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**NATURAL RESOURCE MANAGEMENT AND TITLE II FOOD AID:  
AN EVALUATION**

A Report Submitted to

**USAID/ETHIOPIA**

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# NATURAL RESOURCES MANAGEMENT AND TITLE II FOOD AID: AN EVALUATION

## Executive Summary

This is the report of an evaluation of the natural resources management (NRM) activities being implemented by a group of Non-Governmental Organizations (NGOs) in Ethiopia supported by USAID/Ethiopia with P.L. 480 Title II resources. The five NGOs included in this study were: the Relief Society of Tigray (REST), Food for the Hungry/Ethiopia (FH/E), Catholic Relief Services (CRS), World Vision/Ethiopia, the Ethiopian Orthodox Church (EOC), and CARE.

USAID/Ethiopia has been providing Title II resources to Ethiopia since the mid-1980's for both relief and development purposes. The activities evaluated in this exercise have been, in the main, of a "regular program" nature targeted at land rehabilitation and environmental stability as a fundamental prerequisite to achieving food security in the country. Since its inception, the Title II program has provided approximately 175,000 metric tons of food aid valued at about US\$ 150 million and equivalent to roughly 92 million person/days of food-for-work (FFW), most of which has been used for NRM objectives (soil conservation, reforestation and agricultural development). This evaluation is the first of its kind since USAID resumed assistance to the country in the mid-1980's.

The purpose of this evaluation was threefold: provide a body of independent feedback to the NGOs and USAID regarding enhancements to ongoing programs; provide guidance for the design and formulation of future programs of this type; and to contribute to the preparation of USAID's future development agenda linked to the agriculture sector. This evaluation was carried out at the "program level", aimed at analyzing the impact of regular food aid on the dual objectives of improved food security and environmental rehabilitation. It was not intended as an exercise to carry out a detailed input/output review or even overall goal achievement assessment of the programs evaluated.

The evaluation was undertaken by a four person team over the period September 7 to October 8, 1994. The team reviewed a wide range of program related documentation, interviewed NGO, USAID and TGE personnel, and visited a series of field sites where food aid was being used for natural resources management purposes in the Highlands of Ethiopia. Near the end of the evaluation period, a two-day Workshop was held in Addis Ababa with representatives of the NGOs and the TGE to review and elaborate the preliminary findings of the evaluation team.

The report which follows is divided into two principal sections. Section 2.0 presents a synopsis of the observations of

the evaluation team based on their assessment of the field sites visited and the related project level documentation. Section 3.0 constitutes the program-level Findings, Conclusion and Recommendations resulting from these field-based observations and an overall analysis of the program. These Findings with special emphasis on the Conclusions and Recommendations are rendered here in summary form below.

### **Findings:**

There can be little doubt that the Title II food aid projects and programs being carried out by the NGOs in the area of food aid and natural resources management are making a difference. These NGO activities provide a beacon of hope for countless thousands of rural Ethiopians who are responding enthusiastically in a country-wide effort to rebuild and rehabilitate the nation. The NGO community shares the awesome burden of making sure that this beacon burns bright-- with the message of hope kindled by self-reliance and self-realization.

The Evaluation Team has noted that there is earnest questioning going on everywhere, particularly at the field project level where questions such as the following are being asked: Are these the right technical packages? Are we creating food aid dependency? Other donor projects are using other approaches; why not us? The fact that these questions are being asked is in and of itself a cause for optimism about the future. This first comprehensive program evaluation of the food aid/NRM programs being carried out by the NGOs using USAID/ Ethiopia supplied Title II food aid is an opportunity to consolidate the gains made to-date, review what works and what does not, and move forward. While the issues raised below might give pause to the casual reader, the Evaluation Team is convinced that the challenges they present remain in the hands of those best equipped to handle them-- the committed and motivated staffs of the NGOs and their willing and hard-working community partners.

### **Technological Findings**

#### **Conclusions:**

- ◆ Food aid promotes an intervention-oriented approach to rural development particularly where it is used as FFW. This may be counter-productive to finding a wider array of real solutions to the problems. For example, meeting the challenge of land degradation can only be fully addressed by managing the use of the land and not by simply treating land.
- ◆ A number of the projects visited have clearly reached the point where regular food aid can effectively be suspended although USAID and the concerned NGOs need to confer to find out whether and how other forms of support might continue to

flow to these areas. Also other donors who share the support of these projects and currently are able to offer cash funded alternatives to food aid could be encouraged to step in and take over funding needs.

- ◆ Food aid dependency from the regular program does not appear to be an issue, given the relatively small amounts of food reaching the average household. Program dependency is, however, another issue which the NGO community must confront.
- ◆ USAID/Ethiopia and the NGO community must also take on the challenge of finding ways to diversify the use of food aid in certain other projects so as to delink it as a form of direct payment for rural works where appropriate.

#### Recommendations:

- ◆ Many of these more basic issues raised as the result of the evaluation exercise merit a concerted dialogue between USAID and the NGO community, oriented to broadly rethinking regular food aid program policies and approaches. The Evaluation Team recommends that USAID convene a food aid policy working group to begin regular (quarterly) meetings involving senior level NGO personnel to begin discussing them and agreeing on an action plan to resolve them.
- ◆ The Evaluation Team recommends that USAID seriously consider an NGO umbrella type support project as part of its future contributions to ag sector development in Ethiopia. This project would be designed to assist the NGOs to improve the performance of their present food aid/NRM projects and may also provide a funding vehicle for maintaining NGO support in areas where food aid is no longer the most useful development resource.

#### Planning, Problem Analysis and Program Design

##### Conclusions:

- ◆ Planning capabilities among these projects are wholly inadequate to the needs of these projects. Until and unless they improve, the NGOs will find it difficult to justify the continuing requests for support from USAID; proving impact will be even more difficult.
- ◆ Enhanced capabilities in planning are necessary to estimate both realistic food aid demand and the magnitude of land-use problems and opportunities as a prerequisite to making the fundamental improvements in both effectiveness (impact) and efficiency required by these projects.

- ◆ There can be no substitute for genuine popular participation as a basic and early step towards defining project objectives during the planning process. Consensus on local priorities, clearly identified by the participants and acted upon by the project will convince local people that change is possible and that they themselves can resolve their problems with help from outside entities. This is development
- ◆ The catchment approach as the basic analytical unit would facilitate planning and implementation of these projects.
- ◆ Logistics related to staff coverage and displacement, food aid deliveries and other important practical needs for implementation also need to be carefully taken into account when planning these projects.

#### Recommendations:

- ◆ The Evaluation Team recommends that USAID organize and support a planning training course-- geared to both food aid needs and land-use problems cum NRM intervention assessment for technical personnel of the NGOs. External technical assistance will be required to bring to the forefront more of the present state-of-the-art for both rural socio-economic analysis and participatory NRM strategies.
- ◆ Special attention should be accorded to training project personnel in putting in place participatory development mechanisms during the planning process for rural development projects. This will require enhanced socio-cultural and institutional capabilities within the staff of the NGOs.

#### Tree-Planting and Forestry Technologies

#### Conclusions:

- ◆ Although tree-planting is a generally successful element of most NGO Title II programs, it is not a panacea for the land-use problems of Ethiopia.
- ◆ In many areas, because of population density, achievements in planting trees may have a direct impact on other land-uses, in particular land normally allocated for grazing. In these "zero sums situations", displacement of livestock may exacerbate over-grazing elsewhere and accelerate erosion elsewhere.
- ◆ Quality counts. There is ample opportunity to improve NGO reforestation efforts by: raising the technical standards of nursery production and outplanting, improving species/site matches, and using more cost-conscious approaches to revegetation.

- ◆ There is a persistent problem of mis-matching of species to site and in choosing mixed plantations, both of which mean lower effectiveness with tree-planting.
- ◆ The use of closure areas should be expanded significantly by all NGOs.
- ◆ The real test of the success and sustainability of tree-planting efforts will only be evident as rural people replicate the patterns. Serious attention is needed to the issue of harvesting and marketing the products of these plantations. Supply and demand for wood products should not be taken for granted.

#### Recommendations:

- ◆ The combined NGO community should carefully re-examine its tree-planting programs in order to improve the quality and applicability of these activities. This may perhaps best be achieved by contracting the services of a local consultant to review the findings of this section of the evaluation report and to prepare detailed guidance for improving the tree-planting and forestry components of the projects. The consultant would work in close collaboration with senior foresters from each of the NGOs who in turn would use the guidance as the basis for training their field staff. An important objective of this work would be to resolve the species/site matching prescriptions used for reforestation in Ethiopia.
- ◆ Careful attention should be focused on the instances where mature plantations established under these projects are now ready for handing-over, local management and harvest. The efforts at the Sorge Forest by FHI should be developed as a pilot model for similar operations elsewhere.

#### Soil and Water Conservation Technologies

##### Conclusions:

- ◆ The application of soil and water conservation needs to be rethought and revitalized in these projects. Food aid policies for conservation (working on private land, delinking food aid as payment) for these interventions must be clarified so as to ensure that local people do not come to regard it as either employment opportunities or the responsibility of third parties.
- ◆ Soil and water conservation is not an end in itself. Present efforts are too narrowly focused on structures for containing run-off and erosion. More work is needed on improving soil

quality and thereby ensuring direct benefits from these investments in the form of improved agricultural productivity.

- ◆ Both pre-treatment protection of degraded areas and post-treatment maintenance of soil and water conservation practices would increase their effectiveness significantly.
- ◆ The NGOs are not utilizing the present range of known technical conservation interventions nor are the activities being implemented reaching a high enough standard of quality to guarantee even their short-term impact.
- ◆ Soil and water conservation practices are most effective when carried out on a catchment basis.
- ◆ Roads and paths have a significant and largely unrecognized impact on land degradation. In general, protecting rural infrastructure through the useful application of food aid for public works projects is an excellent target for FFW.

#### Recommendations:

- ◆ The policy concerns raised above regarding conservation efforts should be tabled by the food aid policy working group mentioned above and field-informed recommendations clarifying the issues should be sought.
- ◆ This is another area where the Evaluation Team recommends that a knowledgeable local consultant be contracted to plan and implement a state-of-the-art conservation training course for senior NGO technical personnel.
- ◆ The NGOs must widen the array of soil conservation technologies they are using and move beyond those intended to control and contain water run-off and soil erosion. Specific measures to improve soil quality should be increasingly employed, including: green manure, composting, cover crops, managed use of crop residues, crop rotation and inter-cropping, enhanced fallow, no tillage, etc.

#### Agricultural Development

##### Conclusions:

- ◆ The real challenge is to raise agricultural productivity; soil and water conservation will not be enough.
- ◆ Roads, markets and social services will be important components of diversification of rural economies for structurally food deficit areas. Off-farm employment opportunities for the poorest small farmers will be the only vehicle for resolving their food security risks.

- ◆ Working on the improvement of staple crop productivity is being largely overlooked. Present agricultural diversification efforts while important may have small impact given average land holdings.
- ◆ Earthen dams and similar small-scale irrigation works seem to be useful activities for increasing local agricultural productivity. They are, however, both costly and extremely technocratic undertakings. A high level of professional expertise, rarely available at the NGO level, is needed in order that such works be fully effective and efficient.
- ◆ Food aid may not be well adapted to the challenges of raising agricultural productivity. Projects must build in micro-entrepreneurship as one of the skills towards self-reliance.
- ◆ Replication is the best measure of impact for agricultural extension.

#### Recommendations:

- ◆ If regular food aid programs are indeed to have greater impact on the food security issue, the Evaluation Team strongly recommends that they expand their efforts aimed directly at improving agricultural productivity. This may require going beyond the means available through the use of food aid as the primary resource.
- ◆ The NGOs should review their staff capabilities and determine if they have the sufficient level of technical expertise needed to address the challenges of improving agricultural productivity, in particular as concerns small-holder farming systems and small-scale irrigation.

#### The Challenge of Livestock

##### Conclusions:

- ◆ The real challenge of livestock has as yet to be adequately addressed in these NGO food aid programs. Over-grazing is the single most important cause of land degradation in Ethiopia today.
- ◆ Improved livestock husbandry is a complex issue requiring a broader approach than is currently being attempted. Beginning to address it cannot be postponed if real progress in both productivity and sustainability are going to be achieved.

- ◆ **Raising animal productivity must be the message; how it can be accomplished will be part of the dialogue with farmers. Focus on the positive.**

#### **Recommendations:**

- ◆ **Each of the NGOs must seriously consider how it is dealing with the livestock and over-grazing problem; further delay is simply postponing finding real solutions to the major land-use issue in the country.**
- ◆ **USAID and the NGO community should appeal to ILCA for assistance in addressing the challenge of over-grazing. USAID should provide direct support if necessary for mounting a preliminary training course by ILCA personnel for the staff of the NGOs on this issue.**

#### **Socio-Economic, Institutional and Administrative Issues**

#### **Conclusions:**

- ◆ **Building representative local organizations as a vehicle for ensuring wide popular participation in these programs (and for the future) should be a stated development objective as important as any physical interventions.**
- ◆ **Project field staff seem overworked by the excessively quantitative nature of the projects (delivering food aid and achieving NRM targets), perhaps to the point where they have inadequate time to consider the qualitative dimensions: planning, participation and impact assessment.**
- ◆ **Incorporating local personnel of the Ministries into project field staff is an opportunity that makes sense and is well worth pursuing. This staff, however, may need additional training and preparation to be fully effective in these roles.**
- ◆ **NGO field staff-headquarters relationships-- in particular as concerns communications and coordination need to be improved.**
- ◆ **The NGOs involved in the Title II program do not have adequate opportunities to meet together and exchange experience about their essentially similar efforts; lessons learned are being lost.**

#### **Recommendations:**

- ◆ **USAID should encourage the NGOs to add personnel to their staffs with suitable training and experience in the area of participatory development and institution building to counter the issues identified above.**

- ◆ The NGOs must seek additional opportunities for inter-organizational interchange wherever and whenever feasible, both at the field level and among headquarters personnel. Hopefully, the policy working group recommended at the outset could serve as the primary nexus for achieving this objective.
- ◆ USAID should continue to encourage the NGOs to improve their working relationships with the emerging government ministerial capabilities, both at the field level and in Addis. Where feasible, ministry personnel should be included in training activities set up for NGO personnel engaged in these programs.

## PREFACE

This evaluation exercise could not have been accomplished without the unconditional support of the NGOs involved in the program. The many manifestations of traditional Ethiopian hospitality and logistical support for the team over the weeks of field visits was exemplary. In all cases, the NGO personnel demonstrated a "can-do" attitude-- a fundamental prerequisite for working in the challenging arena of smallholder rural development in a fragile land. Furthermore, the dedication and enthusiasm of outposted field staff working in isolated areas was for the evaluation team a symbol of the future. The evaluation team feels itself truly privileged to have been allowed to share in this enthusiasm and participate in a small way in this program.

The evaluation team is most grateful to the individuals involved, too numerous to name, for facilitating their work and making it both interesting and enjoyable. More importantly, however, the evaluation team must underscore the sincerity and frankness encountered among many staff anxious to improve the programs and address the issues raised. This willingness to discuss, dissect and move forward correcting the issues identified was a profound demonstration of their true commitment to the destiny of the rural people and the nation they serve.

Despite much hard work and considerable achievements, the food aid assisted natural resources management program does presently confront significant issues as it moves forward. The evaluation team is firmly convinced that the capabilities, and in particular, the commitment amply evident among the NGO staff equips them best for meeting these challenges.

This report is respectfully dedicated to the men and women of these NGOs.

This evaluation report, the first such exercise after more than six years of program implementation, falls short in many ways. It raises many issues and offers a series of recommendations. It is only one step along a continuum towards improved problem identification, program adaptation and implementation. Making these improvements, however, will be, in and of themselves, examples of the real "process of development".

Enhanced participatory mechanisms to more fully engage client farmers; raising productivity in sustainable ways; reaching for environmental stability; and improving the effectiveness and efficiency of the institutions and organizations serving rural people are the challenges of "our times". Ethiopia is clearly a country in transition, poised to address each of these challenges. The NGO community involved in food aid assisted natural resources management has the field-informed experience with which to

contribute widely to these national objectives. The Transitional Government of Ethiopia and USAID should, without doubt, continue to support, facilitate and nurture these NGO initiatives and capabilities-- basic building blocks and services for a people and nation moving ahead.

## Acronym List

AIDAB	Australian International Development Assistance Bank
Br	Ethiopian Birr (approx. 6 Br to the US Dollar)
CARE	Cooperative for American Relief Everywhere
CBD	Community Based Development
CEFIS	CARE Ethiopia's Food Information System
CRS	Catholic Relief Services
EHRDP	Eastern Hararghe Relief and Development Project
EFAP	Ethiopia Forestry Action Program
EOC	Ethiopian Orthodox Church
FEWS	Famine Early Warning System
FFW	Food for Work
FFP	Food for Peace
FFR	Food for Relief
FHI	Food for the Hungry, International
FY	Fiscal Year
GOE	Government of Ethiopia
ha	Hectare
IADP	Integrated Agricultural Development Project
JICA	Japanese International Cooperative Assistance
LWF	Lutheran World Federation
MOA	Ministry of Agriculture
MNRDEP	Ministry of Natural Resources Development and Environmental Protection
MYOP	Multi-Year Operational Plan
MT	Metric Ton (1000 kg)

NGO	Non-Governmental Organization
NRM	Natural Resources Management
ODA	British Overseas Development Administration
PA	Peasant Association
REST	Relief Society of Tigray
RRA	Rural Road Authority
RRB	Relief and Rehabilitation Bureau (TGE)
RRC	Relief and Rehabilitation Commission (TGE)
SCF	Save the Children Federation
TGE	Transitional Government of Ethiopia
USAID	United States Agency for International Development
USG	United States Government
WFP	World Food Programme
WVE	World Vision Relief and Development Intl, Ethiopia

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# NATURAL RESOURCES MANAGEMENT AND TITLE II FOOD AID: AN EVALUATION

## 1.0 Introduction

This is the report of an evaluation of the natural resources management (NRM) activities being implemented by a group of Non-Governmental Organizations (NGOs) in Ethiopia supported by USAID/Ethiopia with P.L. 480 Title II resources. The five NGOs included in this study were: the Relief Society of Tigray (REST), Food for the Hungry/Ethiopia (FH/E), Catholic Relief Services (CRS), World Vision/Ethiopia, the Ethiopian Orthodox Church (EOC), and CARE.

