which foments a higher sense of ownership. In some cases, this initiative is translated into obtaining additional help from other public or private agencies. In any event, once the community assumes the responsibility this translates into more durable and maintainable projects.

This contrasts favorably with previous rural development efforts, where the projects deteriorated soon after completion because of the inability of the community to replace the donated materials.

Although, rural communities have severe limitations in their ability to generate resources, the Vol Ags should not loose sight of the benefits of working within the resources of the community. Monetization should be judiciously used. The temptation to pump in external resources should be resisted even if in the short run it may mean delays and inefficiency. In the long run, only rural communities able to generate resources will able to make the projects durable and productive.

2. FFW rural program recipients; some characteristics

The FFW program works with the segment of rural dwellers that are at the bottom of the socio-economic hierarchy of Bolivia. These rural dwellers live from agricultural production, which is used in a mixed way for the subsistence of the rural family and as means to generate some cash to cover increasing needs arising from their integration into the national economy.

The rural dweller is organized into rural communities. Rural communities are an agglomeration of 40 to 60 families around a school, the limits of a local sindicato, or a section of an Ayllu. These small rural communities contain groups of related families. Every rural community has a communal organization, which resembles an action group. The communal organization is activated to solve common problems, i.e. construct a school, a health post, an irrigation canal, and usually disbands thereafter.

The rural community is the basic unit of rural social organization. Its small size makes it the preferred mode of organization, since it works on the basis of consensus, and consensus is easier to reach in small groups.

The small size of the rural community poses limitations on the type of project that can be undertaken and the resources that it can generate. There is an obvious need to break down the limits of the community in order to undertake more significant projects that can be sustained.

Rural social institutions that encompass more than one community do exist, and can be easily strengthened, or created. While most rural projects are community based, it is possible and may be

advisable, to begin to focus some projects on larger institutions. The borders of these larger institutions can be demarcated by economic, social and cultural ties among communities. The most obvious are river basins, roads, and ancestral territories (Ayllus). The types of projects that can be taken up in a given area can be used to define the radius of action, and the limit of a local institution. Thus, an irrigation project is seen as part of a river basin system. A reforestation project in the river basin may be essential to maintaining the irrigation canals and the level of water distributed along the many communities down river. While one canal serves one community, the protection of the river basin (reforestation or management of the water) is a project that will necessarily involve more than one community and needs a multi-communal institution or organization. Common need can be the basis of organization, whether at the communal or multi-communal level.

3. Motivation to participate

Although rural communities are almost uniformly poor and welcome any assistance, their participation in FFW projects seems strongly motivated by their desire to improve the quality of their lives and the need to increase their incomes, in addition to the hardships brought on by the crises of the '80s.

FFW projects in rural communities that are not facing some kind of emergency, appear to act as the stimulator and organizer of collective action. Some rural projects are so disproportionately large in relation to the FFW input, that it is impossible not to think of the FFW input as only an incentive. This is not to say the FFW rations are not appreciated or needed, but that the value, symbolism, and impact of this type of aid goes beyond the real and actual value of the food distributed in the majority of the rural projects.

Rural communities have been observed to respond quickly with overwhelming enthusiasm and dedication to the interest that the agencies show their communities. This type of response places a great deal of responsibility on the agencies to provide adequate technical assistance. Inadequate and/or untimely technical assistance can just as quickly cause disillusionment, frustration, and conflict in the community. In this regard it perhaps is important to mention that the agencies should take advantage of existing technical resources. Technicians may already exist in the departmental development corporations or with other agencies, who for the cost of per diem or other incentives beyond the basic salary they receive from their employer, would be willing and able to provide technical assistance to FFW projects.

For the rural dweller, food is a concrete, useful and readily understood form of aid. In a social, political, and cultural context full of unkept promises by urban technicians and politicians, the rural dweller appreciates the support of the agency with FFW. The transaction seems to be interpreted as a concrete indication of the

seriousness of the promise to help with the project. The transaction of Food For Work is also a reversal of the usual way in which rural areas are treated by urban areas. Food usually goes to the urban area, not the other way around. The food that is provided carries a different, perhaps higher, status than that locally produced. It comes from an urban area. It is already processed and ready for use. It breaks the monotony of the local diet, and is a valuable nutritive supplement.

The exchange of food in rural areas holds not only a great deal of symbolism, but is a well understood medium for many forms of mutual aid in labor exchange practices. In communities with scarce cash resources, food is often retribution for help. Many Andean traditions of mutual aid and communal work are mediated by food. For example Ayni, which is a labor practice of mutual help, is often compensated with food rather than labor in exchange for labor, i.e. all neighbors who help build a house, or sow a field are rewarded by ample supplies of food and drink for their labor. The evaluation team was often perceived as functionaries of the FFW program and were received in almost all communities with gifts o. locally produced food. It seemed that the communities wanted to reciprocate the aid of food with food, at least symbolically.

The second big motivator of community participation is the promise (given the minimum capacity of the agencies) for technical assistance. Although in many cases, the community members know far more about the technical requirements of the project (e.g., the construction and operation of irrigation systems) than the lone, an over-extended agency promoter, they still expect his/her approval and support, and encouragement. A farmer in Potosi, when asked, why they needed the agency technician, responded;

> "We are all equals in this community, so we need someone who knows more and is an authority, to get us to agree to do something, and to do it."

4. Program impacts

As with the urban projects, the first impression is that rural projects will have a considerable impact on alleviating poverty, improving the quality of life and enhancing the incomes of rural dwellers.

A great number of the rural projects have either just been completed or are under construction, which makes it difficult to see concrete examples of impacts. Without baseline data, impacts are hard to measure on rural projects, especially those projects that effect agricultural production.

There is an obvious need to classify rural projects by types, and to design a monitoring and evaluation system that provides for the quantification of impact, where possible. There is also a need to

conduct impact studies of representative projects, independent of the results obtained through a monitoring and evaluation system.

The types of rural projects being undertaken by the PVOs are, because of their nature, long-term projects. An irrigation system, for example, may have an immediate impact in making water available for the irrigation of more hectares, however, without continuing technical assistance in agricultural extension (seeds, use of inputs, etc), its impact will be reduced. the rural projects supported by the Vol Ags need a long term commitment to be effective an produce the anticipated impacts.

Recommendation #16: That USAID carefully review its current and future portfolio of projects, agricultural and otherwise, for ways that FFW beneficiaries and FFW implementation staff might profit from inter-project coordination. Projects promoting the marketing of products (e.g., vegetables, textiles) could be helpful, as could those dealing with production and credit.

Recommendation #17: That SNDC and the private voluntary agencies continue to search for ways to make their community and farm interventions increasingly appropriate and helpful from the point of view of the beneficiaries. Although some of these institutions have moved far in this direction, others have not. There is an approach to developing and extending appropriate agricultural technologies for small, resource-poor farmers that has enjoyed considerable success in different parts of the world in recent years. It is called Farming Systems Research and Extension (Investigacion en sistemas agropecuarios). There is an abundant literature on the approach, in both Spanish and English. It is recommended that the institutions participating in the Title II FFW program, with the help of USAID, obtain the literature and read about this approach. Its principles will be useful.

Recommendation # 18: That the USAID, in collaboration with Planning Assistance, design and implement a baseline survey with two follow-up rounds one year apart to capture the the quantitative impacts of the principal agricultural projects being implemented by the PVOs. An agricultural economist, or rural development specialist sensitive to food aid issues with experience in quantitative research in the third world setting should be contracted by the USAID as soon as possible to establish the research protocol and to implement the baseline round of data collection. Planning Assistance should provide the necessary team support to the economist. Ideally, the same researcher would return for each of the follow-up rounds.

Recommendation # 19: USAID and the PVOs should be prepared to make long-term commitments to the communities in which they initiate FFW activities, especially the agricultural projects. A 5 to 10 year commitment to reinforce introductory efforts with follow-on agricultural and rural development projects would offer the best opportunity for sustained development in target communities.

[1] Arrellano L.,Sonia and Quiton Fredy. Evaluacion Participativa Del Programa Alimentos por Trabajo - Area Urbana- Apoyo del Titulo II Planning Assistance, Inc. September 1987. La, Paz, Bolivia.

[2] Ibid. p.16

[3] Ibid. p.19

V. CASE HISTORIES OF SELECTED FFW PROJECTS

A. ADRA CASE No. 1: Construction of the Pecataya-Yura Access Road

The town of Yura is located about 5 kilometers from the Potosi-Uyuni highway about 100 kilometers southwest of Potosi. Access to the town from the main highway was precarious by using the dry river bed connecting the town as a road. Obviously, during rainy periods the town was cut off from road communication.

A construction of a rural access road was solicited by the town of Yura under the auspices of the FFW program. The request was approved and construction started in April 1987. Unfortunately, considerable rock excavation was encountered for which reason the assistance of the local district office of the National Highway Service (SNC) was requested. Two tractors were provided which enabled the road to be essentially completed five months later in August 1987.

When the project was visited by the evaluation team on July 22, inspections indicated that although the road was transitable, certain features including the construction of ditches and placement of headwalls on the culverts had not been done. The absence of these drainage structures could possibly result in damage to the road during heavy rains.

The town chairman at the town of Yura was questioned and indicated that the request for completion of the work had been made to ADRA and also to the local district office of the SNC.

The Consultants then visited the 7th District office of the SNC located near the town. The engineer in charge of the office indicated that he had no knowledge of such a request but would provide any assistance required which was within his capabilities when and if requested. He also confirmed that unless this additional drainage work was completed the possibility of a washout of the road was probable.

The apparent lack of communication between the Yura town fathers and entities involved in the construction of the road is evident. It would appear that the town fathers were no longer interested in improving the road because it was still transitable to traffic. The fact that the road could be washed out by a heavy rain due to lack of adequate drainage had not been considered.

Issue/Lesson: Stricter control is required in some instances to insure that feeder roads are completed to adequate standards - particularly drainage - and work not left pending to be completed at a later date.

B. ADRA Case No. 2: La Paz Ring Road

Probably the most visible and ambitious road project undertaken with the participation of FFW is the construction of 5.35 kilometer Ring Road around La Paz connecting the Alto Miraflores area with Barrio Soligno. With the completion of the Ring Road trucks with produce from the Yungas can deliver to markets in El Alto, or onto Oruro without the need of passing through the congested streets of the capital. The Ring Road will also serve as a distributor providing access to selected points of the capital by means of connecting streets. Although still not completed, a major portion of the Road was inaugurated by the Mayor of La Paz on July 15, 1988.