Given Ethiopia's chronic vulnerability to famine, these same NGOs have long been involved with emergency relief. USAID/Ethiopia began providing relief and development resources through Title II in the mid-1980s. In addition to emergency relief, USAID has also been supplying "regular" program food to these organizations with an aim at addressing the longer-term needs of improved food security. Ethiopia is one of the six countries in the world (the others being Haiti, India, Bolivia, Peru, and Ghana) which account for half of all Title II resources (FAM 1993). In recent years, Ethiopia has been Africa's largest recipient, receiving 32,755 MT in FY92, 40,896 MT in FY93, and 56,798 MT in FY94. Since the inception of the Title II program in Ethiopia in the mid-1980s, approximately 275 thousand metric tons of food aid has been delivered with an estimated value of US \$ 150 million and equivalent to more than 90 million person/days of work.

Although famine in Ethiopia is often triggered by drought, there are many areas of the country where because of population pressures and a fragile and degraded environment, rural people are barely able to meet their nutritional needs even in years of normal rainfall. This situation has been exacerbated by the years of internal war and the ill-conceived economic development policies of the previous regime. As population has increased, the land has been less and less able to meet the basic needs (food, fodder, fuel and water) of the people.

It is therefore not surprising that per capita food production and consumption has shown a negative trend in the period 1961-1987 (Webb et al 1992), one of the primary justifications in the past for the continued use of food aid. These circumstances have also left rural people dependent on the uncompromising realities of a land wreaked by erosion, depleted soil fertility, increasing deforestation and watershed degradation. Hence, even minor fluctuations in farm productivity resulting from erratic rainfall and/or outbreaks of farm pests can provoke localized food crises.

## 1.1 Purpose of the Evaluation

USAID/Ethiopia anticipates that P.L. 480 Title II resources will continue to flow to these NGOs and their activities will and must continue to be focused on mitigation of food security concerns, largely through NRM activities aimed at improving agricultural productivity. In addition, USAID has begun the process of widening its role in Ethiopia with the preparation of a country strategy featuring agriculture as one of its four strategic objectives. Regular program food aid and its NRM based focus on agricultural improvement is seen as a bridge to coming agriculture sector programs. The Transitional Government of Ethiopia (TGE) has also clearly indicated that one of its major priorities is to protect and rehabilitate the environment and the land and water resources on which production is dependent. Similarly, several of the NGOs who have been involved in this program for some time have expressed a concern about finding more creative approaches to the use of food aid for NRM purposes (Harvey personal communication).

Accordingly, the purpose of this evaluation is to draw lessons learned from the now substantial field experience with Title II funded NRM activities. These lessons may potentially serve to:

- provide a body of independent feedback to the NGOs and USAID regarding enhancements to ongoing programs;
- provide guidance for the design and formulation of future programs of this type; and
- contribute to the preparation of USAID's development agenda linked to the agriculture sector.

It is also expected that this evaluation exercise will facilitate the diffusion of lessons learned by encouraging interchange among the various NGOs involved in these essentially similar programs. This evaluation of the food aid/natural resources management projects is the first of its kind undertaken since the beginning of the program more than eight years ago.

## 1.2 Scope of the Evaluation

In carrying out this evaluation two key themes from the scope of work (see Appendix A for the full SOW) were emphasized: the appropriateness of technical interventions being employed by the NGOs in conservation and natural resources management, and the overall effectiveness of NGO NRM programs.

The report which follows first presents a section (2.0) with detailed discussions of the observations of the Evaluation Team for each of the field visits to individual NGO project sites. An attempt has been made in this section to provide a fairly comprehensive report on the observations at each site thought

likely to be of high interest to the concerned NGO. The Evaluation Team made a point of raising their observations with the NGO staff present so as to elicit field informed responses and get the process of improvement going as soon as possible. In every case, the NGOs responded well to these observations and a healthy and collegial dialogue characterized each field visit.

The final section of the report (3.0) presents the analysis of these field observations in the form of program-level evaluation findings, conclusions and recommendations. For the sake of analysis and discussion, the findings (which were also utilized for presentation at the Evaluation Workshop) are grouped under two broad headings: technological issues and socio-economic, institutional and administrative issues. The intuitive reader will, however, recognize that almost by definition these categories are inherently inter-related.

The reader should also note that this evaluation was at the "program level", aimed at analyzing the impact of regular food aid on the dual objectives of improved food security and environmental rehabilitation. It was not intended as an exercise to carry out a detailed input/output review or even overall goal achievement assessment of the programs evaluated. This would have clearly been beyond the scope and resources of the team. It may fairly be said that despite the recommendations for program enhancement contained herein, the evaluation raised more questions than it answered. This is in keeping with the conviction that given the essentially national character of these programs, that it will be the NGO staff and their client participants who must and will ultimately have to grapple with the issues raised and integrate them into their program planning and implementation.

### 1.3 Evaluation Methodology

A four person team, including a Team Leader/Natural Resources Management Analyst (provided by USAID/Ethiopia), a Forester, a Workshop Facilitator and a Representative of the TGE, undertook this evaluation during the period September 7 to October 8, 1994. The services of the Forester and the Workshop Facilitator were provided by the Office of International Forestry at USDA Forest Service. The TGE Representative was a senior member of the staff of the Planning and Programming Department of the Ministry of Natural Resource Development and Environmental Protection.

The core activity of this evaluation was a series of field visits to the ongoing project sites of the partner NGOs in the north, east and south of the country. See Appendix B and the accompanying map for the itinerary and location of these field sites. In each project area, the team met with and sought to integrate a wide range of project participants (NGO staff, local Ministry Bureau officials and farmer participants) in the

discussion and analysis of the activities being reviewed. See Appendix C for a list of persons met.

In addition to field visits, the team had an opportunity to meet with senior food aid and NRM staff (some of whom joined the evaluation in the field at specific points) of the NGOs in the capital. A good deal of relevant documentation, in particular Multi-Year Operational Plans (MYOPs) and Annual Reports were reviewed in the course of this exercise. See Appendix D for the list of references reviewed.

Near the end of the evaluation period, a two-day workshop was convened in Addis Ababa to which the NGOs and other interested parties were invited in order to review the preliminary findings of the evaluation team. This workshop also included keynote presentations on future directions for food aid supported NRM activities as seen from the perspectives of USAID and the NGO community in Ethiopia. A series of working groups reviewed and discussed the evaluation findings, provided additional clarifications and generated a series of conclusions and recommendations (See Appendix E- Workshop Schedule and Report). The views expressed during the workshop have been incorporated into this report.

## 2.0 FIELD VISIT REPORTS

The brief reports which follow have been prepared by the Evaluation Team for each of the NGO project sites visited. They are at best only a synopsis for each of the sites, based on information gathered quickly during an intensive two and one-half weeks of field visits. In some cases, they were facilitated by the availability of more detailed descriptive information<sup>1</sup> provided by the NGOs and accordingly are both more detailed and lengthy. In certain cases, NGO responses to a voluntary questionnaire sent to them in anticipation of this evaluation exercise proved helpful in understanding and analyzing field experience. The returned questionnaires have been included in this report as Appendix F.

By agreement with USAID, these field visit reports do not attempt to reflect the magnitude or level of achievements reached by many of these projects nor the hard work and dedication of the staff and participants to reverse the tide of environmental degradation in Ethiopia. This information on achievement can be found elsewhere, particularly in the annual reports submitted by the NGOs to USAID.

There are doubtless errors of both interpretation and fact in these essentially narrative reports. Their objective is to provide part of the basic inputs for analysis and discussion about the regular food aid program and NRM based interventions. They cannot document the full set of background, data and information on which the Evaluation Team based its assessment of the potential lessons learned. Indeed, much more has gone into this assessment, especially the lengthy discussions about the issues raised with concerned project staff which provided the basic grist for the analytical findings found in the next section of this report. Much of what has been compiled here will be of primary interest to the NGOs involved; hopefully it will also provide the reader with an understanding of the issues synthesized in the next section on Findings.

These field visit reports follow here in the order in which they were visited with the exception of the two World Vision sites which were grouped together for ease of reference.

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<sup>1</sup> The MYOPs typically do not provide detailed site description information nor in-depth problem analysis. In the case of several NGOs, in fact the information provided is rather general on these matters owing to the fact that a good deal of information has been aggregated for planned activities over several similar regular program food aid sites.

## 2.1 Ethiopian Orthodox Church- Ginager Project

In March 1990, the Ethiopian Orthodox Church (EOC) prepared a Multi-Year Operation Plan (MYOP) for the years 1991-1993. The plan called for activities that would be implemented in four different areas in Ethiopia. Following approval of the MYOP, some of the targeted areas were deselected due to the war and security concerns. Ginager, in North Shoa, was added as a replacement for one of the dropped areas. Work in Ginager was started in 1991. The food aid that was used to drive this project had been allocated for a different project with different goals, objectives, and targets.

Ginager is approximately 140 kilometers to the north of Addis, in Asagirt Woreda. The area is hilly, heavily grazed, and largely treeless. Average land holding is reported to 0.25 ha per household and the area is said to be one of the poorest in the country. Ginager may properly be thought of as an area of structural food deficit.

Population of the woreda is approximately 37,000, distributed in 36 Peasant Associations. Approximately 25,000 residents have participated in FFW activities to-date. The 1994-96 MYOP targets 7,000 residents as beneficiaries.

Work over the past three years has involved road construction, seedling production, distribution, and planting, terrace construction, farmer training, and most recently, demonstration and training in vegetable production.

Monetization of a significant portion of the project's food aid to enable the construction of a road<sup>2</sup> and the purchase of a flour mill has reduced FFW resources for natural resource management activities. The 37 kilometer access road was constructed by the Rural Roads Authority who were paid to do so by EOC using money generated by monetizing food aid allocated to the project by USAID. While there are indeed monetization funds allowed under the Title II program to finance machinery rental of the kind undertaken by EOC, the commodities monetized by the local EOC staff were intended for food-for-work. The sale of those commodities was not authorized and would not have been authorized because of the implications for food security in the area. EOC has now been enjoined from any such future monetization efforts.

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<sup>2</sup> A previous project working in this same area and supported by Lutheran World Relief tried FFW-based road construction. The success of these efforts, some still barely visible in a line parallel to the new road, was limited by the rockiness of the area which constrained necessary cut and fill for proper road bed layout.

Project impact, however, particularly insofar as the road is concerned as measured by local resident comments has been positive. Local residents mention improved access to health care, better prices for the crops (farmers are now getting 15 Br for a sack of hops compared to the previous price of 10), and a rejuvenation of the local economy as benefits due to the presence of the road.

The road has been well laid out but unfortunately too few water management devices (culverts and cut-outs) have been installed. The roadbed itself channels large amount of run-off together and where it finally dumps off the roadway, it can be seen to be causing severe erosion, including in nearby productive fields. Hopefully, the Rural Roads Authority will take responsibility for the maintenance of this important road or its trafficability will be soon limited by these construction flaws.

Using the remaining resources available, the project's activities to date have included, nursery production, communal woodlot plantation, distribution of seedlings to farmers, terracing, farmer training in soil and water conservation, and recently, vegetable production demonstration.

The technical quality of the terraced hillsides visited in the Ginager Project area is generally poor. Terraces do not follow the contour, are poorly constructed, and are often too closely spaced. Remnants of older, project terraces constructed during an earlier period do follow the contour and appear to have been spaced more rationally. Farmland has been converted to terraced woodlots in an area that suffers from a shortage of arable land.

According to project reports, 736 km of terraces have been created since 1991. For the years 1991-93, achievements were consistently less than 50% of targets (targets for 1994 are not known). Whether this is a function of insufficient FFW following monetization or lack of local interest is not known. However, under achievement may be due to insufficient communal and private land (this would also explain the extremely tight spacing of the terraces). Removal of communal grazing areas for terracing and tree planting where land is so scarce will probably draw little interest (land for nursery and demonstration plots needed to be "purchased" with FFW and the project had to provide work to the families of those who "donated" land). Creation of tree plantations on terraces in an area where households get by on 0.25 ha seems like an extravagance.

According to project staff, local farmers dislike terraces because terraces interfere with their plowing. At one site, a farmer had agreed to the installation of terraces on his land, using FFW labor, only to remove the terraces once the food had been delivered. Terraces and tree planting figure importantly in FY'94-96 MYOP.

Trees have been planted primarily along stone banded terraces. The purpose of tree planting is production of construction and fuelwood and reduction of soil and water loss. Rights to trees planted on communal areas have yet to be determined. Based on a brief field inspection, seedling survival rates appeared to be poor. The project had no data on survival, however, they estimated survival on communal lands at 80%.

According to project staff, distribution of seedlings for private planting has drawn increased interest with each year. One farmer contacted during the site visit had purchased seedlings for planting on his own land. This same farmer had benefited from FFW terracing and tree planting on his fields. A second farmer had serious doubts about the merits of planting trees, particularly insofar as his eventual ownership rights were concerned. With such small land holdings, and with tenure problematic, tree planting on communal lands may not be the best use of limited resources. These communal areas are now primarily used for grazing; project staff are uncertain as to whether the animals have been displaced because of the widening spread of tree plantations. At one site viewed by the Evaluation Team, animal damage from grazing was evident in the plantation.

Training is an important part of project activities; 1650 farmers have been trained in soil conservation, nursery development, tree planting, and vegetable production.

Vegetable production began as a demonstration activity in FY'94. A field next to the project nursery was planted with vegetable crops appropriate to the region. Production of vegetables is intended primarily for the local market, but sale to the Addis market is also seen as a possibility. This activity should be encouraged, particularly as it has a good chance of impacting on women's income.

The short visit of the Evaluation Team did not provide an opportunity to delve sufficiently into the institutional arrangements for the project or its relationship with local agencies, Ministries and other organizations. EOC staff report a close working relationship with MNR and MOA agents whose role they characterize as one of providing technical guidance to the project. Another NGO has recently begun working in the woreda. Baptist missionaries started work in spring development, nurseries, and resettlement of demobilized soldiers. Apparently there is a concern among local people that this group will link its assistance to them with its evangelical objectives. The EOC, however, may wish to explore closer collaboration with the Baptist Mission, provided an understanding on proselytism can be reached.

Technical and administrative problems are known to have plagued the project's natural resource management activities. Rapid staff turnover, corruption, and theft of food (235 quintals)

and complaints about a predominantly top-down approach to the planning process have further undermined the project's ability to affect positive change.

A project management committee, which includes project staff, TGE representation, and local community leaders is responsible for planning FFW activities and selecting participants (7,000 of a total population of 37,000). Starting in 1995, the selection committee will include 2 female members in an attempt to stimulate greater involvement of women in the development process.

Little information is available on the impact (that is the outcome of the project as opposed to the completion of annual achievement targets) of the project's NRM activities. Like the other NGOs participating in the Title II regular food aid program, EOC has recently been charged by USAID to improve its ability to track and report on impact. Impact indicators have yet to be developed. The FY'94-96 MYOP calls for the gradual development of procedures and staff familiarization with the concept.

The EOC is currently undertaking an independent evaluation of all four sub-projects. The Evaluation Team visited the Ginager area in the company of one of the local consultants undertaking this independent evaluation. Evaluation of three of the 4 sub-projects has been completed. The first draft of the consultant's report will be available soon. This independent evaluation will be very important considering the wide array of problems the project has confronted. It represents an opportunity to rethink and restructure what at this point can only be characterized as a flawed project. EOC personnel and USAID are encouraged to carefully consider the findings of this evaluation.

The FY'94-96 MYOP presents a continuation of previous activities: namely nursery production, terracing, farmer training, and vegetable production. Road construction and maintenance are also included.

## **2.2 Relief Society of Tigray (REST)**

The Relief Society of Tigray was established in 1978 as the social welfare and development arm of the Tigray Peoples' Liberation Front (TPLF). It has been involved in providing food aid to drought victims and war refugees, typically as free food often supplied to displaced persons, since that time. Even before the political struggle began, food shortages and periodic famine in Tigray, mainly induced by drought, were relatively common phenomena.

Since independence, a low level of central government support for regional development in Tigray, and the subsequent faulty

economic and social policies of the Derg Regime, combined with the struggles of the civil war, left the area highly underdeveloped. For example, there are no tarmac roads in the region. This situation has exacerbated its vulnerability to food insecurity, something easily triggered in the uncompromisingly austere environment of the region.

After the 1984/85 famine, and as increasingly large portions of the region came under the control of the TPLF and refugees began returning from the Sudan, REST's approach to food aid shifted to community oriented rehabilitation. Long years of experience with food aid contributed to an awakening understanding of the need to develop a sound food aid policy. Although it is still difficult to understand or determine how REST calculates annual food aid needs requests, an improved policy environment targets food aid with specific objectives: enabling rural people to undertake environmental rehabilitation, avoiding out-migration, and continuing to support the most vulnerable segment of society.

The armed struggle against the previous regime kindled a high level of community consensus and cohesiveness which has enabled REST to organize, inform and mobilize a massive grass-roots approach to soil and water conservation. This social cohesion is one of REST's present strengths. They seem to recognize, however, that they will have to deliver on this social compact made with the people or risk losing this advantage.

Since 1989, this work, best characterized as terracing with stone bunds, supported by relief food aid was undertaken by all the able bodied farmers throughout the Region. To-date, over 225,000 hectares have been so treated. Because of the massive challenge, and the large number of people involved<sup>3</sup>, REST created a new food aid modality called Food-for-Recovery. Rather than full rations (3 kg. per day), participants receive 15 kg. per month for their participation in these voluntary programs. This approach was also thought to be important so as to avoid creating food aid dependency and to stimulate a self-help ethic among the local people (see further discussion about this point below).

Recognizing that the root problems of food insecurity in the region could not be arrested with relief alone, REST embarked on a

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Mass mobilization for Soil and Water Conservation in Tigray: In the early years, terracing work was performed by the community on a regular basis, wherein farmers worked 4 days a week for 5 months out of the year. In 1994, with peace and stability in the region, and a decline in the need for relief food, the work regime was reduced to 3 days a week for 3 months out of the year.

new and more integrated approach<sup>4</sup> to the use of food aid for agricultural development in the early 1990's. The present USAID Title II regular food aid program (in conjunction with relief aid still flowing into the region) began in 1992; it is called the Integrated Agricultural Development Program (IADP). Building on their previous experience with relief and rehabilitation, the new program approach embodied a series of important principles:

- Relief and rehabilitation was to be integrated with development and all those capable of working would be encouraged to take part.
- Food aid is provided as support to the community and not as payment for labor so as to foster community initiatives and self-reliance.
- Distribution of food would be targeted at those most in need with the selection of beneficiaries left to the grass-roots community level (the "Baitos").
- A social safety net would be maintained for the most vulnerable groups for whom free food would continue to be provided.

Regular program food for REST programs from USAID is provided under the auspices of Catholic Relief Services (CRS). It is expected that REST will become a direct participant in the Title II program in FY 1996. Regular program food allocated to REST amounted to 4119 MT in FY 1993 and 4177 MT in FY 1994; 5516 MT were requested for FY 1995 although this also includes an amount earmarked for MCH programs.

The present Title II funded program is operating in the Central Tigray Zone II. The original proposal to USAID through CRS targeted 17 relatively inaccessible woredas in this zone although only 10 were actually selected and became operational in 1992.<sup>5</sup>

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<sup>4</sup> It is worth noting as well that REST has a program for the internal purchase of food aid with funds received from the donor community, eg. GTZ. The decision to take this approach has a number of advantages: faster response time, higher cultural acceptability of locally produced food, cost savings because overseas transport can be avoided, and the stimulation of local production and markets.

<sup>5</sup> In FY 1995, in order to further consolidate and strengthen their programs, REST will limit its USAID funded Integrated Agricultural Development Program to four woredas, three from among the previous ten in the Central Zone and one in Eastern Tigray. It is understood that this is in part a response to the massive outpouring of development assistance now reaching the Region as the

Under the IADP<sup>6</sup>, there are seven basic sub-programs aimed at agricultural development; they are;

- Soil and Water Conservation
- Reforestation
- Agricultural Extension
- Livestock Development
- Seed Banks
- Rural Water Supply
- Farm Access Roads

The Evaluation Team visited a wide variety of sites at which these interventions were on-going, however, because of the size of the project area and difficult access to many areas, no comprehensive survey was undertaken. The sites visited did, however, provide a useful overview and the basis for a stimulating interchange with REST environmental rehabilitation and agricultural development personnel.

At Selecklecka Village, on the road between Shire and Axum (outside the program area), the Team saw the first of several examples of closure areas. If the many other areas (there are more than 100,000 hectares of closure area in Tigray) so designated have reacted as well as this example, there is undoubtedly great promise to this type of protection and management. This large forest area extends up the flanks of the hill above the village and covers several hundred hectares. It was established many years ago because of the problems of erosion, flooding and water supply plaguing the area. Real progress in protecting the natural vegetation has been made since the introduction of food aid used to pay guards. Tall trees of native Acacia spp. now dominate the site

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donor community responds to the post-war development needs and opportunities.

<sup>6</sup> In addition to the food aid and cash associated with the USAID funded Title II resources, this program is also co-financed by several other donors: European Union, AIDAB- Australia, ODA- United Kingdom, and NORAD. Understanding the interplay of how these combined resources are used is difficult; REST field staff themselves often have difficulty in explaining the origins of the support for particular portions of the activities. This is in part a vestige of the projectized approach to development in which each donor establishes separate agreements with REST. A genuine "program-oriented approach", with a single local program designed and managed by REST, and for which individual donor support is sought and clearly identified, might be easier for all concerned.

along with occasional patches of Eucalypts and Neem<sup>7</sup> which were planted in the more degraded sites.

A local resident pointed out to the Team that there had been some recent incursions into the forest, presumably because with the onset of peace, people are starting to aspire to meeting their just needs. The implication is that the interests of the livestock owners and herders are not adequately represented on the Baito. Changes of this kind are in the air and projects such as this one would be well advised to take them into consideration rather than to oppose them on principle. The village Baito has plans to take over the protection of the area once food aid ends.

Although the area serves as an important catchment forest, it could probably be brought under some form of conservative management, allowing cut and carry grass collection (typical in other established closure areas), dead wood collection for fuel, and perhaps even some harvest of the Eucalypt poles. When questioned about grazing pressures, this same informant observed that some people had indeed objected to the closure because of the loss of grazing areas. He further indicated that additional areas are being brought under a similar closure scheme at the decision of the local Baito. Some form of utilization will eventually be needed as an increasing percentage of these lands are closed and livestock remains an important element of local production systems.

The Evaluation Team next visited the REST Nursery at Caebi in Feresmay village in Hahayle Woreda. Established in 1992 as part of the IADP, the site is one of the larger central nurseries in the Axum area. Its larger seedling production capacity (500,000 seedlings per year) is attainable because it is located on the banks of a perennial river. REST has been set up many (87) community nurseries elsewhere in the program area largely because of the problem of localized competition for water supply and to minimize transport distances in these rugged areas.

The Caebi Nursery itself is technically managed by one of the MNRDEP Bureau personnel and employs on average about 60 workers

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<sup>7</sup> Numerous examples of trees referred to as Neem were seen in Tigray (and elsewhere in Ethiopia). The author, however, examining these trees feels that they are more likely to be Persian Lilac (Melia azedarach) rather than Neem (Azadirachta indica). The flowers of the trees seen are violet to light purple in color typical of the Persian Lilac; Neem flowers are usually white or pale yellow. Persian Lilac is known to be better adapted to cooler, highland sites than Neem. This distinction has little bearing on the growth of the trees although it may be important if projects are planning to make use of the oil of the seeds for pesticides, something common with Neem but unrecorded in the literature for Persian Lilac.

paid with FFW on a daily basis. During certain parts of the season, as many as 200 laborers may be hired to meet work needs, for example, for filling plastic pots. This latter point about the utilization of Ministry Bureau personnel is an important one. Throughout these REST programs areas, and presumably throughout the Region, Bureau personnel have been fully incorporated into the programs, acting as the field implementation staff for the program. REST provides resources (food and cash) to operate the programs, providing technical backstopping, training and coordination as well.

REST annual seedling production for the IADP is a relatively modest 7 million plus seedlings; the second quarter nursery status report for FY 1994 lists production of 7,259,192 million seedlings of 52<sup>8</sup> plus species, including 7 fruit species, in the ten woredas. Reportedly approximately 25% are destined to be used for reforestation on communal planting sites with the remainder distributed to private farmers for planting around the house yard. REST personnel explain that while there is high interest in tree-planting, the actual area available to do so is relatively limited, both around the households and in agroforestry configurations in the crop areas. Livestock grazing on the higher steeper areas is so extensive that tree-planting on these communal areas must be carefully brokered with the Baitos concerned (see discussion below on land-use issues).

The nursery also includes an area dedicated to agricultural diversification with demonstrations of vegetables, fruit trees and fodder grasses. These emerging efforts are laudable although the fact remains that most of the species being introduced have watering needs which exceed the local rainfall, even in a normal year. One gets the impression that they are a well-intentioned, but poorly thought-out effort to find a "techno-fix" to the problems of high population density, inappropriate agricultural practices, low overall agricultural productivity and poor rainfall.

In effect, this approach of seeking new species to introduce ignores the real challenges of improving the productivity of the primary crops and of the land-use patterns in the area. Soil and

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<sup>8</sup> While this wide range of 52 species is a laudable attempt to meet both demand and site specifications, it must be very difficult to plan and program and to ensure quality seedling production because of the need to understand the technical specifications for so many species. The seedlings seen outplanted in the field were at best of only medium quality. Mixed plantations involving various species reduce the efficiency of reforestation efforts and inevitably entail errors in matching species to site. In general, reforestation programs should endeavor to "keep things simple", especially if local people are not familiar with some of the species being produced.

water conservation practices on the farmlands along with improved agricultural inputs and better linkages to markets are likely to have more of a sustainable impact over the long-term. Part of the problem may be that food aid programming is hard to use for agricultural productivity improvement, namely through the supply of improved seeds and techniques (extension), or that delivering food for work interventions absorbs the capabilities of the NGO (here again, see the discussion below on land-use).

Throughout Tigray, one can see striking examples of the terracing achieved with mass mobilization and food aid. Stone bunds along the contour are visible everywhere on the heights and slopes. The fact that they are so visible, however, is a clear indication that the package of interventions has been left uncompleted. These areas, despite the intensive bunding, remain largely denuded because of the constant pressure of livestock. While the stone bunds slow water run-off and catch some of the eroding soil, they must be viewed as only a small part of the process necessary to actually rehabilitate these areas.

As has been discussed elsewhere in this report, these stone bunds ("dead barriers" in soil and water conservation terminology) should be only a part of the continuum of interventions necessary to restore these degraded, rocky slopes which are abundant in Tigray. In general, the continuum should follow the following pattern. Protection should be the first step and if properly done will quickly indicate whether the site has any potential for natural restoration. Physical structures, should they be necessary to control run-off and capture soil are the next step. On some sites, for example, because of either slope or past use, it may not be necessary to cover the entire area with such structures. Next, replanting can be undertaken where and if it is evident that additional revegetation is necessary.

Much of the stone bunding and terracing common in Tigray was established as a means for distributing food aid, and with the hope of achieving environmental rehabilitation. Fortunately, this has now been well recognized in Tigray. The General Assembly of the Peoples' Congress, meeting in the week before the Evaluation Team visit (late Sept. 1994) directly addressed the soil and water conservation programs with a series of directives. Their directives underscore their understandings that: tree-planting is not enough, that area closures hold great promise for the future and that mass mobilization for terracing may lead nowhere. It is likely that the amount of time that peasants will have to commit to these types of programs will be further reduced-- to 30 days a year. This, as is obvious, will have implications for the future use of food aid. A shift away from food-assisted mass mobilization for soil and water conservation on communal lands may, however, free-up food aid which could in turn be utilized in assisting farms to meet conservation goals on their own lands, as part of an on-farm investment strategy.

Two additional sites were visited in this same woreda (Hahayle) on the uplands plains south of Adwa: a 1994 catchment planting at Maymerat, and a nearby grazing lands improvement site. The 75 hectare catchment planting on a highly degraded foreslope had been treated with closure, bunds, check dams, and tree-planting with micro-basins. The treatment seemed to be taking well, with soil accumulating behind the bunds and check dams and successfully established tree seedlings. The latter, however, are another example of a mixed plantation including: Acacia decurrens, Acacia saligna, Sesbania sesban, and others. On the grazing improvement site, a flat communal grazing area left among the fields in the plains (and presumably facilitating the movement of animals across this predominantly cultivated area), improved grass varieties in combination with Sesbania sesban had been planted. According to the REST personnel, the grazing area will be managed on a cut and carry basis.

Both areas despite the good intentions implicit in them should be reconsidered from a technical and land-use point of view. In the mixed plantation, the range of species itself raises the question of site-species match.<sup>9</sup> Acacia saligna (also known as A. cyanophylla) used extensively throughout both Tigray and other areas of Ethiopia, is considered a dryland species (350 - 600 mm. rainfall) used at relatively low elevations for sand dune stabilization in other countries (eg. Libya). Acacia decurrens, however, is a more site demanding species with high rainfall requirements and better soils. Sesbania sesban has low rainfall needs (as little as 350 mm.) typical of hotter climates (average temperature range 10 - 45 degrees C.) and lower elevations (300 - 500 meters).

There is also reason to question the establishment of a tree crop for fodder purposes on the plains area suitable for rotational grazing. Cut and carry although a good idea should be used on sloping areas where free ranging animals are likely to provoke erosion. On the degraded site at Maymerat, the high level of investment (bunds, check-dams, protection and tree-planting) seems to be questionable from a cost/benefit and scale of intervention point of view. A less intensive approach (with an emphasis on a community brokered protection and management of grazing) would make it possible to treat a larger area and therefore have a greater impact. The hills surrounding the site are almost all in the same

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<sup>9</sup> A full examination of the issue of site to species match is both beyond the scope of this evaluation and impossible to carry out with the paucity of good data and information on the range of sites seen. Many of the species currently being employed for reforestation in Ethiopia have been more extensively used and studied worldwide over the past decade. A careful examination of the most common reforestation species used in the country would be worthwhile.

condition. Food aid provided in a FFW scenario induces projects to take an intervention-oriented approach to land rehabilitation; the tendency is to treat the land and not the land-use which has led to the degradation.

This latter point was even more dramatically illustrated at two other catchment sites seen elsewhere in Tigray. The Maymisham Catchment Planting in Endabatsahma Woreda is a truly impressive example of the possibilities of environmental rehabilitation. Closed in 1992, this 20 hectares site is now extremely green, with native Acacia spp. trees resprouting and lots of grass and herbs. The site has also been terraced and provided with check-dams, and in 1994, was planted with both tree species and cactus. In discussions with REST personnel, and a local farmer who acts as a guard for the area, the dramatic change in the area was perhaps best evidenced by the presence of many similar and still highly degraded areas all around. There is reason as well to believe that although this site has been successfully rehabilitated, the grazing pressures that it formerly carried have been shifted elsewhere, possibly accelerating the degradation there.

At Welegesa, at the top of the catchment leading to the new small-scale irrigation scheme being built at Adiha, another example of extremely intensive slope treatment was viewed. Contour stone terracing at 3 to 5 meter intervals, combined with tree-planting, mainly Acacia saligna, have completely stabilized a steep slope area that was being heavily eroded. It is the start of an effort to protect the river catchment area that is being dammed to develop a 100 hectare irrigation scheme, financed by Oxfam America scheduled to be completed by Jan. 1995. Here again, it a question of intensity and pace of watershed rehabilitation. The condition of the river bed just upstream from the dam site, and the steep profile of the surrounding hills suggests that the stream drops its bedload of rocks and sand just above the dam. The degraded condition of the upper watershed means that cleaning out the rock and rubble will be an arduous task for years to come. Because of the costly investment in the dam (over 1 million Birr, not counting labor) and the promise of significant benefits for many farmers who will be able to get two crops during the dry season, absolute protection of the upper catchment will be both needed and worthwhile.

In a wrap-up discussion with the Deputy-Director of REST, a number of interesting points were discussed between the Evaluation Team and REST personnel. REST personnel, it should be noted, exhibited intense and earnest interest in improving their approach to the use of food aid for natural resources management. They are keenly aware that the destiny of their Region is directly linked to a fragile and limited natural resource base. There is ample evidence as well that the people of Tigray themselves are very conscious of the limitations of the lands suitable for farming. Throughout the Region, household compounds are inevitably located

on sloping land or rocky outcrops, reserving any and all flat areas for crop fields.

REST and the people of Tigray face multiple challenges linking land-use with food security. Creeping population pressures and a people restless for the long-awaited fruits of development means that bolstering achievement and impact in the near-term (the next five years) will be critical. Food aid is not necessarily the ideal option for meeting the challenges. In the years to come, REST will have to build on its hard-earned experience and translate it into a much more comprehensive and extensive approach to improved land-use rather than just land treatment.

A solution to rehabilitating the extensive areas of degraded uplands will only be found in a more direct and affirmative programmatic capacity for addressing livestock and over-grazing. With a food security network in place to counter the ever-present threat of drought induced famine, REST and the people can turn their attention to improving the productivity of the regional herd, one of the traditional coping strategies used as a hedge against famine.

In general, a more catchment based approach will be needed, in area after area, brokering the discussion with local people about how to raise animal productivity while adhering to the limitations of the carrying capacity of the land. The excellent experience with closure areas provides an example of the possibilities. Expanding the area of closures will, however, not be enough. What will be required, and is certainly possible, is the creation of a system of rotational grazing. A dialogue with the concerned populations must be tabled to ascertain what percentage of the communal grazing lands could be closed to allow for natural regeneration, and for how long before the animals might be returned. Such a system will also need a mechanism to promote the responsibility and authority for enforcing such a system. On a parallel track, REST will have to promote improved animal nutrition, veterinary services and market outlets so as to fully reward farmer investments in raising individual animal productivity. It will not be easy but the alternative is continued environmental degradation which will lead to the overall collapse of the livestock systems, massive land degradation and with it, even further reductions in agricultural output as watershed degradation undermines crop systems.

At the same time, increased attention to direct improvements in the productivity of traditional cereal crops will be needed. REST has already recognized this latter challenge and the spread of farm to market roads, and the nascent rural credit system are steps in the right direction. Soil enhancement in crop fields, improved agronomic practices, the provision of additional farm inputs and more robust farm to market linkages will help convince farmers that additional investments in agriculture will pay off. The REST-led

interventionist approach made possible with the availability of food aid must give way to a farmer-led strategy based on self-reliance and building household capacity to benefit from its own investments.

### 2.3 World Vision- Kilte Awlaelo Area Development Program

The World Vision (WV) Kilte Awlaelo Area Development Program operates in two woredas (Atsbi and Wumberta) about 30 kilometers east of the town of Wukro in Tigray. USAID Title II regular food aid is used in Wumberta; AIDAB provides the food and funding for the work in Atsbi. The WV Program headquarters camp, with accommodation for staff and ample buildings for both offices and storage, is located just outside the town of Atsbi. It is a relatively young project, begun in 1992 (FY 93) as a continuation of the emergency response, at the request of REST and local government authorities.

Kilte Awlaelo is a high, plateau area on the edge of the escarpment just to the east which drops down into the Denkali Depression. The area is highly degraded as a result of intensive agriculture and livestock pressures in a land of highly broken topography. It is also a relatively isolated area (the access road was completed and improved with FFW), still feeling the impact of war damages and where farmers had lost most of their productive assets due to drought, famine and war. Wumberta is even more at risk because of intensive livestock grazing and newly plowed fields on very steep slopes. It is reportedly a food deficit area even with normal rainfall.

According to project personnel, the present operating year (FY 94) has been made even more difficult because food aid deliveries have not occurred as planned. Project staff told the Evaluation Team that although they had requested 6000 MT of food aid, only about 1600 MT was agreed. At the time of the visit (Sept. 94, virtually at the end of the fiscal year), less than half of the agreed amount had been delivered despite pleas and memos (seen by the Team) to WV Headquarters in Addis. Project staff were under the impression<sup>10</sup> that this was because USAID had failed to ship the food as promised. According to WV Kilte Awlaelo, this lack of food aid has had several serious consequences: they have been forced to cut back on their programs (see discussion of activities below) and

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<sup>10</sup> This matter, and the similar situation reported by WV personnel in Omosheleko, was discussed with USAID by the Evaluation Team on its return to Addis. As it turns out, food aid shipments were indeed delayed because World Vision Ethiopia had failed to call forward food aid which had been allotted to its programs.

there were rising complaints from local people that Atsbi funded by AIDAB was better off than Wumberta funded by USAID.