In addition to road construction the project contemplates general infrastructure improvements which will benefit more than 150,000 families living in the area of influence. These include child day centers, communal education centers, schools, sidewalks, light posts, drainage systems and retaining walls. Approximately 2000 workers were involved in the construction. The financial investment in the Road approximates US$1,000,000. Unskilled labor for the project was provided under AID, Title II food for work programs. ADRA provided general project supervision.

Construction of the project was initiated in 1986 with 680 FFW volunteers doing such work as road widening, provisional surfacing of access roads with hand laid stone pitching and emergency ditching. In 1987, work continued on the Ring Road including major drainage works and erosion control devices. Work on social infrastructure such as the children's breakfast food installations at Rosario and the Day Care Center at Cupilucapa was completed. In 1988 work on both the road itself and infrastructure investments continued.

ADRA is currently in process of making a social-economic evaluation of the impact of the project on the general development of the area.

Issue/Lesson: This successful urban project demonstrates how an integrated approach to urban development results in greater impact than just the isolated construction of a road facility.

C. ADRA Case No. 3: Construction of the Lambate-La Plazuela Road

The construction of the Lambate-la Plazuela Road started in April, 1986 under the FFW program with ADRA supervising the construction. Initially the construction equipment was provided by the Army Engineers. However, due to the impossibility of maintaining this equipment, the Army withdrew in December 1986. All work between December 1986, and July 1987, was done by ADRA with PL480 funding without the benefit of equipment. Obviously, very little progress was made during this 7-month period due to the mountainous terrain with a high percentage or rock cuts. In December, 1987 a contract was signed with the local construction firm Sermaq to provide two tractors with operators to replace equipment withdrawn by the Army. ADRA also purchased directly out of PL480 funding a compressor with two jackhammers for rock drilling purposes.

The terrain in the project area is extremely difficult with almost all the road in sidehill cut along the mountain slopes. Furthermore, construction must be shut down for a three-month period due to heavy rains general between December and March. at the time of the visit to the project in July 15, 1988 approximately 22 kilometers of road had been opened in the 20 months since construction was initiated. A considerable construction effort has been made in simply keeping constructed section open to traffic due to slides and washouts. The opened section still requires drainage structures, including bridges, ditching and general shaping of the road surface. Progress can therefore be considered as less than desired.

The major obstacle appears to be rock excavation. ADRA is attempting to do this with the limited equipment purchased and unskilled FFW campesino labor who are trained for this purpose. This arrangement has not worked satisfactorily. Tractors which are rented on a time, rather than a production basis, are not always effectively utilized particularly as the units have no ripper. One tractor is employed in opening the road platform.

The second tractor follows behind doing finishing operations.

ADRA is attempting to fast-track the operation with designs completed just in advance of construction operations. As payment is made on a time basis, no cross sections or formal plans are produced. The tractor operators are simply instructed by ADRA personnel where to proceed. Road alignments are determined by trying to connect all major population centers with the road. A preliminary recognizance is made on foot followed by more detailed studies utilizing a compass. No formal topographic layouts are attempted. No geophysical investigations are made to try to stabilize or avoid potentially dangerous slide zone although local inhabitants are consulted whenever possible and alignments adjusted accordingly.

About 80 percent of the cost of the project is used for payment of equipment with only 20 percent for labor inputs. At the time of the visit no more than a dozen hand laborers were observed working on the project although considerably higher inputs have been reported during initial stages. Labor in the area is generally scarce and in some cases camps have to be setup as travel distances are excessive. The project is obviously not suitable for massive employment of rural poor.

The lack of formal designs precludes effective construction planning and programming. ADRA promoters working on the project spend more time on general construction supervision and control rather than promoting FFW labor inputs with the communities. The technical aspects of the project which have been criticized are poor road alignments, utilization of small 40cm. non-reinforced culvert pipe, and lack of slide prevention measures. No select material surfacing is currently placed. Traffic will run over the natural subgrade material. Almost the entire road is in cut. No equipment is available for loading, hauling, transport or compaction.

DATA SHEET
Lambate-La Plazuela Road

Total Length: 65 kms.

Design Velocity: 30 K.P.H.
Minimum Horizontal Curve Radius: 30 meters
Maximum Vertical Grade: 10%
Normal Cross Slope: 2%
Road Width: 5 meters minimum including ditches
Right-of-Way: 15 meters
Design Load for Structures: HS-20 (AASHO)
Embankment and Cut Slopes: Determined by Material
Surfacing: None, no select material is placed over existing subgrade material.
Widening: Widening of narrow sections of road is done at approximately 500 meters to permit passage of two vehicles.

Issue/Lesson: Lack of adequate advance planning and evaluation combined with inadequate design and construction packages appears to be a major limiting factor in meeting program goals on rural highway projects.

D. ADRA Case No. 4: Construction of the Sita-Arcopongo Road

This road, having a total length of about 110 kms., is quite similar to ADRA Case No. 3, the Lambate-La Plazuela road. Construction of the road was originally initiated by CORDEPAZ (Department of La Paz Development Corporation), but was abandoned after only four kilometers were constructed in a period of three years.

The project was reactivated by Save the Children who requested ADRA to complete the road with PL480 funding. ADRA was made responsible for the design, construction and supervision of the facilities not directly related with project construction.

The project has been divided into construction sections. The first section between Sita and Lacalaca (29 kms) was formally inaugurated in December, 1987 and is currently opened to traffic. Construction of this section was initiated in October 1986 and completed in November 1987 with a 1.5 month shutdown during the rainy period. A production rate of about two kilometers per month was attained.

The second section of road between Lacalaca and Fruti (22.6 kms) is currently under construction. At the time of the visit to the site July 18, 1988 about 9 kilometers of this road had been essentially opened but not yet completed in all aspects.

The design, contract, and construction procedures for this road are closely resemble those indicated in ADRA Case No. 3 for the Lambate-La Plazuela Road. However, a greater utilization of FFW labor was observed but still not in quantities which could be considered of great significance. Each community along the road appointed a roads representative who represented the interest of the community. In addition, several communities join together to form a Roads Committee with a General Secretary and Treasurer elected from the committee. Monthly meetings are held attended by the community road representative and other interested parties which currently include engineers and promoters of ADRA and Save the Children. Tasks are set for each member of the community and fines levied in the event of non-compliance. The communal organization necessary for an on-going roads construction and maintenance program appears to exist in this area.

Issue/Lesson: Massive community participation in Construction of the Sita-Arcopongo Road FFW rural road project does not appear to be developing despite a relatively well organized communal structure. FFW road programs probably should be focused on construction of short 1 to 10 km. connecting farm to market roads rather than major arterial feeder roads due to scarcity of labor in sparsely populated rural areas.

E. CRS/Caritas CASE No. 1: Surfacing of H. Vasquez Street in Potosi with Hand Laid Stone Pitching

The surfacing of city streets with stone pitching is a major component of currently financed FFW programs. These projects are highly suitable for labor intensive construction and provide general community benefits in the form of increased accessibility, reduced dust, lower maintenance costs and property valorization.

Probably typical of these projects is the surfacing of the H. Vasquez Street in Potosi for which general information is given in the data sheet. The project was completed under the FFW program with the support of the city government in the form of hand tools, wheelbarrows and transport for the stones.

The project was specifically selected to benefit one of the poorer neighborhoods of the city. Completion was done in about one month utilizing three shifts of five hours each per day.

Evaluation of the production rates achieved on the project indicate relatively low values averaging about one third of the rates achieved by private contractors. For example, a generally accepted rate of 0.60m2 per hour is utilized for hand placement of stone pitching while actual rates on the project was on the order of 0.24m2 per hour.

The low production rates result in comparatively high costs. Estimates indicated in the data sheet a square meter cost on the order of US$10.60. This cost appears to be on the same order of magnitude that could be done by private labor contractors working in the area.

Reasons for the relatively low productivity can be attributed to lack of adequate handtools, inexperience of the workers, deficiencies in organization and logistic support, possibly the lower production rates resulting from the employment of majority of women workers.

Another major consideration is probably the payment of work in food allowances which may be insufficient incentive to stimulate high production rates. For example, under the Fondo de Emergencia (FSE) Structural Adjustment program where displaced miners are paid partly in food and partly in cash, production rates are expected to equal or exceed those obtained by private labor contractors.

DATA SHEET: H. Vasquez Street, Potosi
Hand Laid Stone Pitching (Bs$2.40 = US$1.00)

General Information

Length:	252 M.	Date Started:	23 June 1988
Width:	8 M.	Date completed:	21 July 1988
Area:	2016 m2	Work Shifts:	3 at 5 hours or 15 hours/day

No Workers Employed..... 271
Percent of Women 60

Rations

20.5 Kgs Flour
12.5 Kgs Bulgar
2.5 Kgs Oil
4.5 Kgs Powdered Milk

40.0 Kgs Total

Value of Ration: Bs$38.00 (US$15.80)
One Ration given for 100 hours work
Ration Cost per Hour: Bs$3.80 (US$1.58)
No. of Rations Expended: 1150

Production Rates

1	Preliminary Earthwork	0.13 M3/hour
2	Transport and Stockpile of Stones	0.13 M3/hour
3	Compaction of Subgrade	0.17 M2/hour
4	Placement of Stones	0.24 M3/hour
5	Cleanup	0.18 M3/hour

Costs

A. Value of Rations: 1150 x Bs$38.00.....Bs$43,700
B. Depreciation of Handtools (5.0% x A).....Bs$ 2,200
C. Transport of Stone Bs$2.00 x 322 M3.....Bs$ 600.00
D. Value of Stone Bs$8 00 x 322 M3 .....Bs$ 2,600
E. General Cleanup Bs$8.00 x 301 M3.....Bs$ 2,400
F. Total Cost .....Bs$51,500.00 (US$21,500)
G. Cost per M2 (F/2016) .....Bs$ 25.50 (US$10.60)

Issue/Lesson: Although urban street projects are considered quite successful in generating employment, increased production of workers is required in order that these FFW programs can be considered a viable construction alternative that can compete economically with private sector, profit oriented labor contractors.

F. CRS/Caritas CASE No. 2: Impact and the role of women: The case of the Palliris of Potosi

This case is presented as representative of the majority of the urban improvement projects. The impact and issues derived from it are common to all urban FFW projects.