The various World Vision Ethiopia programming documents seen provide aggregated data on the 11 project sites in which Title II regular food aid is being used. In no case was the Evaluation Team able to find indications of sufficient detail regarding problem analysis which were adequate for any real planning of either food aid needs or NRM interventions. Indeed, in discussions with project staff and comparisons of both planned and completed activities, there were wide divergences between planned, undertaken and completed. The following table provided to the Team by the WV staff in Atsbi, gives an indication of the situation:

<u>Activity</u>	<u>Unit</u>	<u>Plan</u>	<u>Achieved</u>
Seed collection	kg	400	166.5
Seedling production	mill.	1.5	1.10116
Planted- communal	mill.	0.3.5	0.35244
Distribution- private	mill.	1.125	0.643825
S&W Cons.- non-arable	kms.	1700	125.96
S&W Cons.- arable	kms.	2250	464.52
Check-dams	kms.	20	2.28
Earth Dams	Nos.	2	3
Ponds	Nos.	4	3
Road maintenance	kms.	130	76.90
Road construct.	kms.	40	23.06
Beneficiaries	Nos.	17,000	36,170
Person/days	Nos.	532,333	754,582
Grain	MT	1597	2274.78
Oil	MT	63	17.78183

A footnote to this chart indicated the following: 17.78183 Mt of oil was carried over from FY 93, 548.406 MT grain was carried over from FY 93, 845.324 MT grain was from the grain allocated and delivered in FY 94, and 881 MT grain was relief food aid borrowed from AIDAB to cover FFW.

Food aid delivery shortfalls claimed by WV- Kilde have certainly complicated their position vis-a-vis the local people but they do not explain many of the inconsistencies underlying the above figures. For one thing, soil and water conservation on arable lands is reportedly done without food aid, so why the dramatic shortfall-- roughly 21 percent of what was planned. Although tree-planting on private lands does seem to be taking hold, and numerous examples were seen in Atsbi while little was seen in Wumberta, it too is supposedly achieved without food aid. The deepest issue, however, is the fact that while overall food aid

was planned at approximately 1600 MT, they actually used 38 percent more than planned.<sup>11</sup>

The Evaluation Team as a result of a wrap-up debriefing with the WV- Kilte personnel feels that much of the difficulties lies in the decision to undertake massive earth dams which apparently are much in vogue in Tigray. The program planned to build 2 of these structures but actually worked on 3. The team visited 3 of these structures in Wumberta; none have actually been completed. It is also apparent that they are extremely difficult to plan in terms of food aid. WV- Kilte claims that the local irrigation staff of the Ministry of Agriculture assisted with the planning of the dams and made careful assessments of the amount of earth that would have to be displaced by the workers. The fact is, however, that while broad estimates of the amount of earth can be made, by estimating the size of the dam in cross-section, where this earth must come from, occasionally at some distance from the dam itself, has a great impact on the actual work load and the amount of labor required (see additional discussion on earth dams below)<sup>12</sup>

The Evaluation Team visited a series of program sites in Wumberta Woreda, including several earth dam sites, nurseries, tree plantations on communal land, and rural road maintenance works. Wumberta, it should be noted, is an area of intensive livestock grazing, both by local people and reportedly by herders from the nearby Denkali Depression who bring their animals in search of pasture during the dry season and who pass through the area while transporting salt and wood from the lowlands. WV- Kilte Awlaelo does not have a program to deal with the issue of grazing pressures at all. They claim, justifiably so, that theirs is a young project and that the livestock issue is a complex one. It is, nevertheless, wholly evident that unless and until there is some

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<sup>11</sup> This whole matter of food aid planning and allocations needs to be seriously reviewed as the apparent confusion over the plan, deliveries and allocations is so skewed. The number of beneficiaries is also a subject of concern because despite reduced food aid allocations claimed by WV- Kilte, there appears to be significant multiple counting of participants in the programs.

<sup>12</sup> WV- Kilte staff say they have planned to focus on earth dams, as the only means of increasing food production in the area by expanding the area under irrigation, during FY 95-97. According to their planning, they will undertake 4 such structures in FY 95 and 7 in the whole period covered by the MYOP. An examination of the 95-97 combined World Vision MYOP, shown to the WV- Kilte staff, however, revealed that only 1 earth dam had been requested in FY 95, and only 4 during the entire period. This is another compelling indication that there would seem to be a lack of good coordination of planning between World Vision- Ethiopia Headquarters in Addis and its sites and staff in the field.

advancement on this issue, serious land degradation will continue unabated for some time. Throughout the areas visited in the woreda by the Evaluation Team, telltale signs of significant erosion caused by grazing on steep areas was seen. Recent flooding of the river near Wumberta Town, with massive siltation covering adjacent fields and the access road farther up the valley, is but one indication of these difficulties.

A visit to one of the plantation sites at Hiwlwal, on the slopes above Wumberta town, provided a useful opportunity for observing the land-use constraints facing the local people. Wood is much needed in the area as it is virtually deforested, to the very tops of the hills. Fuelwood and building poles are in high demand. The site, perhaps 75 hectares, was planted in both 1993 and 1994, with a mixture of species including: Olea africana, Sesbania sesban, Eucalyptus spp., Dodonia viscosa, Cupressus lusitanica, Casuarina equisetifolia, Acacia decurrens, and a local Acacia spp. The area has also been protected and guards, supported with a food aid incentive are in place. Poor survival marked the 1993 planting (probably 25 percent) although the 1994 plantation seems to be doing better although it has as yet to go through the dry season. The mixed plantation was done according to WV- Kilde staff because local people expressed interest in a variety of species. In retrospect, it seems to be more a well intentioned but poorly informed effort to wean the people away from a dependency and preference for Eucalyptus spp. which has received much negative comments as a species inimicable to the long term improvement of the environment.<sup>13</sup>

The likelihood of an effective and productive plantation, however, seems improbable for a number of reasons. Several of the species (Sesbania and Casuarina) are primarily lowland species. Mixed tree-planting places the different species, planted right next to one another, in competition. Generally poor quality seedlings mean high losses and slow growth. During the visit, the site was in need of maintenance with some of the species being overtopped by weed and natural regeneration. Only Eucalyptus spp. and Acacia decurrens seemed to be growing well, and both species would provide the needed wood products so much in demand. With

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<sup>13</sup> Echoes of similar policy determinations were heard by the Evaluation Team elsewhere in Ethiopia. In their judgement, it is a clear case of "letting the best become the enemy of the good". If Eucalyptus spp. were eliminated from Ethiopia, the land would be virtually treeless! Eucalypts with their ability to coppice vigorously and provide poles and firewood are clearly well appreciated by local people. Claims that they deplete the site and/or suppress grass and undergrowth are clearly unfounded as can be readily observed throughout the country. The bad reputation of Eucalypts was earned in other arid lands where rainfall is considerably more limited than in highland Ethiopia.

such high demand for trees and wood products, no organization can afford the luxury of inefficient tree-planting.

While visiting this hillside site, it was easy to observe the dilemma of over-grazing and its consequences on the surrounding hills. There were, however, some indications that the people themselves practice a variety of rotational grazing. Certain areas, readily identifiable by the marked presence of the abundant Maskal Daisy were being reserved, according to local informants, as late season grazing. The World Vision program in Kilde Awlaelo would do well to confer with REST about its evident success with closure areas and about the possibility of using them as the start to a more intensified program to deal with the livestock situation (see the discussion of improved livestock productivity in the field report on the visit to the REST areas). What is certain is that without attention to the over-grazing problem, the present emphasis being given to earthen dams will have only short-lived impact as erosion and siltation from the surrounding degraded catchments quickly fill in the basins so created.

The World Vision Kilde Awlaelo Area Development Program seems to be putting all its proverbial eggs in one basket. The program has given great attention to the construction of earthen dams. This effort is a massive undertaking, well adapted to the strong intervention-oriented approach implicit in public works focused FFW, and is seen to be addressing the major issue of food security in the region by attempting to raise agricultural productivity. It, however, seems to be dangerously flawed, at least in the opinion of the Evaluation Team, particularly in the relatively steeper terrain of Wumberta. While there may indeed be the potential for increasing agricultural productivity, the following observations seem pertinent:

- Few of the earthen dams visited seemed well designed, with seepage, slumping and faulty layout.
- Their utility is subject to the whims of nature; they may not fill if the rains are inadequate, leakages through infiltration and seepage and loss to evaporation may decrease the amount of water and limit the command area.
- Siltation and flooding are serious threats to their sustainability because of the highly degraded nature of the catchments above them. A broken dam during a high rainfall event could have catastrophic consequences on the areas downstream.
- Large numbers of people must be mobilized to carry out FFW to construct them; few of them will actually be able to participate in the direct benefits of improved agricultural productivity.

- Earthen dams seem to be difficult to plan for and absorb much of the capabilities of the organization. Food aid distribution to the participants is a massive undertaking itself.
- Potable water is difficult to obtain and local people will have a tendency to use impounded waters for drinking purposes; they were observed to be doing so already at one of the dam sites. This could have serious negative health impacts.
- Earthen dams will attract livestock seeking water and without adequate controls will exacerbate the degradation from over-grazing in adjacent areas.

There can be little doubt that WV- Kilde is undertaking these dams because of a generally positive view of them in Tigray; similar works were seen everywhere in the Region. They need to be seriously evaluated by a team of competent irrigation and agricultural engineers to ascertain if they are a viable and sustainable technology for the steeper, rolling hillside areas of the Wumberta Woreda. At the very least, WV- Kilde may wish to consider smaller structures and should give priority attention in the near future to ensuring that the predicted irrigation potential and agricultural productivity increases can indeed be realized before embarking on further dam construction.

The Evaluation Team left Wumberta Woreda with the conviction that while an integrated approach was definitely necessary to meet the challenges and opportunities of NRM there, a simpler and more focused project would have a greater chance of success. More attention to the livestock drama of the area and intensified soil and water conservation on the mid-slope farming areas (virtually none of the soil and water conservation reportedly carried out was actually evident) are needed. This young project working in a hostile, degraded environment seems most warranted but will have to carefully review its approach in the years to come. Highly improved coordination with the central authorities of World Vision will also be needed so as to more fully support the hard-working and dedicated staff who have agreed to live and work supporting the local people in this development outpost.

#### 2.4 World Vision Site- Omosheleko

This World Vision Project Site<sup>14</sup> is located about 440 kilometers from Addis Ababa, in the South People's Administrative

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<sup>14</sup> Much of the information, in particular the factual data which follows was extracted from the document: World Vision Revised ADP Document (1994-2000) for Omosheleko- March 1994.

Region (Kelel 07), Kembata-Alaba-Tembaro Zone. The woreda name Omosheleko (meaning Omo Valley) is something of a misnomer as the site is located in the higher reaches of the Omo River Watershed. It is situated on the hills on the eastern flank of the river with altitudes ranging from 800 masl (meters above sea level) to 2600 masl. World Vision's local headquarters for the project area is in the town of Modula, reached along a poorly surfaced road 68 kilometers west of the town of Adillo, the latter about midway along the tarmac road between Alaba (Food for the Hungry Project Area) and Shone (another of the World Vision Project areas funded with Title II resources).

The road first goes to Durame and then through several smaller hamlets (eg. Hadera) before Modula. Much of the trip through Durame (described by the Ethiopians accompanying the team, as the area of "Green Famine") and its surrounding area is peopled by Kembata People, characterized by intensively cultivated, high population density with little signs of serious erosion and abundant farmstead plantations of Eucalypts. As mentioned above, road access is extremely difficult because of the poor road surface caused by faulty drainage and lack of maintenance which would probably impede the passage of the heavily loaded trucks typically used for the delivery of food aid. In the opinion of this author, development in this area would be well served by significant improvements to the road which would facilitate market access for the industrious farm community and greatly ease the spread of social services, the delivery of agricultural inputs, and should it again prove necessary, the transport of emergency food aid. The area's vulnerability to food insecurity, according to World Vision, is predominantly a function of the small size of the farm holdings typical of the area. Omosheleko might thus best be characterized as an area of "structural food deficit".

World Vision's facilities at Modula, in the higher reaches of the woreda at about 2200 masl, are impressive, occupying an approximately 10 hectare site right in the town. Extensive accommodations, now being modernized and upgraded, house a large staff nicely. In addition to the FFW/NRM and agricultural development activities, World Vision provides MCH, health facilities, Gender and Development, and a large child sponsorship (approx. 10,000 children) for the area. World Vision personnel indicated that their effectiveness is sometimes hampered by too few means of transport. Two landcruisers, a pickup truck and several motorcycles, the latter used mainly by the child sponsorship and training personnel take quite a beating (as do the personnel riding in them) on the poor roads of the area. The camp is equipped with a generator and draws its water, as does the town, from a capped spring several kilometers distant and nestled in one of the few remaining small natural forests in the woreda.

Omosheleko woreda encompasses an area of approximately 376 square kilometers with a population estimated at 114,000. Average

population density, higher in the highlands and declining as one travels lower onto the drier and more livestock oriented areas, is approximately 305 people/km<sup>2</sup>. Crops grown in the area include teff, maize, sorghum, beans (of several kinds), and peas. Many of the households in the higher reaches of the woreda are planting dense stands of Eucalypts which they raise in small backyard nurseries and plant out as bare-root seedlings along the margins and in small blocks on their farms. Spacing between seedlings is very close, producing many small size saplings, poles and sticks essential to the building of the local houses.

World Vision began its food aid operations there during FY1984/85, providing relief food to famine victims. During that first year, characterized as the "Relief Phase", 4350 metric tons (MT) of food aid were reportedly provided, in the form of wet feeding and dry rations. Dry rations distribution went to approximately 13,200 people. The second phase of the project (termed the Rehabilitation Phase- 1986-1990) embarked on a more ambitious course aimed at restoring the agricultural productivity of the area. It included FFW components (tree-planting, soil and water conservation, feeder roads construction), other infrastructure development and the distribution of agricultural inputs (seeds, tools, fertilizer, pesticides, and oxen) under both donation and reimbursable loan terms.

The present phase (1991-2000) termed by World Vision as the Agricultural Development Program, is described as a community based, long-term integrated rural development program addressing the whole of the Omosheleko woreda. Its agricultural activities, however, particularly the full integrated package, operate in 22 of the 31 peasant associations (P.A.) of the woreda. Two other local church-based NGOs (Kale Hiwot and Synodos) are working in the other P.A.s. This phase, on which the attention of the evaluation team was focused, is taking, as the name implies, a much more integrated and strategic approach to the area. The strategy as outlined in the cited project proposal<sup>15</sup> includes the following:

- incorporating smaller, scattered activities into a suitable development administrative structure;
- setting strategic development goals;
- initiating grass-roots community participation;
- promoting sustainable development;
- empowerment of people;
- upgrading institutional capabilities; and
- consideration of gender issues.

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<sup>15</sup> It is noteworthy that this project proposal includes no mention of food aid, despite the fact that Omosheleko has been included in World Vision/Ethiopia's FY 95-97 MYOP submission to USAID.

According to the document, the development constraints are: over-population (438 people/km<sup>2</sup><sup>16</sup>); small land-holdings (0.9 hectare/family); poor farming systems; disguised unemployment; and poor social services. The stated overall development objective is "to empower and build the capacity of the community of Omosheleko to better deal with their environment".

The following is a brief synopsis of NRM related achievements for Omosheleko as taken from the FY 93 Annual Report, the latest available annual report provided by World Vision to USAID.

Activity	Achievement	Work Norm	P/D Used
Seedling Production	1.528 mill.	10/1000	15280
Seedlings Planted	1.4 mill.	15/1000	21000
Seedlings dist.-people	100,000	-----	-----
Seedlings dist.-orgs.	28,000	-----	-----
Area Planted <sup>17</sup>	611.2 has.	-----	-----
Checkdams	14.18 kms.	1000/km.	14180
Fanya-Juu Bunds	226.3 kms.	250/km.	56579
Soil Bunds	113.7 kms.	70/km.	7959
Microbasins	15812	5/100	790
Feeder Roads (maint.)	1.33 kms.	500/km.	665
Totals	-----	-----	16453
Beneficiaries-		8577 (6755 males/1822 females)	
Commodities Used-		578.7 MT wheat/23.18 MT oil	
Person-Days Work-		192,899	
Average Work Days/Beneficiary-		22.5	

Although it is somewhat unfair to single out this particular project for additional scrutiny, the availability of these figures do allow for a certain amount of deeper analysis. The following remarks are considered of interest. In the first instance, the

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<sup>16</sup> The reader will note that this figure, taken from the project document differs from the previously cited figure above, which itself was based on a calculation carried out with figures presented in the same document.

<sup>17</sup> It is rather surprising that given the intense land pressure in the Omosheleko area, that the project team could actually find 600 plus hectares available for tree planting, especially since a high proportion of those were supposedly planted on communal lands. The Evaluation Team noted that some plantation areas had been planted on several occasions. Farmers themselves are actively planting trees on their own lands in the area but these are mainly Eucalypts which they produce in on-farm nurseries and outplant in small dense patches along the margins and cutouts of their lands.

amount of wheat consumed would be just exactly adequate (578 MT/3 kg. = 192,666 work days) to remunerate the stated 192,899 work days reported. This coincidence is questionable because of the fact that a certain number of project staff (nursery supervisors and site guards) are paid food at a higher rate (1.5 quintals/month?) and over a longer period.

Another noteworthy point is the fact that the area reported as planted (611.2 hectares) is actually a function of the total number of seedlings produced divided by the average number of seedlings typically planted per hectare (at 2m x 2m spacing = 2500 seedlings/hectare), to wit: 1.528 million divided by 611.2 = 2500. This belies the fact that there are rather large losses of seedlings as a result of damage during transport over the rough roads to the plantation sites, often, in the estimate of this author, amounting to 10-15% of the total transported. Large numbers of discarded empty polypots were observed at several locations (not within the Omosheleko area) at apparent seedling staging areas elsewhere in the country.

According to World Vision reports, the Omosheleko Project planted significant amounts of seedlings in small P.A. woodlots between FY 90 and FY 92. Some of these, particularly those planted in FY 92 would doubtless require some maintenance (weeding and cultivation) to ensure good survival. Although there is a recognized work norm for such an activity (5P.D per hectare), there is no report of this having taken place.

The Evaluation Team visited a range of NRM-related project activities in both the lowland areas of the woreda, down to about 1400 masl as well as in the Bada Highlands, up to 2400 masl. These included nurseries, mini-nurseries, plantations, closure sites (including areas of natural forest), and soil and water conservation areas. The team also had the opportunity to meet with a contact farmer and visit his compound to see the agricultural/horticultural innovations he was introducing there.

One of the first sites visited, that of an FY 93 Eucalypt plantation (with FY 94 replanting) was a particularly instructive opportunity. The 10 hectare site at Getcha P.A. (each P.A. is being encouraged to plant at least 10 hectares) was located on a flat, sloping area used for grazing. It is right on the edge of a large, heavily gullied area (several hundred hectares in extent) which has formed as the result of over-grazing in this lowland (1400 masl) pastoralist dominated area. The gully itself has been declared a closure area, supposedly since 1988. It was hard to see, however, that this closure had been seriously respected as the vegetative cover was still quite sparse and there were cattle present within it. On the fringes of the gully, there was considerable evidence that it was still expanding, starting as small fissures opened by accumulating run-off on over-grazed areas, spreading like a cancer as the water took its toll. On the still

intact fringes of grassland surrounding the gully, large herds of cattle could be seen grazing, and the grass cover, presumably at its best condition given the time of year (late rainy season) was notably cropped down.

The discussion which ensued between the team and the World Vision staff pointed out the contradiction taking place, and the difficult problem of dealing with livestock pressures. The gully is the result of extensive over-grazing and yet, in effect, the plantation by occupying existing grazing lands, had probably added to the problem by withdrawing more land from the already constrained grazing resource base.

Several other relevant points came up during the discussions of what had happened on this site. As was explained to the evaluation team, the project uses a FFW model which involves local monetization. The participants have agreed that they would accept only 60% of food earned as payment with the remaining 40% being monetized and the funds so generated turned over to the Omosheleko Farmers Credit and Savings Committee. This money, as well as funds to be earned from the eventual sale of products from P.A. woodlots, is to be used to continue funding agricultural and community development thus ensuring some measure of financial stability even after World Vision withdraws<sup>18</sup>. The team found this arrangement (Is it a facet of all World Vision sites? It was not mentioned during the team's visit to the Kilte Alwaelo site in the north.) somewhat curious for several reasons.

First of all, it raises the question as to whether the area is really food deficient? There is some cause to be concerned about this point because as mentioned above, food aid during the relief phase of the project was only provided to some 13,200 people during the crisis of 1984/85, presumably a time of high need. If only 10% or less of the people needed food aid then, how many need it now, during a year of normal or better production?

In this same vein, worker participants are chosen by a committee within the P.A. specifically appointed to identify community members in need. This beneficiary screening procedure flies in the face of one of the basic premises of FFW-- that it is self-targeting: those in need will come to work. The 60/40 split also raises the rather disturbing question of whether in fact those in need, if the selection process does identify the poorest, are

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<sup>18</sup> As was mentioned previously, World Vision has presented a proposed FY 95 - 97 MYOP to USAID which continues funding for Omosheleko (as well as 11 other sites) through the period in question, albeit with gradually declining food aid requests. Then too, Omosheleko is part of the longer term ADP proposal prepared by World Vision to cover the period 1991- 2000.

working to generate investment resources that will ultimately benefit the whole community?

One can speculate, and this issue was discussed with World Vision personnel on site who share some of these concerns, as to whether, based on this analysis, as well as the relatively low level of average work days per participant mentioned above (22.5), that the project might be having some difficulty in attracting participation in return for food aid. This situation may help to explain as well a perception by the team members, reinforced for example by low percentage achievement in soil bunds in FY 93, that soil and water conservation was not being carried out as intensively as site conditions warrant. The implication being-- that farmers perceive soil and water conservation as something they do when they feel the need for food aid. These sorts of perceptions have crept into food aid programs elsewhere; they become unfortunate precedents difficult to reverse.

This brings up the matter of the project's efforts in both agricultural development and the potential gains from soil and water conservation on farmers' fields (soil bunds and fanya-juu). Several matters are worth bringing to light here. More intensive soil conservation measures on side hills (where slopes range from 45 to 60%) would seem to be necessary both as a means to raising cereal crop productivity and to ensuring sustainable agriculture. On steeper slopes, one could ultimately envisage the establishment of bench terraces; on more gradual slopes, more rigorous application and maintenance of techniques like soil bunds and fanya-juu. Recently, as well, the area has had to absorb 3000 returnees and ex-soldiers. There are indications, easily visible on higher slopes, that they have been allocated even steeper land to cultivate. Several patches of recently cut stumps on particularly steep and high areas were observed. These wholly inappropriate practices could serve to shift the fragile balance currently obtaining in the higher lands of Omosheleko and generate serious run-off, erosion and gully formation problems which will be directly felt on the more productive and gentler slopes below.

The team feels that it must remark that the current thrust for establishing P.A. based woodlots seems to be absorbing a good deal of World Vision's resources and capabilities, perhaps more than is merited. An analysis of the commodity usage in FY 93 in the table above suggest that the remainder of the work days unaccounted for were used primarily for seedling production, transport and planting. Then too, the two forestry staff members candidly agreed that plantation work keeps them very busy, although they are also responsible for the soil and water conservation measures. On at least one of the closure/plantation sites, there are indications that the site has been needlessly planted on multiple occasions-- because activity targets had to be completed?

Similarly, if indeed the basic reason behind famine vulnerability in Omosheleko is "structural food deficit", owing to the small size of the farm holdings on relatively poor land, the question must be asked: Can soil and water conservation and tree-planting, with or without FFW, eventually make a difference, especially in light of increasing population pressures? The longer term solution, i.e., alterations of land-use in accordance with overall land capability, will of course constitute a prima facie example of natural resources management. Agricultural intensification and diversification as well as income diversification will be needed to provide the optimal production equation. Improving the road, as mentioned at the outset, might prove to have the most impact in the near-term. It is an open question then as to whether regular food aid is the best solution for bringing development resources to bear on the problems and opportunities of Omosheleko.

## 2.5 CARE Ethiopia Eastern Hararghe Relief and Development Project

CARE Ethiopia began working in the Eastern Hararghe area in 1984, at the request of the Government of Ethiopia (GOE) and in direct response to that year's drought. CARE started work in West Hararghe and Eastern Shewa at the same time. Initially, CARE's response was limited to Food for Relief (FFR). In 1986, the GOE announced a policy under which no further "free" food would be distributed in Hararghe. Henceforth, food recipients would be required, if physically able, to work in order to receive food. This led CARE to develop a program using food-for-work (FFW) that would both allow for the distribution of food in a deficit area and enhance the region's food security through the implementation of natural resource management and soil and water conservation activities. Food for Work was an important part of CARE Ethiopia's development strategy throughout the late 1980's.

In late 1991, CARE suspended its FFW activities in both East and West Hararghe. A CARE internal audit had discovered irregularities that were best dealt with by eliminating the program. Food distribution continued in Hararghe as FFR, FFW continued in Eastern Shoa). Food for Work would not return as part of CARE's activities until October 1993. During the "down-time", CARE made major changes in staff and put accountability systems in place. Investments in raising technical competency were also made. The drought of 1992 was so severe that the GOE's policy of no "free" food was abandoned. CARE restarted the use of FFW in October, 1993, however, in response to new food aid policy directives from the Transitional Government of Ethiopia (TGE), that food aid would again only be distributed on a FFW basis.

CARE's Eastern Hararghe Relief and Development Project, based in Dire Dawa, covers six woredas, all of which are structurally

food deficit, though some have greater deficits than others. CARE staff estimate that as a region, in a good year, East Hararghe suffers from a food deficit of 10-15%. Average land holding in the project zone is 0.75 hectare per household. Topography in the two woredas visited included both highlands and lowlands. Slopes were moderate. Sorghum and maize are the principal staple crops, and appeared to be doing quite well. Crop rotation is not practiced. Chat is the most important local cash crop. Wood is the primary cooking fuel. Dung stays in the fields and crop residues are either fed to livestock or are used for fencing.

Within the six woredas, CARE works with a total of 18 Peasant Associations (P.A.'s). The selection of the woredas was made by the GOE at the time of the 1984 drought. The selection of the specific P.A.'s has been made on the basis of past association, CARE sensitivity that it not overextend beyond its capabilities, staff constraints, and the lack of security away from the woreda centers. Most P.A.'s are in close proximity to the woreda center.

CARE's development approach in East Hararghe includes a variety of activities involving both FFW and community participation (free) labor. Natural resource management (NRM) activities driven by FFW include: seedling and forage nurseries; creation of soil and stone bund terraces; creation and maintenance of ponds, shallow wells, and capped springs; check-dams; and tree planting. CARE does not undertake tree-planting through FFW. Seedlings are raised in FFW supported nurseries, but the planting is done by farmers without any payment. With the exception of nurseries, gully treatments, and ponds, all FFW activities are on private land. Road construction and maintenance is also part of the overall FFW package. CARE supports the above activities with resources from Title II monetization, and from other donors. ODA has provided a grant for support of FFW activities, including spring development material and technical staff costs. CARE has assigned one extension supervisor and two extension agents per woreda.

In addition to FFW activities, CARE's overall development approach includes working through Community Based Development (CBD). CBD activities are typically on-farm soil and water conservation, improved agricultural practices, home nurseries, etc.. CARE provides facilitation, technical advice and certain inputs (eg. poly pots, seeds) and farmers provide labor at no cost. Most, but not all, CBD activities take place in CARE-identified Model Villages. Model Villages are areas that CARE has identified as being particularly receptive to extension efforts. Villages in this context mean a group of homesteads surrounded by fields; ideally villages are about 5 km apart. All farmers in a model village will not necessarily be eligible to receive the extension package. Model villages are seen as focus areas, not necessarily an area where there is unanimous consensus on problems and solutions. Within each Model Village, extension agents identify

particularly progressive farmers. These Model Farmers benefit from extra time and attention from the extension agent.

Each extension agent is responsible for one Model Village. Extension agents devote approximately 60 percent of their time to FFW related activities and 40 percent to CBD activities. Some FFW activities are completed in collaboration with Model Village residents, but the majority of FFW is directed at areas not included in Model Village program. For example, 14 of 110 kms of soil bunds were completed in Model Villages and 4,900 of a total of 81,177 seedlings were planted in Model Villages.

CARE's package of technical interventions includes a wide variety of activities. FFW activities are supplemented and complemented with activities involving free community participation, and cash and material resources available through other donors (improved varieties of seed, salaries for masons, etc.). As a package, the choice of interventions appear to be well matched to local conditions and needs. A large geographic area and small number of staff are the principal constraints in achieving greater impact and efficiency. CARE has plans to increase its extension staff by 2 in each woreda. CARE hopes to enlarge its program and add additional P.A.'s as resources permit. Some activities supported in FY'94 will be dropped (bund stabilization and maintenance, pond maintenance). Apart from work in nurseries, no other FFW activities were under way. Peak FFW work season is January through June.

Researchers at Alamaya University estimate that use of soil bunds can improve agricultural yields by up to 30-40%. In the East Hararghe region, soil bunds and rock-faced bunds have drawn strong interest from farmers. According to CARE staff, farmers recognize that crop productivity is higher due to higher soil moisture. From field observation, it is clear that farmers understand the importance of soil and water conservation. Farmers go to great lengths to ensure that their chat plants capture the maximum amount of rain and suffer from the least possible soil loss. Perfectly maintained labor-intensive soil bunds and terraces are the norm. Intensive soil management for sweet potatoes is also common place although similar bunds on maize and sorghum fields were rare in the area visited.

In FY'94, the farmers in the 6 project woredas created 1561 kms of hillside terraces, all on farmers fields (the majority of this work involved soil bunds). What percent of arable lands this covered is not known. In the two woredas visited during the evaluation, slopes were moderate and though some soil bunds were seen, the majority of bunds were put in place in steeper, unvisited woredas. CARE has talked with farmers about the need to maintain and stabilize bunds (with fodder or vetiver grass). CARE views and has presented bund maintenance as activity that falls outside of

the realm of future assistance. Fodder grasses are available in the nursery in Gursum.

While CARE does appear to have been successful in generating interest in on-farm terracing, CARE's philosophy of limited interventions on public or common lands may ultimately limit the effectiveness of their on-farm work. Farmers' efforts will have been for naught if upslope erosion on common lands goes unchecked.

The Model Village approach seems appropriate and should be encouraged. However, model sites are useful, only when they serve as models to other farmers. CARE had planned but did not execute 2 Farmer Visit days to the Model Villages. This is understandable given extension staff workload and the fact that Model villages have only recently been identified. During the evaluation the importance of regular farmer-to-farmer visits was discussed.

Two villages were visited. The extension agent in Babile seems to have been more successful. The Dolise Model Village, in Gursum, illustrates the importance of being sure you have the right package of technologies when establishing models. The village gives the impression of having been top down in selection and implementation of technologies. Vegetable gardens, including tomatoes, are an important part of the Model Village package. Project staff highlighted the ability of Model Village residents to produce and share tomato and other vegetable seed with their neighbors. Tomatoes were seen everywhere on the road, giving the impression that if the tomato market isn't glutted, it soon may be. Extension agents may wish to selectively target lesser exploited vegetable crops. Staff may also wish to explore tomato drying for shipment and sale in Addis.

Sesbania spp. planted along the contour in the fields at this site was probably inappropriate in open grazing conditions. Pigeon pea planted in fields in the Babile Model Village may also be inappropriate for the same reason. Farmers in Model Villages are also encouraged to manage their own home nurseries. This is a commendable approach. Farmers have produced and planted their own coffee and Eucalyptus spp. seedlings. Farmers were provided with papaya seedlings grown in project nurseries although they are also known to grow their own seedlings from seed. Extension staff may wish to expand the home nursery concept to include a wider range of species.

Access to draft animals is an important regional problem. In Gursum woreda, approximately 20% of farmers have 2 oxen, 30% have one ox, and 50% have no draft animal at all. If conditions found elsewhere in Ethiopia apply here, approximately 20% of households are headed by women, and female headed households own half as many animals as male headed households (Holt and Lawrence, 1993). Oxen are very important in getting fields prepared in time to take advantage of the arrival of the rains. The International Livestock

Center of Africa (ILCA) has developed a one-ox plow.<sup>19</sup> Using such a plow, farmers with only one ox would have a greater likelihood of getting their fields prepared in a timely manner and thereby increase their chances of maximizing crop yields. CARE has contacted ILCA and may wish to do so again. Conceivably, Model Villages, and female-headed households in particular, may be a local entry point for this technology.

Two nurseries were visited, both in Gursum woreda. Both appeared to be well designed and managed. A variety of locally appropriate species are produced, beds had been emptied following seedling distribution. Eucalypts are particularly important locally as construction is with poles and mud, not stone. Extension and nursery staff were unaware of the need for rhizobia inoculation of Leucaena spp. seedlings. Without inoculation seedlings may not form nitrogen fixing nodules. Examination of one seedling failed to show nodules. Inoculation is inexpensive and is easily done. Most foreign seed suppliers would be able to provide inocula.

The Dolise fodder and grass nursery was created in 1988. This nursery serves as a source of seed and of grass "splits" for stabilization of soil bunds and terraces in farmer's fields. This is the only grass and fodder nursery in the region and contains an impressive variety of species. Grass splits are distributed to farmers, other NGO's and to the MOA. CARE hopes to establish small satellite nurseries in each woreda in 1995. Nurseries will be managed on a community volunteer basis. In addition to distribution to other NGO's, other woredas, and the MOA, the nursery served 1700 farmers from Gursum in 1994.

Coffee seedlings are currently produced in FFW-run nurseries. Coffee is not suitable for the entire project zone. In those areas where coffee will grow, CARE may wish to encourage farmers to produce coffee seedlings in home nurseries. Awareness of coffee as a cash crop is strong. Promoting the production of coffee seedlings in home nurseries may provide extension agents with a foot in the door to farmers who otherwise might not have sought out extension assistance. It may also reduce FFW nursery labor requirements.

CARE may wish to consider redirecting resources currently devoted to woreda level nurseries to a strengthened home nursery program. Large nurseries are high visibility outputs but do not

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<sup>19</sup> In comments on this draft report, a CARE staffer commented on this point as follows: "While CARE should definitely try the one oxen plow, one should not put too much faith in it. In local trials, this plow has proven useful under certain circumstances (i.e. level ground, few stones, etc.). It is doubtful that the plow would be appropriate in most of CARE's working area."

necessarily result in surviving trees in the field. Farmers are more likely to care for seedlings in which they have a personal investment. A strengthened home nursery program would require a larger extension staff. Skills are basic; perhaps those working currently in nurseries for FFW could be recycled as home nursery extension specialists?

CARE had planned to create 1000 kms of check-dams in FY'94; 374 were accomplished. Prior to a resolution of the land tenure question, CARE staff, however, remain reluctant to encourage farmers to invest in communal lands. In line with the comments above on terracing on private versus common lands, CARE may wish to reevaluate its position concerning gully treatment, as other NGOs have done, particularly in areas where erosion on communal land impacts downstream on arable land.

Government policy currently places more emphasis on biological treatments rather than on physical structures. The check-dams and gully treatments visited during the course of the evaluation were installed during the previous regime. While they were in need of maintenance, they appear to have been effective in limiting further erosion. More stress is needed on both biological and physical structures approaches to controlling erosion as part of the extension package.

CARE's experience with protected closure areas has been poor. Paid guards have not been effective in keeping animals out. Creation of protected closure areas does, however, figure in CARE's 95-99 MYOP, but CARE has only moderate expectations of success. CARE's approach to protected closure areas does not include terracing or planting. The practice of creating protected closure areas is not new and excellent examples of this approach were seen elsewhere in the country, especially in Tigray. Management of these areas involves at least two major concerns: compensation for loss of pasture and post-regeneration management.

In 1989, an estimated 200,000 - 300,000 has had been classified as "protected". Cut and carry is commonly mentioned as the preferred management approach. However, nutritionally, the optimal time for harvest is in September. This corresponds with a peak in the demand for field labor for weeding. Optimizing cut and carry may, therefore reduce field production (Hutlin, 1986; in Styczen, 1989).

Loss of pasture can be compensated for, in part, with an aggressive extension campaign that stresses bund stabilization with fodder grasses. In areas where land holdings are small, and where open grazing is common, this will be difficult.

The Ethiopian Red Cross (ERC) has initiated trials on management of closed areas in the Upper Mille catchment. Treatments involve continued closure, fuelwood thinnings, fuelwood

enrichment planting, coppicing, cut and carry, removal of unwanted species, planting of fodder trees, planting of fodder grasses, controlled grazing, and planting of fruit trees. CARE may wish to contact the ERC for further information.

Water is the first priority for many local communities. In a CARE project in a neighboring non-deficit area, farmers were willing to pay for inputs and undertake well and water work themselves, with the project providing only technical assistance. The wells, capped springs and catchments visited during the evaluation seemed to have been well designed and constructed. Some of the wells, although complete, were not yet in use as there was "water everywhere".