LAS PALLIRIS

Palliri, a Quichua term meaning to gather, is used for the women who work sifting through a mine's waste in search of mineral-containing-waste. Palliris have been an important element of every mine since colonial times. Most of the Palliris have inherited the occupation from their parents or grandparents. Other Palliris are miners' widows, who have taken up this type of work to support their families. A great number of the Palliris are heads of households.

The Palliris work with hand tools in areas that they rent from the mining companies. The waste containing mineral they laboriously gather is sold to Rescatiris, another Quechua term meaning buyer of minerals, and/or to private companies. They are paid according to the market price of the mineral and the mineral content of a sample of each ton of waste material they deliver. The buyers process the waste and extract the minerals. A Palliri's income is highly variable. It depends on the mineral content of the waste which is determined by the buyer at the moment of purchase through a test. The Palliris are members of the mining cooperatives, which provide trucks, tools and services.

The Palliris differ from most other women in FFW projects in that they are skilled workers and have a long history of manual work. Most other women in FFW projects had their first experience with manual labor, at least this type, in the FFW projects. Some had been self-employed in one of the many traditional urban services, such as laundress, seamstress, cooks, domestic servants. Some had previously been home makers. An increasing number are the wives of unemployed miners who have resettled in the urban centers. Some participants in the FFW projects are young women and men entering the labor force or recent migrants from rural areas.

What this heterogeneous group of women have in common is the need to work to alleviate extreme poverty and the unemployment of themselves and/or their husbands.

In mid 1986, along with over 20,000 other people throughout the country who derived their income from working in the mines, the 307 Palliris of the city of Potosi lost their livelihoods as the price of tin fell through the bottom in the world market. Most mines in Bolivia were closed as a result. The "crisis" as everyone calls it produced thousands of unemployed people and in the city of Potosi, generalized panic ensued. Those who could, moved elsewhere, selling or trying to sell their properties for a fraction of their value. The Palliris and

their families along with several other thousand families in Potosi were facing a very difficult situation.

It was at this point, around mid 1986, that they approached Father Gustavo Evens of Caritas/Potosi for help.

As Dona Ema Quintanilla, the ex-president of the Palliris group put is:

> "In the worst time of our lives, the food arrived. If it had not been for the food, our children would have died. Potosi was a disaster."

The first FFW project for the Palliris was in October 1986. It consisted of the cleaning of a section of the Potosi to Tarija highway The work which was supposed to last some 20 days was accomplished in 4 days reflecting two things: The skill of the women in using hand tools and the fact that they were able to use their cooperative's truck; the lack of experience by the newly created Urban Works section of CARITAS in assigning FFW tasks.

Since then, the Palliris, which because of their unique skills and background, asked and were allowed to work as a group, and have worked as a group in several other FFW projects; laying down cobble stone on streets and avenues, and later planting trees in several reforestation projects. In each one of these projects, the Palliris, as well as the Caritas technicians, learned while doing. Tasks were increasingly adjusted to reflect the skills and working ability of the recipients. the projects were better designed and implemented. For example, the first reforestation effort called "Potosi-Tarapaya" only 25% of the 12,000 trees survived, while in later projects, the survival rate has reached 70%. The Palliris have acquired new skills and have demonstrated that many tasks heretofore reserved for men can be done by women. As one of the Palliris said: "women work better than men, that is why we wanted to work as a group". "We work harder, coordinate the work better, and don't have too many manas" (tricks). The women claim they are more honest and "strict".

As the price of tin began to recover in price, and the discovery that other minerals like silver and zinc found in the waste could also be economically exploited, some of the Palliris began to return to their traditional work. The future for the Palliris is, however, uncertain as the new mining policy encourages the use of capital intensive technology. The Palliris suspect their future as Palliris may be approaching the end. Some are looking for or have found alternative work. The majority, however, hope things return to normal as the price of minerals goes up. However, it seems clear that the introduction of capital intensive technologies to process mine waste will in the near future eliminate the occupation of Palliris. Most if not all of the Palliris will eventually have to find alternative work.

Since 1986, the Palliris have been on and off FFW projects. In their words, the FFW program has helped them survive the crisis and may lead them to alternative sources of work if they can continue to work in FFW projects, while they look to begin to look for new occupations.

At the end of the session, the Palliris were asked about the food rations and their preference for other types of food. Dona Ema again explained that the food was very adequate as a food, but insufficient in quantity. She said that once before in her life she had been a recipient of Caritas food. It was when she was 14 years old, her father had died and her mother was sick in the hospital, and she and her siblings were fed for a while by one of the CARITAS/Potosi programs. She said, she never imagined she would have to be a recipient again. She was grateful that the poor could have this help. Now, as when she was 14, she knows, and indeed expects her dependency of FFW to be temporary. She is optimistic she will be able to work again and feed herself and her family. Dona Ema is about 50 years old, has had two heart valves replaced and continues to work the Cerro Rico. She hopes to be able to find other work. She said she no longer has the strength she used to have.

Issue/Lesson: FFW projects play a crucial role in the alleviation of poverty and hunger for this group of women, and thousands of others like them throughout the country. This group of women see the FFW as temporary relief until the economy returns to normal and they can go back to work in the old livelihood, or find an alternative way to make a living. The case also touches on some of the issues affecting women working in FFW projects.

G. Food for the Hungry International (FHI) - Case No. 1: Rehabilitation and Improvement of the Socara-Caripuyo Road

General project information concerning this road is indicated in the data sheet. The project is in the contract award stage. The only construction done in the field has been to open by hand labor an access trail along the entire length of the road approximating the proposed alignment of the road. The design and contract procedure utilized by FHI differs in some important aspects from that employed by ADRA on their road projects and is described below.

1. Concomitantly with the opening of the access trail, the necessary field studies were completed as required for design work. Field studies for the entire road were completed prior to construction. There was no attempt to fast-track construction by constructing as design work was proceeding.

2. The road was divided into two construction sections as indicated in the data sheet.

3. Design studies were completed and quantities estimated. This included identification and delineation of sections of rock were blasting would be required; fractured rock where a ripper probably could be used; and soils where normal excavation procedures could be utilized. As an economic measure it was decided to use fords instead of bridges for water crossings. Intercepting ditches at the top of cut slopes were designed when so required to control erosion. Production for excavation for the three types of materials, i.e. solid rock, fractured rock and common soil, were estimated and converted into matching hours of work.

4. Various alternative construction procedures were considered including the possibility of FHI doing all the work through direct administration by purchasing necessary equipment with the US$450,000 construction allocation obtained from the PL480 Secretariat. This alternative was discarded in favor of obtaining competitive bids from contractors for equipment use which would include operators and construction supervisors. These supervisors would be responsible to the overall direction of the FHI engineer. The equipment to be contracted would include that necessary for excavation, b asting and construction of fords. A contractor superintendent would be in charge of each of these phases. Specialized personnel required would also be supplied by the contract. FHI would only provide non-specialized labor under the FFW who would be drawn from the area and paid with food allocations.

5. Competitive bidding from three previously prequalified contractors is currently being solicited for the equipment and specialized personnel. Payment will be made on a production, cubic meter basis, with FHI maintaining survey crews in the field to monitor progress and estimate quantities for payment.

6. Under the US$450,000 budget allocation, FHI would also purchase the hand tools and other materials required for construction. These hand tools would be used by non-skilled labor contracted under the FFW program.

7. The contractor will be fully responsible for the maintenance and operation of the equipment provided, i.e. tractors, compressors, and for any auxiliary support equipment such as vehicles for personnel, fuel trucks, maintenance and repair facilities. The cost of these support items will be included in the unit prices indicated by the bidders.

8. the contractor's supervisory personnel will be directly responsible for the operation of the equipment. These supervisors will request in advance non-skilled labor from FHI to be employed under the FFW program. The overall planning of construction operations, however, would be the prerogative of the FHI engineer.

9. Supply and placement of drainage pipe as required along the road would be done by the National Highway Service (SNC) and FSE (Social Emergency Fund).

The project appears to be well conceived and well planned, and should turn out successful.

DATA SHEET: SOCARA TO CARIPUYO ROAD

Length of Road: 53 kms
Design Velocity: 30 kph in mountainous terrain
40 kph in rolling terrain
Minimum Horizontal Curve Radius: 20 meters
maximum Vertical Grade: 10%
Crosslope: 2%
Road Platform Width Including Shoulders: 5 meters
Right-of-Way: 15 meters
Design Loadings for Culverts: HS-20
Side Slopes in Fills: V/H - 1/2
Side Slopes in Cuts: V/H - 1/1
Road Surfacing: Improved Earth
Major Work Items:

Excavation	
Earth	70,420 m3
Fractured Rock	85,600 m3
Solid Rock	98,000 m3
Total Excavation	254,020 m3
Excavation/Km	4,800 m3
Minor Drainage	300 m
Fords	80 m
Bridges	None
Intercepting Ditches	3,300 m

Construction Sections

Socara-Janko Janko (33 kms)

Janko Janko - Caripuyo (20 kms)

Issue/Lesson: The construction package proposed for this road appears to be an improvement over current contract procedures and could be used as a basis for construction of other rural roads under FFW by all agencies engaged in this construction activity.

H. FHI CASE No. 2

Realenga, Oruro: For many years, the 34 peasant families of Realenga, in Dalence Province, dreamed of a captation system on the nearby stream that would irrigate their crops in the dry months of August to November. When they approached CODEOR (Department of Oruro Development Corporation), they were told funds were not available to help them.

As the peasants tell the story, an engineer from a construction firm in Oruro, happened to stop one day in 1985 while some of the men were working in their fields. The engineer observed that a simple filtration gallery designed to capture the sub-surface water in the gravely river bed at a point in the stream he suggested might gather enough water to irrigate 10 hectares. Having heard of FHI's work in the Oruro area, and enthused by the engineer's prediction, the community approached FHI/Oruro for assistance. FHI considered and approved the project without studying the potential production beyond what the community leaders had related. Work began in October 1986. Design work for the structure, cement, sand and skilled labor costing $B15,350 were invested along with 5192 kgs. of FFW commodities to cover the cost of manual labor. Work was completed in December 1986. The community rejoiced and eagerly began waiting for the arrival of the next spring crop cycle to put their new filtration gallery to work irrigating their peas and onions. But when August 1987, rolled around, even after a normal rainy season, the system in fact could capture only enough water to irrigate but one hectare.