Numerous examples of wells (not necessarily CARE activities) that had gone dry and pumps that had broken were seen during this trip. CARE plans to incorporate a strong maintenance training component in future work in the region. Catchments (ponds) have been created, apparently, without first clarifying ultimate use rights and management and maintenance responsibilities. CARE should strengthen this aspect of their extension effort.

CARE is one of several agencies working in East Hararge. Other organizations, working in woredas not covered by CARE, include Menschen fur Menschen, Lutheran World Federation (LWF), Oxfam UK, and the Oromo Relief Association. While this arrangement works fairly well on the whole, problems have been encountered, particularly in the area of work norms and payment. One international organization working in the region pays twice the ration of CARE for FFW activities. While most NGO's follow MOA work norms, CARE uses their own norms, as do certain other international NGOs. CARE would like to charge for seedlings. Other agencies, including the MOA, give them away free.

CARE feels that the Rehabilitation and Relief Bureau could play a stronger role in coordinating the work of different NGOs. The development community meets on a monthly basis but security is usually the only discussion point.

CARE likes to work closely with the TGE Development Agents (DAs). In practice the relationship between the project and the DAs varies from woreda to woreda. In some areas, the lack of a signed project agreement has hampered collaboration with government extension agents. The MOA is generally cooperative but would prefer that CARE work under them. In most cases, however, strong contacts with woreda officials have enabled the project to obtain cooperation.

CARE does provide DAs with per diem and assists with transportation when necessary. CARE does not provide DA's with a salary supplement as an incentive.

In late 80's, CARE had separate projects in each woreda, each with a full complement of extension agents. Thirty-five extension agents formerly worked in an area where 4 now operate (Gursum - Babile). The MOA and MNR have adequate staff to make up the difference but agents lack control and commitment. The division of the MOA into three separate agencies, resulting power struggles and jealousies, and the decentralization of power have had an impact on TGE effectiveness in the field.

The East Hararghe area appears to lack the strong community structure of Tigray. A local institutional system similar to the Kochet, Tabia, Baito system is not known. The strongest local institution is the Peasant Association - a relic of the former regime. The P.A. system functions more strongly in some areas than others. The Ethiopia Forestry Action Program describes the status of rural institutions imposed by the previous regime, such as P.A.s, as, "at best, shattered".

CARE Addis staff recognize that the basic field data for proper monitoring and evaluation are lacking. A few socio-economic surveys have been completed but the work has not been done in a coordinated fashion. CARE Addis staff see the benefit of such data and may propose the use of a USAID windfall to fund collection of baseline data and development of appropriate scale maps for the entire area. An important question that such data would help answer is whether Model Villages and Model Farmers fare better in hard times than their neighbors.

CARE is also very concerned about the need for effective impact monitoring. They are very happy with the quality of the infrastructure that FFW has supported, but realize that infrastructure in and of itself is not a measurable useful measure of impact.

CARE's FY'95-97 MYOP lists independent adoption of soil conservation practices, as a result of observing the benefits on the land of project participants, as an operational impact indicator. From field observations, farmers in the project zone already understand the importance of soil and water conservation measures and it will be difficult to separate actions taken by farmers on their own initiative, based on their current pre-project exposure and knowledge from those taken following exposure to the project.

CARE, the MOA, and the RRB work together in identifying needs, and where and how to intervene. CARE also consults with the P.A. Development Committee during the planning process. The TGE determines which areas are structurally deficit based on crop assessments, census, etc. CARE and FEWS also implement their own assessments. CARE seeks to involve MOA and MNR staff in its assessments and to involve themselves in the MOA assessment.

When undertaking rural community needs assessments, the understanding which communities have of the likelihood of food aid continuing needs to be taken into account. An expectation that food aid (FFW or FFR) will continue indefinitely can be a disincentive to invest in maximizing agricultural production, and can influence the choices farmers make in assigning priorities for FFW funded activities.

Three factors have impacted on the effectiveness and efficiency of CARE's planning in FY'94. In 1993, with insufficient field staff and having not used FFW for several years, identification of priority activities and work targets were set by CARE Addis. The inadequacy of this approach is clearly seen in CARE's Project Implementation Report. In Gursum, production of 300,000 seedlings was planned; only 108,000 were produced. Fifty thousand tree planting holes and 50,000 associated microbasins were planned; no work was accomplished in either activity. On the other hand, 450 kms of soil and rock faced bunds were originally planned for and 1561 kms were created. CARE is fully aware of the need for locally driven planning and has been able to make the necessary changes. Plans included in the FY'95-99 MYOP have been established at the local level.

The second factor to impact on planning was the TGE policy shift that called for an end to the distribution of "free" food except for cases where recipients were unable to work. CARE had budgeted for 90,000 person days of FFW in FY'94. By the end of June 1994, with much of CARE's FFR stocks shifted to FFW, 722,800 person days of FFW funded activities had been accomplished. The majority of this was the creation of bunds on farmers fields-- 200 kms planned, 1561 kms accomplished. As project extension agents do not have responsibility for FFR activities, the mid-course shift from FFR to FFW had a dramatic effect on their work load.

The shift in policy is one that has occurred several times in recent years, according to severity of climatic conditions and the level of crop production. The TGE is clearly sensitive to the creation of a Food Aid-dependant class and through its policies seeks to minimize the possibility of this occurring. The impossibility of long term weather and crop production forecasting will continue to present a programming obstacle. Finally, security concerns also impacted on the areas in which the project was able to work and therefore had an effect on project achievements.

"No strategy to increase agricultural production in Ethiopia can ever catch up with, let alone, keep up with the current population growth rate of 3% per year". It is now well understood from worldwide experience, that empowerment of women can have a significant impact on population growth. CARE may wish to shift from looking at women as an area of emphasis, towards looking at women as the primary focus of their activities.

A good mechanism to involve women in project activities has not yet been put in place. Of 25 extension agents, only two are women. Having women extension agents is particularly important in this Muslim area, where male extension agents will not always have effective access to women farmers. Unfortunately, CARE does not have a large pool of suitably trained women from which to draw. In the past, CARE has had to reduce hiring criteria in order to hire female extension agents. CARE has prepared a proposal to include family planning education in all of their projects - currently seeking funding.

Schools in the project zone are non-functional. Schools closed following the collapse of the Derg and the institution of a regional approach to government under the TGE. Most teachers in the project zone had been Asmari. Political instability during the transition and a push for majority ethnic representation led non Oromo teachers to leave the region. According to CARE staff most farmers are not interested in sending their children to school. Given the scarcity of both land and off farm opportunities, education would seem to offer an opportunity to make a difference.

## 2.6 Food for the Hungry/Ethiopia- Alaba

The Alaba Conservation-Afforestation Project is located in Alaba Woreda of the Kembata-Alaba-Tembaro Zone in the Southern Ethiopia Peoples' Region, about 315 kilometers from Addis Ababa. The project site itself is in an area around the town of Alaba Kulito along the road between Sheshemane and Soddo. The project was started in 1984, in response to a request from the Ethiopian Government Relief and Rehabilitation Commission (RRC) as a result of localized outbreaks of famine in the area because of drought. Food aid contributions from USAID were shifted to the regular program in 1986 when after the famine emergency had passed, FH/E began to take on responsibilities for rehabilitation and development.

The Alaba Project is one of the longest running among those NGO projects funded by Title II Regular Food. Indeed, USAID has now made it clear to FH/E that they need to prepare for their withdrawal from the area as much of their rehabilitation work should now have been covered. Of special interest, are the handing-over arrangements being considered to transfer the responsibility for the conservation and management of reforested sites, including one particularly large area (Sorge Forest with 4000 + hectares) to the local communities. This forest, and the planning for the management, utilization and followup maintenance was, accordingly, an important focus for the Evaluation Team.

The Alaba area is one of rolling hills with shallow soils and frequent indications of heavy erosion. The farms themselves

generally occupy the flatter, plateau sites planting mixed food and cereal crops with a predominance of maize, cash cropping of chili and a heavy percentage of land used for livestock grazing on open access communal areas. It is this latter type of land, most frequently sloping areas either descending into the valleys or on the higher and/or steeper elevations where the most dramatic incidences of erosion and gully formation can be seen. On the road between Alaba and Sheshemane, burros loaded with fuelwood cut from the remaining natural stands of once extensive Acacia forests may be seen incessantly trekking to the cash marketplace. The area is also extremely hard pressed for water sources with only one perennial river, the Bilate, traversing the area.

The Alaba Project is based at a modest yet very efficient camp on the outskirts of the town of Alaba Kulito. Here a staff including forestry, agriculture, water resources and soil and water conservation personnel pursue a main goal of transferring rural development knowhow and skills to the local community. In 1994, the commodities budgeted for the Alaba Project <sup>20</sup> was 1,426 MT of grain and 59 MT of oil.

This, it should be noted, is a relatively large amount of food aid for an area that seems far from suffering a food security crisis. Indeed, FH/E reports that they use a rotational system for labor, each individual working several weeks and then being replaced by another, as a means for ensuring that as many community members as possible can benefit from the FFW. In effect, food aid is spread evenly throughout the community and does not directly target those with greatest needs. FFW is used only on the conservation/reforestation and nursery work components. Farmers are encouraged and trained to use soil conservation techniques on their crop fields although no food aid is used to supplement their efforts.

The contact farmer model with follow farmers is used to propagate a wide variety of agricultural improvement practices including: horticulture, fruit trees, compost pits, home gardening, apiculture and micro-irrigation. In addition to these activities focused on the farmsteads of the area, FH/E has spent considerable effort fostering tree-planting in the area and on rehabilitating degraded grazing lands. Communal woodlots are their main strength, as was mentioned above, although farmers may now be seen to be planting trees, predominantly Eucalypts, widely on their field margins and in small private woodlots. The following statistics give some idea of the magnitude of their success with tree-planting:

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<sup>20</sup> Approximately two-thirds of the project's food aid comes from USAID with other commodities, supplies and resources being provided from the Canadian Foodgrains Bank and BandAid.

Closure Areas-	3931.5 hectares
Community Woodlots-	481.0 hectares
Total Area Reforested-	4412.5 hectares <sup>21</sup>

It should be noted, however, that the majority of these planted areas (3,265 hectares) are more than 5 years old while another 718 hectares are 4-5 years old. Tree-planting has evidently slowed down in these latter years of project activity. The Evaluation Team was unable to find out if this was because of a lack of lands available for planting or because possibly food aid was no longer sufficient inducement to convince participants to turn out for FFW.

Among the field sites visited by the Evaluation Team were examples of the following: communal woodlots, horticultural demonstration site, central nursery, soil and water conservation activities on private land, a closure area being treated to control erosion, a contact farmer and his homestead, a pond site and the large-scale reforestation site on the hills above Alaba. Before discussing the woodlots which are the most important elements of the Alaba Project, some mention of the other activities is warranted.

The large main Alaba Project Nursery along the Bilate River at Hantamie is an impressive operation. The ten hectare site has produced on average about 2.5 million seedlings over each of the last eight years. Some 20-22% of the seedlings currently being produced are non-forest species: coffee, avocado, cashimir, guava and others, in response to the high demand for these home garden trees. The nursery is currently able to sell coffee seedlings at Birr 0.20 each, slightly less than the cost of producing them. The nursery is also the site for a horticultural demonstration area and seed/plant materials multiplication center. Vegetables currently being promoted, through on-site training courses with contact farmers who actually cultivate them, include: onions, potatoes, beans (several varieties), garlic, sugar cane, carrots, tomato, cabbage. A variety of improved fodder species, both grasses and leguminous creepers are also being demonstrated and farmers are encouraged to take planting materials to try them in their own lands. There is also an innovative training program in the production of adobe based bee hives, something adapted from a nearby GTZ operated apiculture project.

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<sup>21</sup> These figures do not include an additional 429 hectares planted during 1992-1994, the current operational phase of the project. It should also be noted that these figures obtained on-site differ significantly from those provided by FH/E Headquarters in responding to the pre-evaluation questionnaire which reported a closure area of only 500 hectares! (see Appendix F). This difficulty in obtaining reliable data and information on achievements was noted with other NGOs as well.

It is clear that the site, once a completely degraded area in the bend of the river (and now completely rehabilitated with rock walls and tree plantations around it) has been a key element of FH/E's program in the area. Staff mentioned that demand for all sorts of plant materials, especially tree seedlings continues to run high among local farmers. They are even considering the possibility of charging for tree seedlings with an eye to meeting the recurrent costs of operating the nursery once USAID food aid ceases. The nursery employs between 150 - 300 workers depending on the intensity of the seasonal activities, all paid with FFW. This amount of labor sounds rather high especially given the fact that the nursery is located at the river bank and has a motor pump and gravity tank system to distribute water throughout the planting beds.

The ensuing discussion of this point raises the thorny issue of what will become of the nursery should USAID support be withdrawn from the project. It seems unlikely that a farmer-based organization could take it over, especially considering these recurrent costs. FH/E feels the local Bureau representatives of the MNRDEP would not have adequate budget to cover the production costs. Some more scaled down operations could certainly be one approach given the fact that much (75%) of the seedlings are currently targeted for planting on communal woodlots, an activity as mentioned above which has slowed down in recent years. Then too, the principal species (85% of production) has been Eucalypts for which farmer manageable nursery techniques are quite well known. This issue of the long-term destiny of the nursery needs further discussion although the fact remains that one of the other donors currently supporting the project might agree to take on the responsibility of funding it.

Much of the emphasis and efforts towards improving agricultural productivity has shifted to a soil and water conservation/agriculture extension team approach. During a visit to farm fields near Alaba, good examples of farmer established fanya-juu conservation bunds and a type of trench fencing ("dichera") are common, all of which has not been subsidized with FFW. In the past, during the old and now abandoned villagization schemes, mass mobilization supported with FFW to carry out soil and water conservation schemes was common. The project has been able to phase out this aspect of its FFW and farmers are now doing it on their own, sometimes as part of shared work approaches which are still common in Ethiopia. Once the previous regime collapsed, farmers quickly left the "new villages" and return to settle in and around their former fields. The farmers met in the field asserted that everyone was replicating the soil and water conservation activities in order to maintain the productivity of their fields. However, it would appear that at least part of the rationale for the soil bunding appears to be as boundary marking in an effort to secure their renewed hold over formerly held family lands. According to FH/E personnel, some of the farmers are using improved

corn seed and fertilizers, a trend which will hopefully increase, given the ease of access to both inputs and markets.

One of the most innovative and important realizations of the Alaba project is the construction of small ponds combined with a slow sand filtration systems to solve the chronic water supply and water quality situation of the area. The gravity fed cistern collects water running through a gravel-aggregate-sand filter from where it is pumped by hand to those who come to fetch water. Here again, this work was all community labor volunteered without benefit of FFW<sup>22</sup>. The project paid for all the cash and materials costs (cement pipes, and hand pump), amounting to approximately Birr 8000 (less than US \$ 1500). A community appointed, and presumably rotating, pump monitor operates the facility during morning and afternoon periods for fetching water. During the visit, village women and girls present on the site while fetching water were enthusiastic about the facility. Community labor will be used to maintain the pond during the dry season once the water level drops below the intake point. This simple facility, supplying a primary need seems to hold great promise and might well be tried in other areas with similar water supply problems, for example, as part of some of the earthen dams being constructed in other parts of the country (see the discussion regarding the World Vision site in Wumberta).

The Evaluation Team also visited two adjacent closure areas within the lands of the Hantazo/Bubisa Peasant Association. The areas formerly used as open access grazing lands are highly degraded, in some cases with the shallow sloping soils have been eroded to bedrock. FH/E with FFW participation is in the process of rehabilitating the areas with stone contour bunds and tree-planting. On the second of these areas, a team of participants were in the process of constructing soil-faced stone bunds along the contour. In order to gather soil to cover the stones, however, it was pointed out that they were actually creating a higher level of soil disturbance likely to cause more erosion during the ensuing rains. Most of the soil on earlier stone bunds had already been washed away. Here again too, the large area involved-- several hundred hectares-- meant that in order to protect the area effectively, livestock would have to be shifted to other areas, with the probability of increasing the rate of over-grazing elsewhere. At present, FH/E has as yet to institute a program aimed at reducing over-grazing through the promotion of improved animal productivity and consequent reduction in average herd size, the only lasting solution to the over-grazing problem. There was

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<sup>22</sup> This example of the ponds constructed in the Alaba Project Area is a clear example of the fact that where a project agrees to tackle development activities of high priority to the local people, that the people themselves will recognize the benefits and be willing to work without additional incentives such as food aid.

also ample evidence that the local people are finding it difficult to keep their animals out of the closure areas, thereby undermining the whole effort.

Communal woodlots, as mentioned above, are a special feature of FH/E's activities in Alaba and several examples of successful woodlots were visited. The most impressive of these is the 4417 hectare Sorge Forest established on the hills above the cultivated lands of six peasant associations. Because of over-grazing on the heights and removal of the tree cover, the surrounding slopes were heavily eroded giving rise to large gullies and causing flood damage to the fields and villages below them. The entire forest area is now protected and most of it, including the gullies themselves has been effectively replanted.

The Sorge Forest with many mature trees, particularly Eucalypts but also including some Acacia, is now ready for further management and utilization. FH/E is preparing a management plan for the area and meeting with representatives of the six peasant associations in order to find a way to hand-over the forest for use and management. The large amount of standing timber, useful for both poles and fuelwood, represents a potentially very valuable (millions of Birr) resource and the pressures surrounding its destiny are great.

Each of the six P.A.s has former lands included in the now reforested and rehabilitated forest. During the previous regime, the site was declared national protection forest land because of its degraded condition. The well-intentioned efforts to protect this land, however, met with staunch resistance from local people who, as elsewhere in the country, interpreted the move as an effort to deprive them of their land. It was not until FH/E started FFW-funded reforestation and soil and water conservation on the area that any progress on rehabilitation was made. It is FH/E's intention to hand it over to the local communities and ample progress has been made in meetings with the elders and leaders of the six concerned peasant associations. These local leaders have in turn stated their unconditional willingness to take over the forest and to manage and utilize it the welfare of the communities they represent.

One of the important lessons learned from this forest, as mentioned by the FH/E forester, is the fact that the question of the long-term institutional arrangements for management should be dealt with at the outset of a project and not after the woodlot's evident value creates additional pressures regarding its end use. This is a lesson many of the other NGOs in Ethiopia working on communal woodlots should definitely heed. At present, FH/E has worked with the concerned P.A.s to form management committees, two for each P.A., one composed of elders and the other of political leaders. In the opinion of the author, the large number of people involved in the destiny of the forest is at best going to make

decision-making (known in the development community as a situation having high "transaction costs") a tedious and slow process which could undermine sound management operations. FH/E should consider helping the communities to go the next step in organizing an overall but more limited management committee with representation of all P.A.s.

Adding to the difficulties is the possibility of interference from local Ministry of Natural Resources officials who assert that the land was designated (and still is) as a national forest area. Hard pressed for operational funds, they are asserting both authority for controlling the utilization of the forest and some claims to the proceeds of the eventual harvest. Because of the size of the forest and the large amount of timber and value it represents, resolving the situation of its future management should be considered by all concerned as a premier pilot model of communal forestry management for Southern Ethiopia. The outcome of its eventual resolution as a communally managed and utilized forest will have impacts extending well beyond the Alaba area. Should the forestry authorities be able to enforce their claims on the area, it seems likely that this will erode the community consensus about the need to protect it and the area will once again be irrationally cut, degraded and destroyed, as was the case in other communal forest areas at the collapse of the Derg.

During the discussions about the Sorge Forest Management Planning effort, a number of points were raised. Although there seems to be unanimity among the communities involved about their willingness to take over the responsibilities for management, the issue of whether it was a fully informed decision came up. As yet the management planning has done too little of the cost benefit analysis related to utilization versus future management and protection costs. Apparently, although there is consensus that the proceeds of any harvest should be divided 80% for communal purposes (building schools, water supply systems, clinics and similar social services) and 20% for maintenance and reforestation, no actual estimate of the recurrent costs of maintenance have been made. Among the questions that should be addressed so as to ensure that the communities have fully understood the commitment they are making are the following:

- Will continuing protection in the form of guards (there are now nine full time guards paid with FFW) be necessary and if so, how will they be paid?
- Will the community have to maintain the access road into the forest, and at what annual costs?
- Who will be the community forestry manager? Will that individual be a community member or will it be necessary to hire a trained individual, and if so, how much will it cost and how will his/her salary be met?

- Estimate the annual costs of management and maintenance: replanting where necessary, firebreak cleaning, boundary maintenance, possible expansion, etc. etc.
- Who and how will the proceeds of sales and the accounts of the forest be managed, and will this need to be a paid position?
- How will the community organize itself to combat forest fires should these occur?

During the discussion on the future of the forest, the FH/E Headquarters staff concluded with the project personnel that a number of important issues remained to be addressed and that these were in the realm of community participation and institutional arrangements. It was decided to reinforce the present efforts to develop the management plan, now in the capable hands of the project forester, with inputs from specialist consultants familiar with the community dimensions of participatory forest management, ideally a rural sociologist or community institutions specialist. The Evaluation Team feels that this is a sound decision and encourages USAID to consider means to continue supporting these pilot efforts to develop a community management scheme for the Sorge Forest. Food aid will no longer be necessary once handing-over begins. This effort should not take more than two years-- six months to put in place and 18 months of pilot implementation.

It also seems certain that the community organization set up to manage the forest will need continuing technical assistance related to:

- the sales, pricing and marketing of the wood;
- for developing suitable cutting schemes (there is a debate about whether to clear cut and replant or do selection felling; the answer may well be clear-cutting in small patches to allow the Eucalypts so cut to properly coppice);
- with finding technically feasible options and implementing suitable investments with the proceeds of the sale of wood.
- with developing a rotational grazing scheme for the forest; and
- resolving the issue of wild animal damage caused to nearby farmlands (many of the communal woodlots have inadvertently become the breeding grounds for warthogs which then raid nearby fields causing significant losses);

That the outcome of this pilot case will have far-reaching implications for the future of the many similar communal woodlots established elsewhere in the country cannot be stressed enough. Providing it with the time and resources to design and implement a well conceived management plan is an investment well worth supporting.

## 2.7 Catholic Relief Services/Ethiopia- Gurage Zone

Catholic Relief Services/Ethiopia (CRS/E) works with a series of local counterpart agencies in implementing its FFW activities. Although CRS staff are not directly involved in field implementation of these projects, they demonstrated a high level of interest and insight about the field activities and of value to the evaluation. In addition to sending a team to accompany the Evaluation Team while it visited other NGO sites, their response to the voluntary questionnaire was both thoughtful and forthright. Some of the points raised in this response merit mention here as they provide additional important perspectives to the more detailed discussion of the site visits.

In regards to project planning, the CRS response made the following points:

- "...due to the extremely long time between planning and implementation (often over a year) as well as the intense detail required in MYOP submissions, it has not been easy to help either indigenous NGOs or community leaders participate more actively in the planning process."
- "For the most part, we believe projects are being designed by counterparts to respond to needs identified by both counterparts and communities. However, our recent Participatory Rural Appraisal experience in Gurage suggests that FFW interventions rarely match village development priorities....communities need to have a stronger voice in the process..."
- "...counterparts feel certain that the food is well received by the community. However, in the participatory rural appraisal conducted in two Gurage villages last May, no community participant listed food as a priority. (Seven other needs were listed ahead of food, which came last)."
- "...we went into projects in the Gurage area with no fixed time-frame for an end to the activities."

On community participation, the questionnaire response noted:

- "...the question of who identifies FFW activities from among the community members is significant, as prominent farmers and more marginal groups often cite different needs."
- "At times we believe that the food may be inappropriate in that other community development activities which rely on more active participation as well as in-kind and cash contributions may be less effective due to the influence of food aid for similar activities in neighboring areas. It is difficult to ask a farmer to contribute cash and labor to dig a well while in the next village people are receiving wheat and oil to carry out the same activity."
- "It would be good to see communities taking a more active role in the selection of beneficiaries, as well as the planning of projects."

These very forthright statements are well appreciated by the Evaluation Team because they represent the first and most important step on the road to improving program performance-- that of problem recognition. The Team is certain that such observations apply to most of the NGOs operating in the other areas visited as well.

The Evaluation Team visited two of these counterparts operating in adjacent areas in the Gurage Zone, Western Shewa: Archdiocesan Catholic Secretariat (ACS) and the Fessa Adventist Development Office (FESSA). Although there are many similarities between the two organizations, they are reported on here separately.

Archdiocesan Catholic Secretariat (ACS)- The team began its visit at the ACS Zonal Office for the project located within the compound of St. Anthony's Church in Imdibir where it received a briefing on their activities. The ACS activities in Gurage are quite dispersed geographically in six sub-woredas and work reportedly with 35 Peasant Associations in 45 sites. This is somewhat surprising considering that the activities began less than two years ago. Early startup problems involving recognition and official approval from zonal authorities apparently also slowed the development of the project. For example, authorization was not received from the Zonal RRC to purchase and import vehicles for ACS because they are not officially registered as an NGO. This matter of registration is as yet under discussion and the matter of vehicles is indeed still an issue (see below).

ACS began these activities with CRS support in 1992 in the Gurage Zone. The zone is an area of high population pressure with approximately one million people occupying 4500 km<sup>2</sup> (calculated population density- 222 people/km<sup>2</sup>). Like other areas of the

country, population density increases rapidly as one goes higher in the rolling hills. It is an area thought to suffer from significant food deficiencies, in the main because of its almost universal dependence on Inset (false banana) as the primary staple crop. Inset, although high in carbohydrates, is low in protein and does not provide a fully balanced diet. Recently, the increasing incidence of a disease affecting Inset has been causing serious concern. In addition to Inset, local people cultivate both coffee and chat as cash crops. The area also has a significant incidence of environmental degradation, typically manifest in the form of massive gullies, particularly at the middle elevations.

Although the Gurage Zone is known as an area of particularly hard-working and industrious people, there are still many problems. ACS started this project with three main objectives:

- to promote environmental stabilization with reforestation and soil and water conservation;
- to change the livelihood of the rural communities by building up basic infrastructure; and
- to maintain the nourishment of the poorer parts of the community.

Their achievements in pursuing these objectives in the last two years have included the following:

- established nine nurseries cum demonstration sites with a total annual seedling production capacity of 2 million;
- produced 2.7 million seedlings;
- worked to protect 35 springs as water sources;
- built over 130 km of brushwood check dams in gullies;
- planted approximately 720 km of grass strips to control run-off and erosion, again primarily in the gullies;
- built 3 small-scale bridges;
- built 25 kilometers of feeder roads; and
- closed 95 hectares, again mainly in gullies to protect conservation works and promote natural rehabilitation.

In FY 93, they utilized a total of approximately 642 MT of food aid and in FY 94 (up to August) they estimate commodity usage at 806 MT. When asked about beneficiaries, they estimated approximately 50,000 although, as was later pointed out, this is roughly the entire population of the 35 P.A.s with which they work. Despite good rapport with the ACS personnel, the Evaluation Team was unable to obtain clear answers to the important questions of how they selected either sites or participants. As of yet, they have not undertaken any significant baseline studies although at USAID's insistence they will now begin to do so.

ACS, they candidly admit, has a number of constraints: it is a young organization with a need to improve its organization and upgrade and increase the skilled staff it employs. Transport is a major problem (appeals regarding vehicles were reiterated on several occasions) given their widely dispersed operational area. They stated that it was only in FY 94 that they first received funds from CRS for program support needs.

Two principal types of NRM-related ACS project activities were visited in the field: gully rehabilitation schemes and nursery cum agricultural demonstration sites. In addition to sites located in the proximity of the town of Imdibir, the team concentrated its field activities on project sites to the east of the main road about midway between Imdibir and Wolkite. It is an area where FESSA also has been working.

The Koror Gully Treatment site (2350 masl) was typical of the dramatic erosion potential spreading through the middle elevations of this area. It is accessed off the main road between Imdibir and Wolkite on one of the farm to market roads constructed by the Gurage Zone Development Council. One passes through a large area of Eucalypt plantation in the relatively flatter areas before beginning to climb higher. The plantation, established reportedly under the Community Forestry Development Program<sup>23</sup> some years ago, is in an area predominantly devoted to grazing; the black cotton soils are said to be normally waterlogged during the rainy season. Any number of large herds of cattle (100 + head) were seen there.

As the land gradually rises and the grade increases, one comes upon a vast area of intensive and huge gully formation. ACS has begun its gully stabilization work at this Koror site, having covered approximately 15 hectares (out of a total of 75 needing similar treatment as estimated by ACS; the author would estimate that the area is considerably larger). Grass-strips, using locally found clumps of grass have been established at approximately 2 meter intervals on the contour along the interior walls of the gully, with brushwood check dams blocking the water channel. The gully area itself is said to be a protected closure area. There can be no question that the technology though very intensive is probably appropriate and effective.

Two issues arose, however, during the on-site discussion. One is the scale of the intervention; will it be sufficient at the

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<sup>23</sup> It seems likely that this particular Eucalypt plantation is an example of those referred to in the Ethiopia Forestry Action Plan as follows: "The push for 'community forestry' development has been seen by the farmer as state forestry in disguise. Local communities have come to distrust the Government, having seen their grazing lands being 'appropriated' by the Government for the establishment of ...forests..."

present rate of treatment and when? The other is the fact that here again (see discussions about similar situation in Omosheleko) the margins of the gully are still being actively grazed, with the probability that the gully will continue to expand.

This second point arises when ACS, with the concurrence of some of the CRS staff present, explains that the grass-strips/check dams are "controlling the expansion of the gully". This seems unlikely although they may be stabilizing the sides and speeding its rehabilitation. The only way to control the expansion of the gully will be to avoid the over-grazing on the communal grazing areas around its perimeter-- in all probability something that can only be achieved by displacing the present herds (where to?) or reducing their numbers. ACS seems dubious that they can convince the farmers to take this admittedly radical step, even if it is a well recognized fact that most of the animals are unproductive. The time to open that difficult debate, however, was yesterday.

The author speculated out loud with the ACS colleagues that perhaps this large Eucalypt plantation through which they travelled might have been part of the cause of the gully formation in the area. Planted right in the middle of the grazing area, it removed a significant portion of that already stressed resource, forcing the cattle higher on to the slopes and contributing to the formation of the gullies through accelerated over-grazing. One might also wish to consider whether a concerted effort to develop a management plan for this plantation and assist the concerned peasant associations to utilize it in a rational manner might constitute a significant contribution to rural development in the area.

The Koror site also again prompts the question of how the project siting decisions were taken. On a salient of the same gully system closest to the road, some rudimentary tree-planting had been carried out directly in the exposed inner slopes of the gully. This they explain is a work site of the local Bureau representatives of the Ministry of Natural Resources. In pitting and planting directly in the steep and highly eroded sides of the gully, this effort seems likely to be of marginal and perhaps even negative impact. Low survival (already apparent) is almost assured given the infertility of the subsoil in which the trees have been planted. The process of scaling the steep inner slopes of the gully in order to pit and plant has probably loosened and otherwise disturbed the soil promoting further erosion. Just across the road from this Koror site, there is another large and extensive gully system, part of the same catchment area. ACS personnel indicated that no one is working in that particular area. There seems to be more than ample sites for work in this one area and the matter of why ACS has spread itself so thinly across the six sub-woredas, especially given their transport problem, remains. It should also be noted that FESSA operates in contiguous areas in and around those operated by ACS.

One of the participants from another NGO pointed out that the local shrub Dodonia viscosa is present and might be propagated through direct seeding with less site disturbance. It is a well known and appreciated fuelwood species. ACS has undertaken some direct seeding with a variety of leguminous cover crop species as was seen on the Semai Gully Rehabilitation site in the town of Imdibir itself. This is a welcome innovation. Another innovation worth promoting is the use of live vegetative plantings as part of check-dams. ACS used cut branches and stems of Erythrina spp. in some of the check-dams on the Semai site, a technique of great promise for strengthening these structures (see the discussion below about bamboo in the FLSCA areas).

Slightly farther and higher up the road, another gully rehabilitation site in the middle of the village of Zeguaje (Shebraden P.A.), the question of how gullies will ultimately be controlled becomes evident. This gully, although a bit smaller has eaten its way to the margins of the former grazing land and is now held in check by the more intensive and stable land-use of Inset gardens and tree plantations on individual farmsteads. Where have all the cattle gone?

The site itself, heavily fenced as it is right along the road, seems to be reacting well from the treatment-- protection, tree-planting, grass-strips and brushwood checkdams. It will, however, be many years before it can be declared rehabilitated and brought back under a rational management scheme-- cut and carry fodder production and perhaps coppice production of fuelwood and poles. Both ACS and some CRS personnel assert, however, that they feel they will soon be able to turn the area over to the P.A. so as to allow them to manage it sustainably. This seems dubious because the exposed subsoils are even more fragile and infertile than the now departed topsoil. Hopefully, the expectations of local residents have not been needlessly or unrealistically raised about the short-term potential of the area during this operation.

The matter of choice of species for tree-planting also came up at the Shebraden site. It seems that on most sites, ACS (and others) have planted a wide variety of tree species, including various Acacia spp., Grevillea, Casuarina, Cupressus, Sesbania, Leucaena, Schinus, and Eucalyptus spp.. Some of these species may be outside their preferred altitudinal ranges.<sup>24</sup> During FY 94, both

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<sup>24</sup> The Evaluation Team has agreed to find suitable reference documents about some of the tree species used by the NGOs in Ethiopia and send them back to the NGOs on it return to the United States. It was also noted that there is a guide to Tree-Planting for Development Agents (a copy was located at USAID; additional copies are presumably available from the MNRDEP) similar to that for Soil and Water Conservation which contains information about species choice for reforestation in Ethiopia to which the NGOs

ACS and FESSA (see discussion below) experienced some problems of late release of funds and were unable to find plastic bags (polypots) on the market in time for nursery production. They were forced to use bare-root seedlings of Eucalyptus spp. as a substitute, a situation which has led to lower survival rates.

The ensuing discussion about the choice of potted seedlings versus bare-root stock was instructive. The NGOs (and presumably others involved in reforestation in Ethiopia) prefer to use potted seedlings because they normally survive better in the sometimes erratic rainfall patterns. Bare-root stock has in general been subject to higher losses. This need not be the case, particularly in the highlands where moisture stress during the rainy/plantation season is less of a problem. The bare-root technique, however, necessitates rather high quality seedlings, root pruned in the nursery to produce a vigorous and well developed root system matched to the aerial portions of the seedling. Root-shoot ratio is conventionally known as one of the most important variables of seedling quality. In many cases, the Evaluation Team saw very large seedlings (over 50 cms in height) being planted, particularly with the fast growing Eucalypts. Such large seedlings have more difficulty in surviving outplanting because their relatively small root systems cannot supply the larger tops with the water and nutrients they need to keep pace with the photosynthetic process. Good seedling quality is the one of the most important factors for both good survival and growth of plantations.

Further examination of the question of bare-root stock with Eucalypts in the Highlands of Ethiopia seems merited, particularly for rehabilitation on inaccessible sites for two reasons. A quality bare-root Eucalypt seedling can be transported in much greater quantities and with less damage than the polypot seedling stock, thus making it possible to plant larger areas with the same amount of labor. It is also possible to prune back the top portion of the seedlings given their coppicing capability and thereby ensure less physiological stress during the critical establishment period and, hence achieve higher survival.

The Evaluation Team also visited two of the ACS nursery cum agricultural diversification demonstration areas, at Atta Mariam Tuba and Getche. This latter aspect related to horticulture--vegetables and fruit tree introductions, used as key sites for training contact farmers, was of greatest interest. Clearly, if part of the local challenge is diet deficiencies owing to dependency on Inset, these innovations may prove most useful.

Although ACS has only been working on these nursery/demo sites since 1993, a great deal has been accomplished. A number of points, nevertheless, should be addressed in order to realize their

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might refer for further guidance on the subject.

full potential. The first issue and the most critical one is the matter of locating suitable growing space for horticultural crops on the already small-sized farmsteads. Although vegetables and fruit may be grown successfully as dietary supplements for the household, or even for market purposes, there are few places in the world where farmers have used them to replace staple crops. More work on primary crops, including the introduction of alternative cereal crops as well as the concern for the disease attacking Inset seem merited. The second point is that as a demonstration site, it is imperative to set a good example for the farmers, meaning site/species selection and careful adherence to horticultural production schedules.

FESSA Adventist Development Office (FESSA)- The Evaluation Team next moved on to visit FESSA sites in other nearby localities in the Gurage Zone. The areas, development challenges and activities seen are quite similar to those of ACS and accordingly need not be discussed in such great detail here. FESSA, through its parent international NGO, Adventist Development and Relief Agency (ADRA) has been operating in the area since 1986. Some of the earliest gully stabilization activities were done under the form of a food-for-clothes model. FESSA itself, started work with CRS in 1990, receiving USAID supplied Title II regular program food.