The disappointment today is palpable among Realenga's peasants. The men don't feel betrayed, but now assert, with the wisdom of hindsight, that test bores should have been made in the river bed to locate the best site for the filtration gallery before work was started They are still confident that there is sufficient water, and they would appear to be correct because large percolations through the gravelly surface downstream suggest as much.

Filtration galleries have been built elsewhere in Bolivia, for both micro-irrigation systems and potable water systems. The lesson here is that FHI should have obtained access to that technical experience before proceeding. As is now the case, the filtration gallery will have to be expanded at an additional cost perhaps equal to the original amount invested if it is to be a useful asset to Realenga's peasants. Had the work been carried out with the proper planning and technical input to begin with, the original investment of $B5,200 in FFW commodities and $B15,350 in complementary inputs would not now have to doubled.

Issue/Lesson: The lesson in this case is that if had FHI invested in appropriate technical assessment prior to undertaking the project, the completed asset would probably have been successful. Proper planning and technical input are essential to carrying out successful projects.

I. CRS/Caritas Case No. 3

The following case is from the Aymara community of Tortoroco, Cercado Province, Oruro Department. The evaluation team visited there on July 21, 1988. Caritas used FFW to build a dam in Tortoroco, beginning in November of 1986. Although the dam is functional, some finish work remains. It serves thirty families, who before had to carry water in buckets from a nearby stream to make gardens. These same families supplied the labor to build the dam.

The team arrived in Tortoroco unannounced and talked with a couple of farmers now benefitting from the dam. They embraced our presence with enthusiasm and talked spiritedly about the dam, their community, its past. The area was the* scene of large haciendas before the Revolution of 1952. The two men, who were born in the community, reminded us that their parents and grandparents had lived in bondage, had been exploited by the haciendas and could not improve their lives. But they, the sons and grandsons, were free to improve themselves, though even now the authorities did not often listen to people like them. These men clearly saw the dam as an important part of this improvement.

Roads serving Tortoroco, located near Oruro, are quite good, and the area already exports vegetables to several urban markets. The two farmers talked freely about their plans to grow vegetables--onions, carrots, cabbages, parsley. Their dreams were at last coming true. Little did they know, however, that the dam almost did not happen.

About three years ago, community leaders brought the head of Caritas/Oruro to their community to discuss the project. He was excited about it, and later arranged for CRS/Bolivia to visit the community; perhaps CRS could furnish the costly materials for the enterprise, for Caritas had no funds for this. CRS visited the community, but decided that the project was too costly. Only by a turn of fate did Caritas/Bolivia then meet a person from Caritas/ Switzerland. The Swiss responded favorably to overtures to finance the material and engineering costs of the project, and soon contracted a local engineering firm to design the dam.

And so with Caritas/Switzerland financing material and design costs, the community of Tortoroco supplying the labor, and Caritas/Bolivia providing Title II food for the workers, the Tortoroco Dam was born. A bright future opened for thirty families, a number which will likely increase in the future, since the capacity of the dam goes well beyond present usage.

Issue/Lesson: Caritas has no resources for the purchase of material to complement food. The case shows what Caritas can accomplish when such resources are available. Serendipity provided the resources for the Tortoroco Dam, but with planning and proper institutional arrangements for obtaining material resources, there could be other cases like that of Tortoroco, using resources from PL480 Title III.

ANNEX 1

Bolivia PL480 Title II Food for Work Evaluation Scope of Work

ATTACHMENT A

Background

In September of 1984 USAID, in cooperation with the P.L. 480 Title II Cooperating Sponsors, conducted a field assessment of food for work projects undertaken to mitigate the effects of the 1983-84 El Nino drought. This assessment showed that only 25% of the food for work projects completed in 1983 and 1984 were durable infrastructure projects that the PVO's sponsoring the food for work program did not have sufficient in-house technical assistance and access to complementary resources to adequately administer the program. The assessment further determined that the PVO's lacked appropriate planning, implementation and monitoring procedures to properly execute viable rural and urban infrastructure projects. Despite these limitations, the field review acknowledged that food for work was a highly prized incentive for moblizing local communities to take action to resolve their pressing problems. Food for work was also having an impact on mitigating the effects of rising unemployment in Bolivia caused by the economic crisis.

As a result of this assessment, USAID decided to assist the VolAgs improve their management, planning and implementation capacity in order to better achieve program objectives. USAID obtained the concurrence of the GOB to allocate in FY 86 the equivalent of 3.5 million dollars in Title I funds and 2.6 million dollars in FY 87 of Title III funds to support urban and rural infrastructure projects linked to food for work activities. In March, 1986, Planning Assistance, Inc. was contracted to provide technical and training assistance to the VolAgs to set priorities, develop program objectives, implementation plans, and establish technical units within each agency. From March, 1986 to the present VolAgs have undertaken 500 food for work infrastructure projects in six cities and 700 projects in rural areas throughout Bolivia. Approximately, 50,000 workers have been temporarily employed through this program. The VolAgs working in this program are Catholic Relief Services, Food for the Hungry International and the Adventist Development and Relief Agency. A Government to Government Food for Work Program is, also, being sponsored by the National Community Development Service.

This particular evaluation will measure progress towards improving the food for work program in achieving its objectives of creating jobs for the unemployed and, concomitantly, creating basic social and productive infrastructure in poor urban and rural communities.

ARTICLE I - TITLE

P.L. 480 Title II Food for Work Program in Bolivia

ARTICLE II - OBJECTIVE

To provide an evaluation team consisting of a Team Leader, Civil Engineer, Sociologist or Anthropologist, and an Agricultural Specialist to evaluate the above Food for Work program and make recommendations to USAID/Bolivia to improve performance and impact.

ARTICLE III - STATEMENT OF WORK

The overall evaluation will measure progress toward the achievement of the program purpose, evaluate program objectives against achievement, impact on program beneficiaries, program management and overall assessment of program successes and limitations. Specifically the evaluation will:

A. Assess adequacy of management system at USAID, VolAgs, Planning Assistance, P.L. 480 Title III Secretariate and other private and public agencies supporting the FFW infrastructure program.

B. Analyze the planning, implementation, monitoring and evaluation systems.

C. Describe objectives, evaluate progress, and identify barriers to achieving objectives.

D. Determine adequacy of program levels, complementary resources technical assistance and program objectives.

E. Conduct visits to representative project sites to determine durability, significance of projects, and capability of communities to maintain works undertaken.

F. Review the reporting information system.

G. Interview participants and beneficiaries of food for work projects to determine whether benefits of projects are reaching the poorer sectors of Bolivia.

H. Assess significance of program to women, who represent a majority of workers in the urban food for work projects.

I. Evaluate importance of program in mitigating or minimizing the effects of unemployment.

J. Assess acceptability of food rations for beneficiary consumption and as income supplement.

K. Select a representative sample of urban and rural projects (approximately 42 projects) of each VolAg to visit in three different regions of Bolivia (La Paz, Cochabamba, and Oruro) to determine viability of projects, durability, maintenance, cost effectiveness, importance to the communities visited and perceived benefits of the workers/beneficiaries. A brief case study of the projects will be incorporated into the evaluation reports.

ARTICLE IV - REPORTS

The evaluation team will hold a planning meeting with USAID and participating agencies prior to conducting the assessment. A final debriefing meeting discussing major findings and recommendations will be made prior to the departure of the team. The contractor will submit to USAID/Bolivia a written draft report in English covering all items identified in the Statement of Work as well as specific recommendations resulting from the evaluation prior to leaving Bolivia. After review by USAID/Bolivia, any comments or recommendations will be incorporated into a final report in English and Spanish (10 copies in each language) and submitted to USAID/Bolivia four weeks after receiving comments on the draft report. The final report will contain a completed Evaluation Summary on a form, to be provided by USAID/Bolivia.

ARTICLE V - RELATIONSHIPS AND RESPONSIBILITIES

The team leader will coordinate the evaluation in Bolivia. The team will be under the technical direction of Sal Pinzino, the USAID Food for Peace Program Manager.

ARTICLE VI - PERFORMANCE PERIOD

The evaluation should begin on or about July 11, 1988 and end five calendar weeks from the effective date of signing the contract.

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ARTICLE VII - WORK DAYS ORDERED

	No. of Work Days
- Team Leader	25
- Civil Engineer	25
- Agriculture Specialist	25
- Sociologist	25
	100 WD = 4.6 work months.

ARTICLE VIII - SPECIAL PROVISIONS

A. Duty Post
USAID/Bolivia

B. Language Requirements
Spanish R-3, S-3

C. Access to Classified Information
Contractor shall not have access to any Government classified material

D. Logistic Support
USAID/Bolivia and the Participating Title II agencies will provide background material to the Contractor.

LOGISTIC SUPPORT

USAID/La Paz will supply office space & office equipment. USAID vehicles will be provided for official business.

ANNEX 2

List of Recommendations

ANNEX 2
List of Recommendations

Recommendation # 1: The ADRA rural program suffers from the picaflor approach--efforts dispersed in too many small projects, with little or no strategic planning to address fundamental problems(e.g., a lack of water) common to wide areas, or to integrate different projects within an area. ADRA must plan strategically, so as to focus its efforts on marginal zones, and on projects that respond to basic needs(such as a lack of water) common to wide areas. SNDC uses the concept of "micro--region"(see the section on SNDC) to refer to such areas, where they integrate projects over a period of five or six years. This strategic approach would mean fewer projects and more larger ones. ADRA, with USAID's assistance, should seek out OPG funding in order to have resources to secure the necessary staff, technical assistance, and materials to plan and implement the strategic approach. Planning Assistance should help ADRA develop a planning scheme for the approach. In addition, ADRA should consider monetizing some of its food commodities to allow it to purchase materials and technical assistance to complement FFW in its projects.

Recommendation # 2: That Planning Assistance assist CRS, Caritas, and USAID to better define their roles vis-a-vis each other. And that special attention be given to the CRS-Caritas relationship, with a view to easing tensions between those institutions.

Recommendation # 3: That funds be made available to Caritas by the PL480 Secretariat (Title III) after it has improved its planning, monitoring and evaluation activities, or by USAID, through the monetization of Title II commodities, for the express purpose of projecting itself more effectively into the countryside. The funds would be used for planning(at both the national and diocesan levels), for technical assistance, for the purchase of vehicles and other equipment, and for the judicious purchase of materials to complement food in their development projects. Specifically, Caritas should select marginal areas of each diocese and focus its efforts there; it should, that is, be proactive in those areas. This would address the picaflor syndrome, and in some cases would mean initiating larger projects that serve larger areas--"micro-regions," for example(see section on SNDC). Caritas could continue to be reactive in other areas, as it is now. In the proactive areas, Caritas should maintain a permanent presence--at least an agricultural technician (perito level). This extended presence can be achieved by models akin to that of FHI. In all cases, even the reactive ones, Caritas should visit a community before committing itself to supporting projects there. USAID, or the PL480 Secretariat, might wish to release funds for the new scheme only in a couple or three dioceses initially. Planning Assistance should help Caritas develop a structure and methods for planning, both at the national and diocesan levels, so that efforts and resources can be effectively focused on certain dioceses, and on marginal areas--micro-regions, say--within those dioceses.

Recommendation # 4: That CRS/New York permit CRS/Bolivia to monetize Title II commodities in order to comply with the above recommendation. USAID/Bolivia and CRS/Bolivia must argue this point in the strongest of terms with CRS/New York. Caritas cannot project itself effectively into the countryside without a substantial increase in financial resources. It cannot improve its overall project management adequately to satisfy PL480 Secretariat requirements for complementary funding without these resources. It cannot function effectively as a development institution in the rural areas. Above all, it cannot effectively complete any of the rural projects on its roster without an increase in financial resources to allow them to do so.

Recommendation # 5: That funds be made available to SNDC, either by the PL480 Secretariat (Title III) or by USAID, through the monetization of Title II commodities, for the express purpose of projecting itself more effectively in the countryside. The funds would be used for direct project costs including purchase of vehicles and other equipment, and for the judicious purchase of materials (e.g., steel, cement) to complement food in their development projects. USAID, or the PL480 Secretariat, might wish to release funds for use in only three or four zonal offices initially. Also, in its new micro-region approach, SNDC should consider posting at least one technical person (e.g., an agronomist) beyond the perito level to the zonal offices.

Recommendation # 6: Planning Assistance should assist the PVO's develop a planning tool fo. use at the community level that would help shift program focus away from isolated projects toward a community development plan. The plan would prioritize community needs, explore the realities of implementing a project, its potential impact, and the consequences of undertaking the project. Part of that planning tool might include the formation of a core group of short-term consultants that can work with the personnel of all agencies in developing their capacity to plan, implement, monitor and evaluate standard technical packages by type of project. For example, irrigation projects operate best when seen as systems effecting river basins, needing operations and management manuals, and extension work to produce peak agricultural production.

Recommendation # 7: That USAID, through Planning Assistance, develop a simple monitoring and evaluation system that can be used by each agency to monitor the implementation of its projects, and to capture their impact. In the planning of the project, specific bench-marks should be built in that will permit the community and the agency to spot implementation problems and look for solutions, as well as a number of indicators to evaluate impact after completion. A "community" file, rather than a project file should be kept. FHI is implementing a community file, which could be used a model for the other agencies. Project files are too limited to permit any evaluation of project impact. This community file could be expanded to a micro region file where appropriate.

Recommendation # 8: That the USAID explore the possibility of obtaining OPG funding for ADRA, FHI and Caritas to assist them in meeting their administrative costs; that the USAID monetize a calculated percentage of Title II commodities to meet administrative costs directly related to implementing projects; that the USAID encourage ADRA and FHI to obtain more administrative support from their home offices.

Recommendation # 9: The urban program is proceeding very well, however, productivity of crews, composed mostly of women, should be increased. Where appropriate hand tools and in particular wheelbarrows cannot be obtained from the local city administration, then provision should be made under FFW monetization for their purchase. Better coordination of material deliveries with work programs is required. Increased productivity could be obtained if food allowances were substituted in part by cash payments. To the extent possible, street resurfacing should be coordinated with programs for placement of water, sewage and drainage installations to obviate the need for redoing the stone resurfacing. Women participation in urban road and other infrastructure programs appears to be desirable not only from the humanitarian point of view but also women are making a positive development input in urban projects, some type of day care center are required close to working mothers. Neighborhoods benefiting from the project could contribute with temporary space. Education institution (public and private) could be asked to setup education programs for the pre-schoolers. The provision of basic first aid kits to each working group should be incorporated into the programs. A person or volunteer should be designated and given training in basic first aid procedures.

Recommendation # 10: On rural roads more advance planning is required particularly in the difficult highland area to determine if labor intensive construction methods under FFW programs are really applicable. This should include an analysis of total labor requirements for the projects and an evaluation if this requirement can be met by the surplus labor available taking into account the seasonable variation of the latter. Furthermore, it may be that other sources of employment are more available to local campesinos for which a food ration does not provide sufficient work incentive. In such cases, FFW projects should not attempted. Furthermore, prior to selecting a road project for construction, an attempt should be made to quantify costs and benefits to arrive at parameters which would indicate if the road project was really feasible. Road construction is necessary for development; however, roads alone will not insure this development. Complementary investments in agriculture, cattle, and other rural infrastructure are required. In order to produce maximum development impact, road construction should not be considered in isolation, but rather as a part of an integrated development program be it at the community, district or regional level. Instead of attempting the construction of major arterial feeder roads having lengths of 50 or 100 kilometers or more, it may be better to let the construction of these roads out to the private sector and utilize FFW programs for the shorter 1 to 10 kilometer roads required to connect minor population

centers to the main feeder road. A higher input of labor could be used due to lower design and quality standards. Outlying communities would be highly incentivated to provide labor which would enable them to get their surplus produce to market.

Recommendation # 11: The current strategy for building a large number of low quality roads under the FFW program would appear to have to be reoriented toward more quality construction and less quantity. The probability of minimal maintenance inputs after construction would require higher initial road construction standards, particularly more emphasis on better alignment, improved drainage, slide preventive measures, and perhaps better quality road surfacing to insure all weather operation. These standards should not be fixed but should be adjusted as required by local conditions. Where road construction is inexpensive, initial construction to a two lane facility could be considered instead of the current one lane roads being built in the highlands. Quality control during construction should be improved. Design standards should be tested in the approximate "cost model" to determine if an "optimal" combination of the road cost inputs will result. Finally, the SNC who is ultimately responsible for the maintenance of these roads should participate in all phases of the road package - from setting initial standards to design and construction supervision. The SNC should have the prerogative to reject for maintenance purposes all roads built to inadequate design or quality standard resulting in excessively high maintenance costs. The PVO's who are currently implementing road programs should work in coordination with the SNC. The possibility might be considered of reducing design costs by the installation of a Computer Aided Design (CAD) program in the SNC which could be utilized by the PVO's in implementing elaboration of road designs and plans. Benchline costs for CAD designs and plans, exclusive of field surveys, are only on the order of $200 to $300 per road kilometer exclusive of major structure.

Recommendation # 12: The current construction package of combining non-skilled labor under FFW with equipment and operator rental from a private contractor appears to be a viable contract mode which results in costs saving of over 50% if compared with standard equipment intensive contracts. However, construction time under the current system appears to be excessive due mainly to use of unskilled labor for blasting and a minimal equipment component. With the proposed increased emphasis on quality rather than quantity in road construction, the current ADRA construction procedures should be modified to include variations to be implemented by FHI on the Socara Road. The optimal trade off between cost and time can only be determined by a feasibility analysis for each road undertaken whereby the stream of benefits and costs are discounted at the proper rate and shadow price utilized. For major projects this analysis should be made with a sensitivity evaluation on construction time to arrive at proper equipment/labor mixes. The proposed FHI method should be adopted by all the agencies engaged in road construction as a basic guideline for construction packages with modifications as required based on results from the feasibility evaluation.

Recommendation # 13: That USAID, and the PVO's consider one of the following two options; and assess their progress after two years to determine if efforts expended toward maintenance support continuation of investments in road construction using FFW resources. Obviously maintaining the status quo is not satisfactory. Long and short term options are presented.

Recommendation # 14: Analytical procedures are currently available to calculate reasonable freight charges for all types of vehicles under different terrain conditions and varying degrees of road surface roughness. These theoretical rates can be compared with actual freight charges in the communities to determine if collusion is taking place and artificially high rates being charged. If collusion is detected then steps legal or otherwise should be taken to reduce these charges. The other alternative would be to encourage various communities to join together, purchase a truck and compete directly with the established private truckers. In addition, communities might be encouraged to ask the truck owners to donate all or part of the transport of FFW commodities into the community as their contribution to the project.

Recommendation # 15: That the USAID, with the PVO's, consider establishing a task-payment schedule that allows for regional productivity differences and ration sizes based on a set of minimum and maximum parameters. In addition, the USAID, in collaboration with the PVO's, should study the phenomenon of rations destined to the nuclear family being consumed by considerably larger urban households, and determine if it is feasible to increase the ration size.

Recommendation # 16: That USAID carefully review its current and future portfolio of projects, agricultural and otherwise, for ways that FFW beneficiaries and FFW implementation staff might profit from inter-project coordination. Projects promoting the marketing of products (e.g., vegetables, textiles) could be helpful, as could those dealing with production and credit.

Recommendation # 17: That SNDC and the private voluntary agencies continue to search for ways to make their community and farm interventions increasingly appropriate and helpful from the point of view of the beneficiaries. Although some of these institutions have moved far in this direction, others have not. There is an approach to developing and extending appropriate agricultural technologies for small, resource-poor farmers that has enjoyed considerable success in different parts of the world in recent years. It is called Farming Systems Research and Extension (Investigacion en sistemas agropecuarios). There is an abundant literature on the approach, in both Spanish and English. It is recommended that the institutions participating in the Title II FFW program, with the help of USAID, obtain the literature and read about this approach. Its principles will be useful.

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Recommendation # 18: That the USAID, in collaboration with Planning Assistance, design and implement a baseline survey with two follow-up rounds one year apart to capture the the quantitative impacts of the principal agricultural projects being implemented by the PVO's. An agricultural economist, or rural development specialist sensitive to food aid issues with experience in quantitative research in the third world setting should be contracted by the USAID as soon as possible to establish the research protocol and to implement the baseline round of data collection. Planning Assistance should provide the necessary team support to the economist. Ideally, the same researcher would return for each of the follow-up rounds.

Recommendation # 19: USAID and the PVO's should be prepared to make long-term commitments to the communities in which they initiate FFW activities, especially the agricultural projects. A 5 to 10 year commitment to reinforce introductory efforts with follow-on agricultural and rural development projects would offer the best opportunity for sustained development in target communities.

ANNEX 3

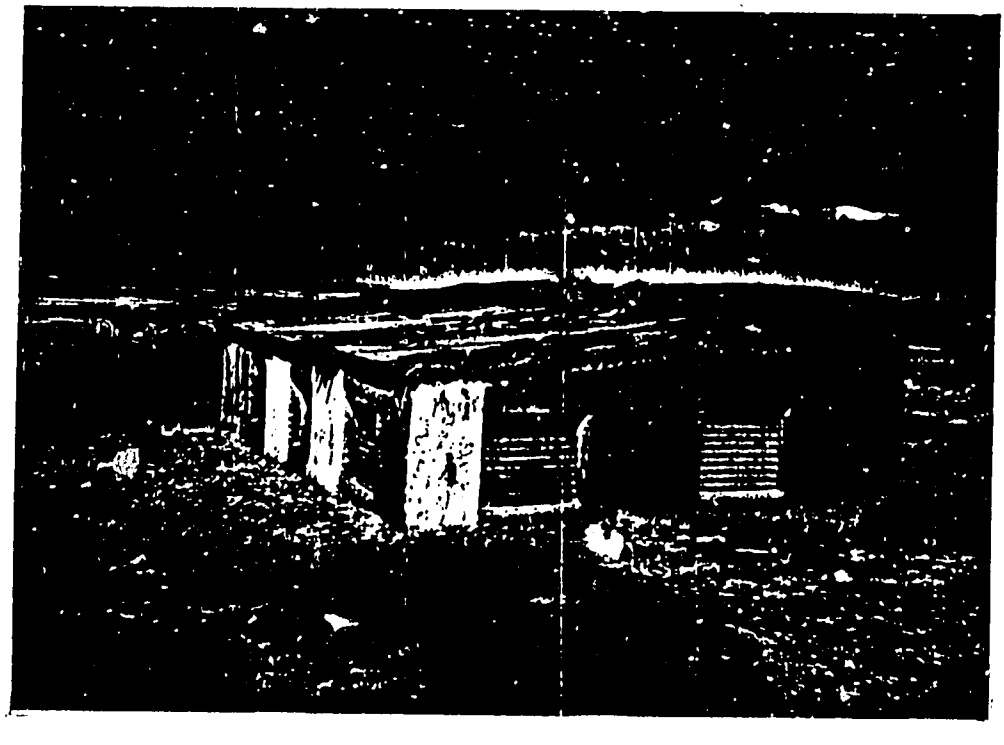
Photographs of Project Areas

The Devres, Inc. Team;
AKA "The wild bunch"
Left to right:

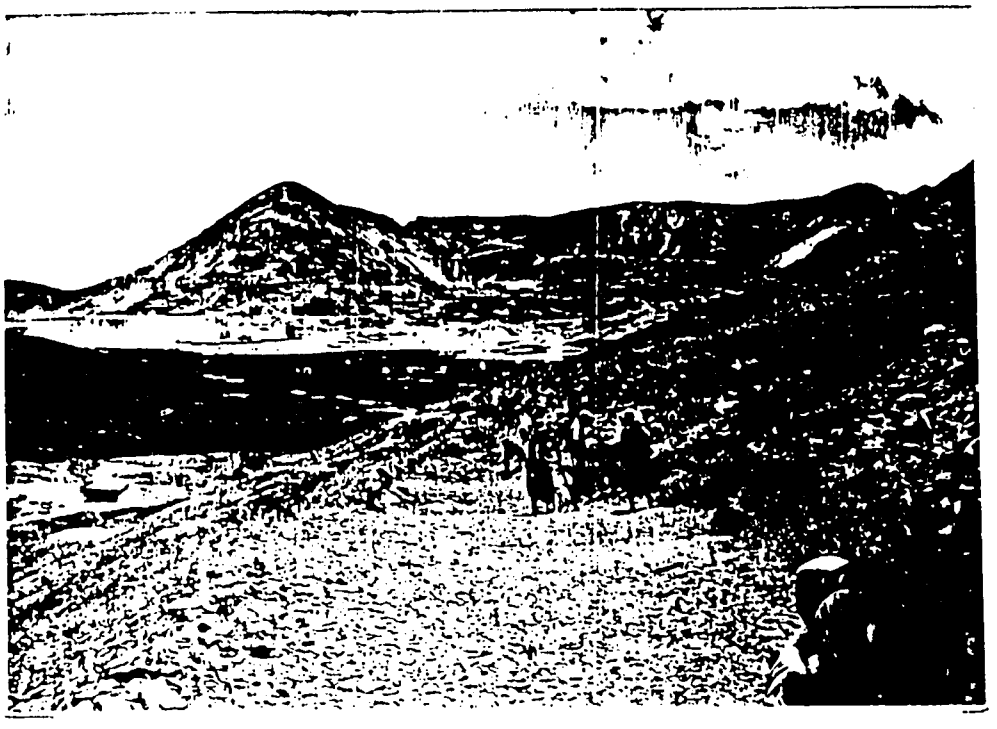
Ivo Kraljevic,
John Paul Chudy,
Al Lubina, and
Jim Jones.

Interviewing campesinos
at a Caritas/Oruro
project at Tortoroco.

Street construction
CRS/Caritas, Oruro.

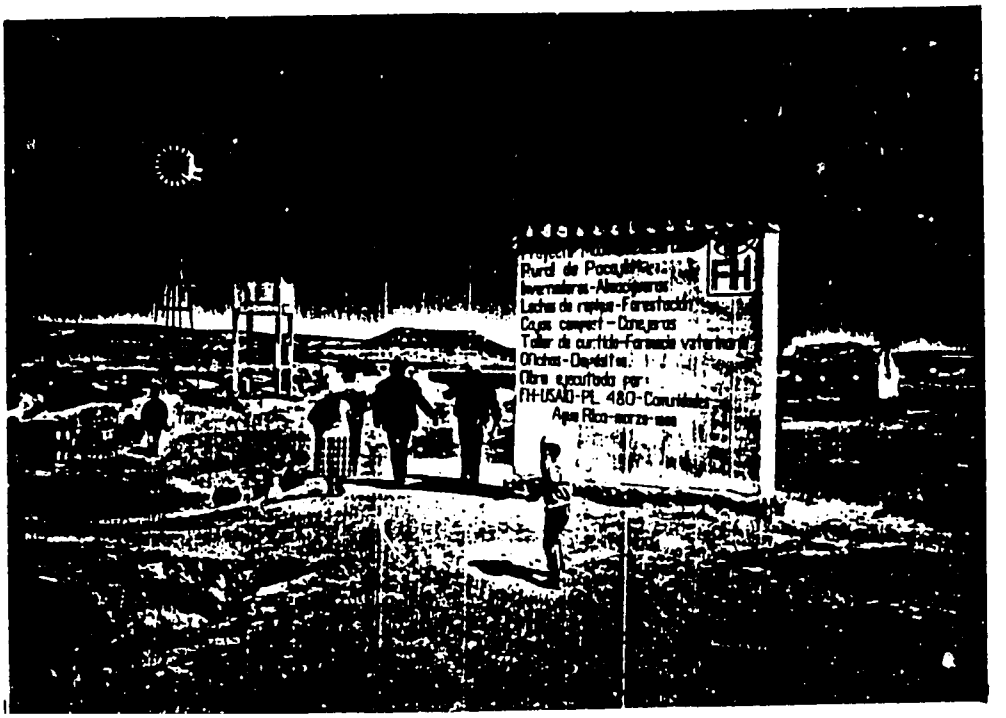


Greenhouse, at the Mother's Center in Sora-Sora, Tortora, Department, Oruro. Built by Caritas/ Oruro, and the families of Sorasora.



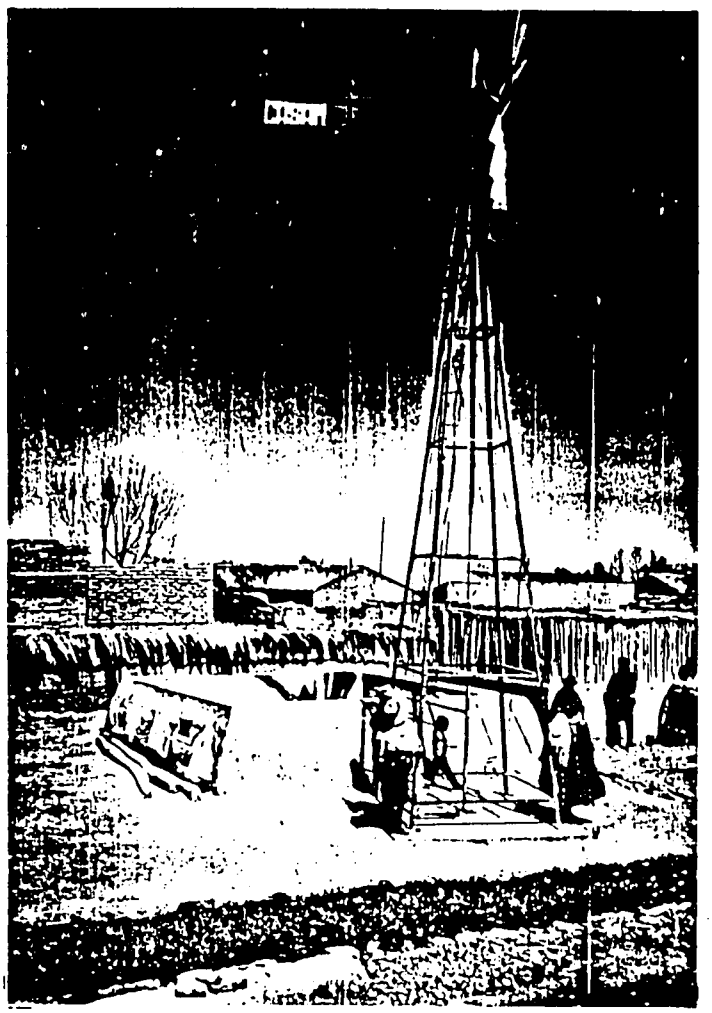
Urban FFW street opening, CRS/Caritas "Hijo del Sol", Oruro.

Urban FFW street opening, CRS/Caritas "Hijo del Sol", Oruro.

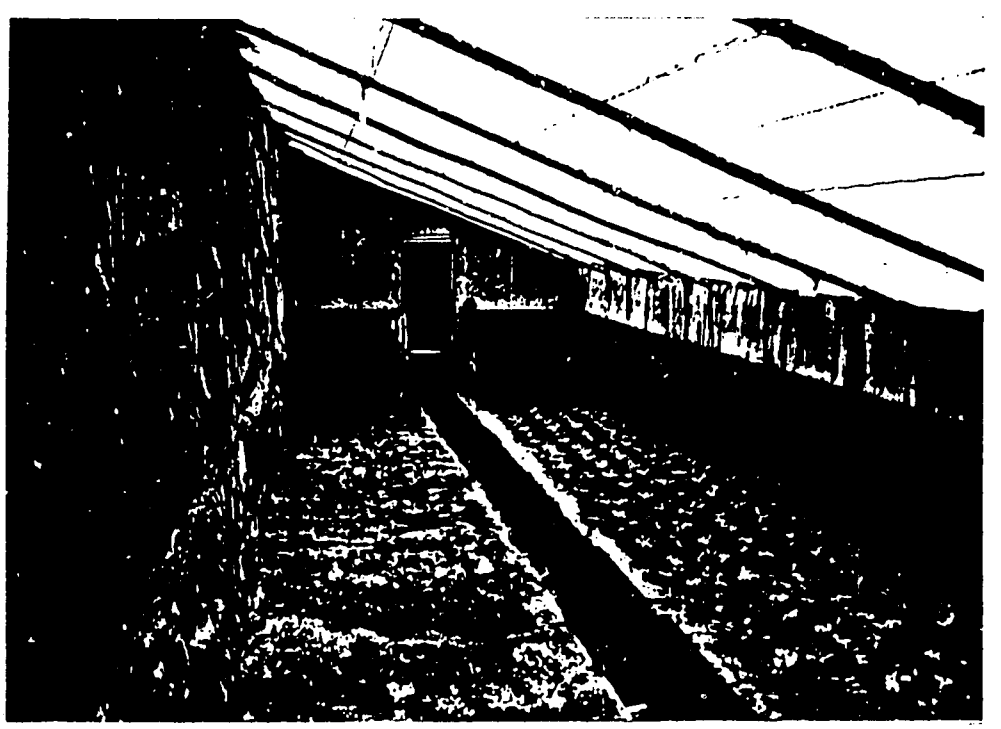


Food for the Hungry Department Module at Agua Rica, Pacajes Province, La Paz Department.

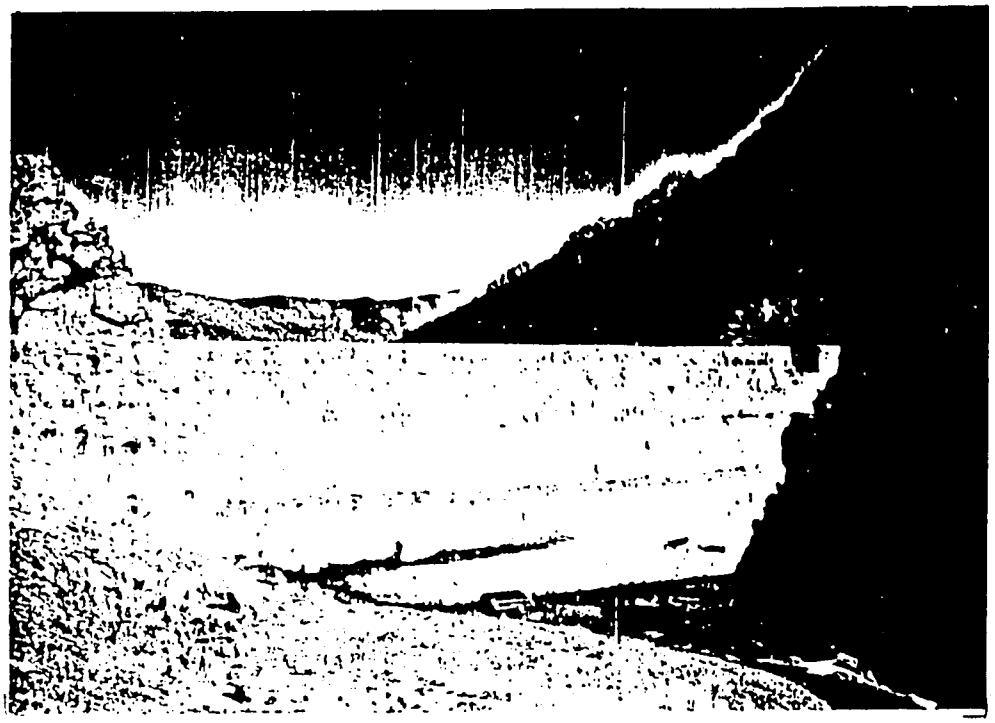
Inside an FHI Greenhouse Development Module. At Agua Rica.



FHI Development Module at Machacamarca, Oruro. Windmill installation for the provision of water to the greenhouses.



A greenhouse at the FHI Development Module at Machacamarca, Oruro.



The Tortoroco Dam built, by CRS/Caritas Oruro, with Technical Assistance from Caritas/Switzerland.

The Main-Canal at the Tortoroco Dam.

ANNEX 4

Persons Interviewed

PEOPLE INTERVIEWED BETWEEN JULY 12 TO 29, 1988

NAME	AGENCY/OFFICE	TITLE
Ing. Guillermo Justiniano	Min. of Ag. & Peasant Affairs	Minister of Agriculture
Mr. Reginald van Ralte	USAID/Bolivia	Mission Director
Mr. Robert Kramer	USAID/Bolivia	Deputy Director
Mr. Mike Hacker	USAID/Bolivia	Chief, Health and Human Services
Ing. Gonzalo Fernandez	USAID//Bolivia	Chief Engineer
Mr. Ben Hoskins	AID/Washington	Food for Peace Officer
Mr. Sal Pinzino	USAID/Bolivia	Food Program Mgr.
Mr. Luis Moreno	USAID/Bolivia	Food Program Adm.
Dr. Carlos Brockman	PL480 Sect.	Director
Lic. Jorge Noda Miranda	PL480 Sect.	Chief, Finance Unit
Lic. Luis E. Jordan S.	PL480 Sect.	Chief, Tech. Dept.
Lic. Fernando Romero	FSE	Director
Lic. Mauricio Balcatzar	FSE	Sub-Director
Lic. Fernando Campero	FSE	Sub-Director
Arq. Jaime Medrano	PA La Paz	Director
Ing. Jorge Mostalero	CORDEPAZ	Infrast. Chief
Ing. Mario Antezana	SNC/La Paz	Operations Chief
Ing. Jose Espada	SNC/La Paz	Road Chief Asst.
Ing. Rene Ochoa	SNC/La Paz	Road Chief
Ing. Luis Cabezas	SNC 7th Dt.Yura	Resident Engineer
Ms. Teresa Vargas	SNC	Coordinator
Mr. Ivan Iturry	SNC	Manager Dept. LP
Ing. Oswaldo Jimenez	SNC	Director
Ing. Cesar Castellon	SERMAQ/La Paz	Area Technician
Ing. Jose Salgueiro	SERMAQ/La Paz	Operations Chief
Mr. Randall L. Hoag	FHI	National Director
Mr. Adhemar Pinaya	FHI	Natl. Proj. Chief
Mr. Luis Carreto	FHI/Oruro	Road Engineer
Mr. Gerardo Wayar	FHI/Potosi	Deptmntl. Admin.
Ing. Sergio Claros	FHI/Oruro	Improv. Technician
Mr. Benigno Herrera	FHI/Oruro	Regional Administrator
Ing. Jorge Belmonte	FHI/Oruro	Urb. Improv. Chief
Ms. Lily Rojas	FHI/Oruro	Accountant
Mr. Ignacio Huaita	FFW/Oruro	Supervisor
Mr. Guillermo Osi	CARITAS/Potosi	Resp. Urban/APT

NAME	AGENCY/OFFICE	TITLE
Mr. Jaime Bejarano	CARITAS	Resp. Rural/APT
Mr. Gustavo Guans	CARITAS	Director
Mr. Pepe Murgillo	CARITAS	Civil Engineer
Mr. Leovigildo Aguirre	CARITAS	Director
Mr. Godofredo Guidi	CARITAS	Director
Ing. Jorge Jordan	CARITAS	Urb. Proj. Dir.
Mr. Abel Salinas	ADRA/Potosi	Director
Mr. Fidel Caballero	ADRA/OFASA	El Alto N. Promt.
Mr. Humberto Chambi	ADRA/OFASA	El Alto S. Promt.
Mr. Patricio Chambilla	ADRA/OFASA	City of LP Promt.
Ing. Hugo Delgado	ADRA/OFASA	Ring Road Techician
Mr. Waldo Lucana	ADRA/OFASA	City of LP Promt.
Ing. Julio Penailillo	ADRA/OFASA	Ring Road Tech. Asst.
Ing. Julio Silvestre	ADRA/OFASA	Prov. Chief
Mr. Iamar Phillips	ADRA/OFASA	Director
Mr. Antonio Apaza	ADRA/OFASA	Supervisor/Potosi
Ing. Fernando Blanco	ADRA	Charge Rural Rds.
Ing. Luis Sanchez	HAM-BIRF	HAM-BIRF Techn.
Ing. Raul Bedoya	HAM El Alto	Superintendent
Mr. Filiberto Cardozo	HAM El Alto	Municipal Govrmnt.
Mr. Hernan Rojas	Villa Mejico	Vice-President
Mrs. Virginia de Mita	Benf. Represnt.	S. Suarez Sch.Dir.
Ing. Fernando Tapia	Sita-Arcopongo	Project Chief
Ing. Ramiro Tirao	Sita-Arcopongo	Civil Builder 1
Mr. Franz Reinagh	Sita-Arcopongo	Civil Builder 2
Ing. Alberto Valdevieso	Lambate-La Plza.	Project Chief
Mr. Rodolfo Tapia	Lambate-La Plza.	Civil Builder 1
Ing. Guillermo Saravia	Lambate-La Plza.	Civil Builder 2

ANNEX 5

Project Areas Visited

PROJECT AREAS VISITED BETWEEN JULY 12-29, 1988

COMMUNITY	PROJECT	LOCATION
Base Aerea	Plza. 21 de Diciembre	El Alto
Tawantinsuy	APT-U Villa Esperanza	El Alto
Franz Tamayo	Plza. Junta Tuitiva Const.	El Alto
Villa Adela	Plza. Simon Bolivar Eval.	El Alto
Rosas Pampa	Greenhouses Evaluation	El Alto
El Alto	Eval. 12 de Octubre Area	El Alto
El Alto	Resurfacing Streets	La Paz
El Alto	Lambate Plazuela	La Paz
El Alto	Sita Arcopongo	La Paz
El Alto	Greenhouses Evaluation	La Paz
El Alto	Crossroad Sogara-Caripuyo	Oruro-Potosi
El Alto	Pecataya-Yura	Potosi
El Alto	Streets (10)	La Paz
El Alto	School	La Paz
La Paz	Streets & Avenues (7)	La Paz
Sita Arcopongo	(25 communities) Road	Inquisivi
La Paz	Retention Walls UN.NA.Av.	La Paz
La Paz	La Paz Ring Road	La Paz
La Paz	Improv. Segundo Bascones Av.	La Paz
La Paz	Improv. Periferica Avenue	La Paz
Sixtilla Alta	Irrigation & Flood Control	La Paz
Chivisivi	Irrigation (SNC)	Loyza/La Paz
Cuivivi	School, Irrigation/Pot. Water	Loyza/La Paz
Huayllani	Huayllani River Regulations	La Paz
Irpa Irpa	Retention Walls	Cochabamba
Villa Mejico	Potable Water	Cochabamba
Caripuyo 5 Comm.	Road	Oruro
Oruro City	Defense Drain	Oruro
Hijo del Sol	Street Opening	Oruro
Caripuyo	Development Module	Potosi
Cala Cala	Development Module	Oruro
Huayna Pasto	Sheep Dip	Oruro
Machacamarca	Development Module	Oruro
Realenga	Tajamar & Filtration Gallery	Oruro
Kazapata	Gallery Reservoir	Oruro
Sajsani	Comm. Greenhouses	Oruro
Loketa	Comm. Greenhouses	Oruro
Panti Pata	Reservoir & Comm. Greenhous.	Oruro
Juntavi	Dev. Module & Water Tanks	Oruro
Churiparara	Sheep Dip & Defensive Walls	Oruro
Circuyo	Development Module/Sheep Dip	Oruro
Wichocollo	Irrigation Channel	Oruro
Negro Tambo	Irrigation Channel & soil recuperation terraces	Potosi
Potosi	Resurfacing City Streets	Potosi
Phuca Hole	Irrigation Channel & Resevoir	Potosi

(cont...)

COMMUNITY	PROJECT	LOCATION
Yura	Road	Quijarro-Potosi
Apacheta	Irrigation Channels	Quijarro-Potosi
Irupampa	Commty. Greenhouses	Don Diego-Potosi
Chulchucani	Water Storage Tanks for Family Gardens	Don Diego-Potosi
Lechewira	Irrigation System	Don Diego-Potosi

ANNEX 6

Evaluation Summary

ABSTRACT

H. Evaluation Abstract (Do not exceed the space provided)

The Bolivia PL480 Title II Food For Work (FFW) program established itself as a higly visible and effective emergency and development activity in response to the El Nino drought in 1983-84. The program mobilizes $9.6 million of commodities per year programmed through four cooperating sponsors. This evaluation was conducted by Devres, Inc., based on personal interviews with cooperating sponsor staff, visits to over 50 project sites, and group interviews with over 500 FFW project workers and asset beneficiaries. The major findings and conclusions are:

* USAID/Bolivia conceived a responsive and powerful program which is creating employment for 44,000 workers per month, and contributing to Bolivia's development.

* A monitoring and evaluation system should be adopted by each cooperating sponsor.

* An independent quantitative impact study of development projects should be undertaken that would include a baseline and two rounds of follow-up data collection and analysis.

The evaluators noted the following lessons:

* Rural programs are more effective when cooperating sponsors target geogaphically to areas of greatest economic need, and select project types that respond to felt needs common to the area.

* Complementary resources from PL480 Title I and Title III local currency generations, along with technical assistance to improve program management practices, are essential to make FFW development oriented.

* The monetization of PL480 Title II commodities can provide cooperating sponsors with resources necessary to strengthen management capabilities.

COSTS

J. Evaluation Costs

1. Evaluation Team

Name	Affiliation	Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. $)	Source of Funds

2. Mission/Office Professional Staff Person-Days (Estimate) _____

3. Borrower/Grantee Professional Staff Person-Days (Estimate) _____

A.I.D. EVALUATION SUMMARY - PART II

SUMMARY

J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)
Address the following items:

- Purpose of evaluation and methodology used
- Purpose of activity(ies) evaluated
- Findings and conclusions (relate to questions)
- Principal recommendations
- Lessons learned

Mission or Office:	Date This Summary Prepared:	Title And Date Of Full Evaluation Report:

Purpose of the Activity: The Bolivia PL480 Title II Food For Work (FFW) program took on great importance in the wake of the 1983-84 El Nino drought crisis. A small and obscure rural assistance program prior to the crisis, FFW became a highly visible emergency program during the period 1983 to 1986. The 1980s have been crises years for Bolivia. As a result, FFW is a highly visible, much needed program which creates jobs for 44,000 workers per month, and contributes very positively to Bolivia's infrastructure and agricultural development. The PL480 Title II Food For Work program now marshals $9.6 million of commodities per year programmed through four cooperating sponsors: the Adventist Relief and Development Agency (ADRA), Food For the Hungry, International (FHI), Catholic Relief Services/Caritas (CRS/Caritas), and the Bolivian National Community Development Service (SNDC). The Bolivia PL480 Title II Food For Work program has three broad components - urban development, rural development, and a large rural and urban road construction component. Since complementary resources first became available to the FFW program in 1986, the four cooperating sponsors have invested a total of $3.8 million to augment their development efforts under FFW.

Purpose of the Evaluation: This evaluation was an assessment of the effectiveness of efforts made by USAID/Bolivia to redirect their FFW program away from an emergency focus toward a development focus following a 1984 assessment of the Emergency FFW program and provision of funds to accomplish this redirection since 1986. Changes included (a) making financial resources from PL480 Title I and Title III local currency generations available to cooperating sponsors, and (b) awarding a grant to Planning Assistance, Inc., so that it could assist the four cooperating sponsors to improve their program management. The evaluation also reviewed program successes and limitations, program management, and the FFW program's impact on FFW workers and asset beneficiaries. Over 50 project sites were visited. Interviews were held with over 500 workers and project beneficiaries, and with representatives of the four cooperating sponsors.

Major findings and conclusions: The urban program has been an unqualified success. In Bolivia, where some would argue that urban migration is a desirable alternative to struggling for survival in isolated settlements on the harsh highlands, FFW has not only created employment for thousands of unemployed people, it has significantly contributed to the development of much needed infrastructure in the marginal urban areas.

The road component constitutes the single largest project type in Bolivia's PL480 Title II FFW program. Urban and rural efforts differ markedly. Urban roads and street projects are successful in generating employment, but are productively less efficient than private contractors would be, largely because most labor is untrained with no, or inadequate tools, and is not supervised using labor intensive management methods. Rural road activities are less successful in generating employment, especially in the case of large arterial roads (25 to 100 km) through the mountainous highlands. On these large roads, 70% of the costs are for heavy equipment. The use of little manual labor is exacerbated by the sparsely populated countryside. Road maintenance is a major problem that in part can be helped by reducing the quantity of road miles built and concentrating more on the quality of roads built.

The post-emergency focus on development is most notable in the rural program. Here, the role of Planning Assistance has been instrumental in encouraging the cooperating sponsors to better plan their projects. Out of these efforts, an integrated development approach is evolving. Food production projects, especially greenhouses, and in some cases small livestock raising, represent important, and often, first time agricultural extension efforts in the rural areas of the highlands. Because FFW is self-selecting, and is availed of only by the truly needy, the agricultural extension projects being fomented through FFW are finding their way into poor areas where hitherto no sustained agricultural development efforts have penetrated.

The cooperating sponsors, especially CRS/Caritas and ADRA have widely dispersed rural programs that suffer from a lack of focus and area concentration and too many projects, and the lack of resources to plan and monitor them. FHI's integrated rural program represents a model for the other agencies regarding an approach to geographical concentration. By limiting the number and type of projects it must plan for and monitor, and concentrating on a geographic area of focus, an agency creates greater opportunies for success.

There is also a need to introduce monitoring and evaluation systems in all four agencies. Monetization of PL480 Title II commodities can provide the resources necessary for planning, monitoring and evaluation systems. These resources are especially needed in CRS/Caritas' program which is totally lacking in planning, monitoring and evaluation activities.

The administrative costs of ADRA and FHI pose a problem. Both agencies are meeting a large part of their administrative costs through Outreach Grants which will not be renewed when they expire this year. A mechanism other than monetization of Title II commodities, such as an OPG from AID's Health sector, should be found to help ADRA and FHI meet these costs.

Finally, considerable benefit could accrue to the program if an independent study to quantify the development impact were implemented. Findings would clearly demonstrate the contributions the program is making to Bolivia's development, and also provide a basis for discussing related issues such as the disincentive and dependency effects of the program.

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Principal Recommendations:

(1) Cooperating sponsors should develop a strategic planning approach so that their efforts have a geographic focus, and respond to basic needs common to wide areas.

(2) A monitoring and evaluation system should be adopted by each cooperating sponsor.

(3) Cooperating sponsors should be encouraged to generate funds through the monetization of PL480 Title II commodities to meet the costs of planning, monitoring and evaluation systems.

(4) OPG funds should be made available to assist the cooperating sponsors meet some of their administrative costs when the current Outreach Grants expire.

(5) Productivity on urban road/street projects can be easily increased by providing adequate tools, especially wheel barrows, and organizing labor activities into supervised work gangs.

(6) Greater productivity on rural roads can be obtained by implementing one or more of the following: (a) improved planning of large arterial roads to determine labor and machinery needs, (b) contracting to private contractors machinery-intensive sections of large arterial roads, (c) giving priority to short (1-10 km) feeder roads (d) planning for large arterial roads only when they are part of a larger integrated development package.

(7) An independent quantitative impact study of development projects should be undertaken, to include a baseline and two rounds of follow-up data collection and analysis.

Lessons learned:

(1) The provision of complementary resources to FFW from PL480 Title I and Title III local currency generations, along with technical assistance to improve program management practices is essential to make FFW development oriented.

(2) The monetization of PL480 Title II commodities can provide cooperating sponsors with resources necessary to strengthen management capabilities.

(3) Rural programs are more effective when cooperating sponsors target geogaphically to areas of greatest economic need, and select project types that respond to felt needs common to the area.