FESSA has divided its activities by catchments, a very useful approach; the first field visit took place in the Wasamar-Gedet Catchment Area. Intensive treatments began in the area in 1990 and FESSA staff observed that the local people in this area are genuinely convinced of the need to protect the environment. Indeed, travelling through the area, there are numerous examples of successfully stabilized gully areas on the lower slopes of the catchment. Higher population densities, typical of the higher population densities in the Gurage Zone, dramatically underscore the clear emergence of a land stewardship ethic among these people. At higher elevations where land is both more productive and scarce, the farms and fields are carefully and neatly tended, leaving little room for erosion which would clearly have a major destabilizing impact.

During a presentation at the FESSA Headquarters high<sup>25</sup> in the catchment, a number of interesting points related to program

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<sup>25</sup> Here again, the road system high in the watersheds may be causal in terms of provoking erosion. It also seems likely that careful planning of food shipments will be required to haul these heavily laden trucks high into the hills during the period when the roads are in the best condition. Delivering food at the end of the rainy season after the roads have been severely degraded, as was seen in the Gurage Zone, adds a needless constraint for the NGO who must distribute food in the highlands.

planning and beneficiaries emerge. Over the years (90 - 94), FESSA has succeeded in overcoming a previous bias towards men as participants in FFW; by 1994, the split between men/women is 60%/40%. Studies elsewhere of FFW programs have indicated that where women participate, a greater percentage of the food actually is consumed as part of the household diet. FESSA has a very active MCH program in the area reinforcing its program objectives towards improved nutrition.

Some rough calculations made with the FESSA staff and based on their estimates of food consumed and the number of beneficiaries does, however, raise the issue as to the impact of regular food aid on local nutrition. An average of 82 kilograms of wheat per beneficiary was calculated for the 1994 season. FESSA, like its nearby partner has little real quantitative data on food needs in the area; a baseline survey has as yet to be carried out. It is the concern over the dependency on Inset which has driven the establishment of these programs. At the higher elevations, small farm size is more likely to be the cause of food insecurity, a manifestation of "structural food deficit" for which soil and water conservation are only a stopgap measure.

Similarly, although it is manifestly clear that FESSA has been quite successful in meeting its physical targets for soil and water conservation, planning and reporting on these activities is rather unclear. For example, FESSA reports many instances of 100% achievement of activity targets for certain practices (grass strips and checkdams) although in the subsequent discussion it becomes clear that it is next to impossible to estimate (let alone actually measure) the needs for such treatments in the erratically configured gully systems typical of the area.

This is something that the Evaluation Team has noted in other areas as well with other NGOs-- planning without a real estimate of the work required or the specific amounts of various treatments needed. FESSA does seem to keep good records of accomplishment, as these are easier to measure (the length of each of the daily tasks completed can be compiled). The hard work and dedication of staff and participants suggests that they could learn to estimate the needs for such treatments as a function of the size of the gully systems and thereby improve their planning skills by building operational treatment models. As the team discusses this situation with the FESSA/CRS personnel, the real basis for planning emerges-- in the words of one of the CRS program staff: "...the plan is based on previous achievements." (See the discussion above regarding the forthright statements found in the CRS pre-evaluation questionnaire,. Good field-based experience, especially among junior staff responsible for FFW coordination offers a wealth of useful information which can dramatically improve planning. These staff need to be encouraged to analyze their experience and use it to calibrate a localized treatment model.

Descending from FESSA Headquarters, one passes area after area which has been treated. That visit combined with another the following day, to the Yesray Wort Catchment Area, provides the substance for a discussion between the Evaluation Team and the FESSA staff which leads to a number of important technological suggestions worth mentioning here:

- Bamboo, found growing in many of the higher elevation sites might be tried as a living component of check-dams, thereby strengthening them and also producing a very useful product on an otherwise highly degraded site (Bamboo is an important part of house "tukel" construction in the higher altitudes).
- It may be more successful to delay tree planting in these gully areas to the second season after they have been treated with grass strips, wattling and check-dams. Soil accumulating behind the structures will offer a better growing environment for the tree seedlings and ensure higher survival.
- Dead barriers (check-dams, wattling, stone bunds), it is acknowledged, must be viewed as only one element of the soil and water conservation practices. One must begin with the matter of protection, both for the gullied areas and for the terrain where over-grazing is causing erosion, followup with structures and then add the biological element (if necessary; it may sometimes be sufficient to protect the area, even a heavily eroded gully!) such as grass stripping and tree-planting. Such a procedure best mimics the natural processes which themselves would heal these sites if left untouched by man and his animals.
- Efforts to pave local access roads and paths with rocks have a flaw, in that people and animals prefer to walk alongside them because the rocks are hard on the feet. This is leading to soil disturbance alongside the paved areas and undermining their effect. Here again, the erosion caused by roads and paths can best be contained by more careful water run-off management.
- Despite constant assertions about the difficulty of dealing with the "livestock problem", the Gurage Zone offers ample evidence that the people themselves have come to recognize the situation and respond to it. Higher in the catchments, there is almost no evidence of open grazing; tethered animals, cut and carry fodder collection and stall fed animals are the norm rather than the exception.

Farmers seem to be well acquainted with the technology for producing and planting Eucalypt seedlings. One farmer visited had his own seed collection and small nursery and was selling seedlings to others in the area. Similarly, although both FESSA and ACS are beginning to work with improved fodder plantings, they did not seem to be familiar with clover found growing high in the watershed-- a useful fodder species and site enhancer.

### 3.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This section of the report is intended to identify the issues found across the broad spectrum of NGO projects and sites visited by the Evaluation Team. It has been both a challenge and an opportunity to analyze the data and information collected and to draw out the most important issues of relevance at the program level. While there has been a need to generalize, the parties concerned will recognize that not all projects share in or have the same set of issues. The Evaluation Team, nevertheless, feels that the issues identified and the lessons learned should be seriously scrutinized by all those involved in the USAID/Ethiopia Title II Regular Food Aid Program. It may help some projects to meet future challenges and avoid some of the pitfalls that others have already experienced.

#### Making a Difference...

There can be little doubt that the Title II food aid projects and programs being carried out by the NGOs in the area of food aid and natural resources management are making a difference. In many cases and in many areas of the country, the NGO presence is "the only game in town". After decades of internal political struggle, the central and regional services of the Transitional Government of Ethiopia are as yet too modest and limited in their capabilities to fully address the needs and opportunities of rural development. These NGO activities provide a beacon of hope for countless thousands of rural Ethiopians who are responding enthusiastically in a country-wide effort to rebuild and rehabilitate the nation. The NGO community shares the awesome burden of making sure that this beacon burns bright-- with the message of hope kindled by self-reliance and self-realization.

The Evaluation Team has noted that there is earnest questioning going on everywhere, particularly at the field project level where questions such as the following are being asked: Are these the right technical packages? Are we creating food aid dependency? Other donor projects are using other approaches; why not us? The fact that these questions are being asked is in and of itself a cause for optimism about the future. Clearly, the time has come to examine the experience gained since the program got underway in 1986. This first comprehensive program evaluation of the food aid/NRM programs being carried out by the NGOs using USAID/ Ethiopia supplied Title II food aid is an opportunity to consolidate the gains made to-date, review what works and what does not, and move forward. Ethiopia is a country in transition-- from a totalitarian government with a centrally planned development blueprint to one attempting to unleash the forces of private enterprise and genuine popular participation in the planning and implementation of development. While the issues raised below might give pause to the casual reader, the Evaluation Team is convinced that the challenges they present remain in the hands of those best

equipped to handle them-- the committed and motivated staffs of the NGOs and their willing and hard-working community partners.

A few salient points about this section and what it presents are worth mentioning here. As many readers already know, the broad outline of this findings section was presented in a two-day workshop attended by representatives of all the NGOs involved in the Title II Regular Program <sup>26</sup>. Both this presentation, and the report itself, have been rendered in simple, straight-forward language so that they could be clearly understood and discussed by as many program participants as possible. Indeed, throughout the field visits, as the Team identified issues, these were pointedly raised and discussed on site in an attempt to widen the dialogue and bring forward the broad and field-informed perspectives which will be essential to resolving them. NGO personnel responded enthusiastically to this challenge. Their receptive attitudes has convinced the Evaluation Team that the process (and process it must clearly be) to improve the use of food aid for natural resources management and environmental rehabilitation is well underway. Although much of what follows represents the viewpoints of the Team, particularly of the Team Leader, the findings, conclusions and recommendations have in every case benefited from countless contributions from the NGO colleagues.

### 3.1 Technological Findings

As the reader will note in the Scope-of-Work for this evaluation, considerable emphasis was directed at the technological underpinnings of these food aid/natural resources management activities. Overall, the Evaluation Team feels that the similar set of technological interventions (soil and water conservation, tree-planting and agricultural extension and development) are appropriate. This overall similarity, observed in projects ranging from the northern to southern portions of the country can be both reassuring and disconcerting. They are reassuring because all are addressing the same general set of problems (a degraded environment, poor production, high population pressures). What is disconcerting is that these problems are not all the same from one end of the country to the other.

For example, several NGOs have recognized and begun to respond to the fact that in areas which are experiencing "structural food deficits", a wider array of development options and strategies will be necessary. Finding gainful employment alternatives will be important for those whose land holdings are too small, too degraded or too fragile to meet their daily subsistence needs exclusively

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<sup>26</sup> Although the Evaluation Team did not have time to visit Save the Children/Ethiopia field sites, their representatives did participate in and contribute to the dialogue at the workshop.

from agriculture. In such instances, the real impact of natural resources management and agricultural improvement must be seen for what it is: buying time until the government, the people and their donor partners can confront the needs and opportunities for rural industry, economic diversification, and improved market mechanisms which will promote off-farm income earning opportunities for a larger group of rural inhabitants. Reducing population growth must go hand-in-hand with urbanization, industrialization, education and employment generation so that small farmers and others can find a destiny beyond that of eking out a frugal existence on a small, degraded piece of land.

An IFPRI paper (Webb et al 1992) on "Famine and Drought Mitigation in Ethiopia in the 1990s" has concluded that famine and poverty are inseparable. Some households, it was noted, however, fare better than others because of the characteristics of their household economy: more savings, diversified income sources, more investment resources, and improved access to a social support network. In several areas visited by the Evaluation Team, it was clear that the most positive steps towards famine prevention were those linked to strengthening the local social services and economies. Improved roads linking remote farming communities to markets (eg. Omosheleko) and the concomitant social structures they bring (clinics, schooling, ag inputs, financial services) will encourage and assist farmers to pursue other gainful development options.

#### Food Aid Dependency or Program Dependency?

Few farm households in the structural deficit areas are standing idly by, fatalistically counting on the rains. The diversity of coping strategies is as wide as the options allow. The Evaluation Team is certain that realistic rural appraisals would reveal the farmers' vivid understanding and desire to move beyond subsistence farming. Typically, farmers in this situation hope for clinics and schools as a high priority, so that their children can stay healthy and be educated and thereby avoid the "lives of quiet desperation" of the poor farm<sup>27</sup>. In this context, the issue of food aid dependency looms large. Although the Evaluation Team did not have the time and resources to undertake the range of studies required to probe this dependency issue, it did, however, formulate some opinions on the topic. It does not seem, given the patterns generally seen of food aid distributions (often typically quite small in proportion to total food needs) that food aid dependency has irrevocably set in. The specter of another form of dependency-- "program dependency"-- fueled by the

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<sup>27</sup> Henry David Thoreau, describing the plight of the small farmer in eastern Massachusetts in the early nineteenth century in his classic work, "Walden".

broad range of interventions some NGOs bring to a local community, is another danger with which to be reckoned.

NGOs must be alert to the fact that their well-meaning zeal to assist the beleaguered communities they serve not become pseudo-social welfare programs for two reasons. On the one hand, there are simply not enough resources, either internally or from the combined donor community, to mount such programs. More to the point, however, as will be repeatedly stressed in this report, anything that replaces or erodes the participatory self-help ethic to rural development in Ethiopia is unlikely to be sustainable over the long-term. Projects and programs must nurture and harness the resolve and capabilities of the people themselves if they are to have the necessary impact.

These simple realities about the long-term future of development in Ethiopia are undoubtedly well-known by the members of the NGO community who struggle with the problems of rural development on a daily basis. The Evaluation Team believes, however, that they must be increasingly taken into account in assessing the role and applicability of food aid as a development resource. Simply stated, regular food aid may no longer be either needed or appropriate in some places. Lest there be any misunderstanding, however, the safety net of a capability to respond with emergency food aid should certainly be maintained given the nation's vulnerability to periodic drought. It must be part and parcel, indeed the very core, of the social services which constitute the expanding capabilities of a government/private sector partnership to minister to the just needs of its people.

#### Managing Land-Use...

Regular food aid, however, and in particular its most typical operational modality Food-for-Work (FFW) has a tendency to promote an "intervention-oriented" approach to the challenges of rural development-- doing something affirmative and action-oriented to respond by applying Ethiopia's most abundant potential resource, labor. One of the most important findings of this evaluation exercise is that degradation is the result of inappropriate land-use and that there is a need to manage the use and not just treat the land affected. One of the reasons for the failure of soil conservation programs worldwide has been this tendency to deal with the symptoms of the problems and not its causes (FAO 1992). There are certainly still many places where FFW can be both justified and useful. However, in several of the projects visited (for example, in Omosheleko, Alaba, in the Gurage Zone, and presumably in others particularly in the south), a new approach will be needed.

Where food aid may once have been overwhelmingly and undeniably justified, helping rural people to rebuild their lives and their land, NGOs must begin to explore the possibility of a transition to greater self-help, participatory approaches to

problem solving. For example, food aid could be delinked as payment for work and used instead as a contribution to a community managed revolving food bank. Creating and motivating self-reliance and community institutions to resolve problems should be a development goal that overshadows physical interventions and will outlast them (Catterson et al 1993).

#### Conclusions:

- ◆ Food aid promotes an intervention-oriented approach to rural development particularly where it is used as FFW. This may be counter-productive to finding a wider array of real solutions to the problems. For example, meeting the challenge of land degradation can only be fully addressed by managing the use of the land and not by simply treating land.
- ◆ A number of the projects visited have clearly reached the point where regular food aid can effectively be suspended although USAID and the concerned NGOs need to confer to find out whether and how other forms of support might continue to flow to these areas. Also other donors who share the support of these projects and currently are able to offer cash funded alternatives to food aid could be encouraged to step in and take over funding needs.
- ◆ Food aid dependency from the regular program does not appear to be an issue, given the relatively small amounts of food reaching the average household. Program dependency is, however, another issue which the NGO community must confront.
- ◆ USAID/Ethiopia and the NGO community must also take on the challenge of finding ways to diversify the use of food aid in certain other projects so as to delink it as a form of direct payment for rural works where appropriate.

#### Recommendations:

- ◆ Many of these more basic issues raised as the result of the evaluation exercise merit a concerted dialogue between USAID and the NGO community, oriented to broadly rethinking regular food aid program policies and approaches. The Evaluation Team recommends that USAID convene a food aid policy working group to begin regular (quarterly) meetings involving senior level NGO personnel to begin discussing them and agreeing on an action plan to resolve them.
- ◆ The Evaluation Team recommends that USAID seriously consider an NGO umbrella type support project as part of its future contributions to ag sector development in Ethiopia. This project would be designed to assist the NGOs to improve the performance of their present food aid/NRM projects and may also provide a funding vehicle for maintaining NGO support in areas where food aid is no longer the most useful development resource.

### 3.2 Planning, Problem Analysis and Program Design

Perhaps the most common issue encountered among the projects reviewed are fundamental weaknesses in their ability to plan, analyze rural development problems and design program responses accordingly. All the projects had difficulty in explaining and justifying to the Evaluation Team exactly how they determine the amounts of food aid to request or the choice and scale of the activities they plan to undertake in a given year. In most cases, the NGOs are operating these regular programs as a followup to previous emergency relief operations or at the request of the Rural Rehabilitation Commission (RRC). RRC, it is understood, bases its requests for these projects on successive years of having carried out food production and needs assessments throughout the country. The methodology used for these assessments is based on the simple though effective principle of per capita food consumption needs compared with local production of basic cereal or staple crops.

#### Who Needs Regular Food Aid; Who Receives it?...

This approach while effective in ascertaining the overall food needs of a locality is of only marginal utility in defining a program approach to resolving the food security situation implicit in the design of a more integrated regular program food aid project targeted at land rehabilitation and increased agricultural productivity. It is therefore not surprising that much of the data and information on food needs in the project areas is at best qualitative and anecdotal. The NGOs are cognizant of the problem.

To meet the challenge of better targeting of food aid, projects presently use two approaches. On the one hand, beneficiary selection is often left to local community organizations who knowing their peers are therefore able to select the poorest to participate. Whether in fact, these poorest of the poor are the predominant participants is difficult to say. Most projects also employ some form of rotational work so as to ensure that food aid is spread widely in the community. In several projects where seemingly reliable data on beneficiaries and their level of participation was available<sup>28</sup>, calculations indicated that food aid earnings were rarely more than 80 kilograms per year. Logically, in some cases, more than one member of a household may participate in FFW and thereby increase the availability of food

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<sup>28</sup> Too many projects encountered by the Evaluation Team were unable to explain how they counted beneficiaries. Double or multiple counting because of participation by individuals in several project activities was common. In other cases, beneficiary numbers did not coincide with the amount of food distributed or the level of work that would have been required to carry out the activities undertaken. Clarifying how to enumerate beneficiaries would be an excellent start to discerning the impact of food aid.

for the family. Is food aid actually reaching the hungry? The answer is probably yes.

Is it making a nutritional difference? There is presently no easy way to know as none of the projects has sufficient baseline data capable of being used to assess this basic impact. One of the fundamental precepts of food-for work is that it is self-targeting; those in need will turn out to work because they need to do so. The present arrangements for selection of beneficiaries and rotational work may be thwarting that important premise.

#### Avoiding the "Drop in the Leaky Bucket" Syndrome...

Similarly, in most of the projects visited, despite the strong and highly visible evidence of land degradation, there was an extremely shallow understanding of the actual nature, magnitude and issues affecting land-use and sustainable agricultural productivity. Few projects actually have and use maps of their areas at a scale suitable for planning, let alone attempting to quantify land-use and/or land capabilities in order to best identify the program challenges and opportunities. Even in projects with a concerted geographical focus, such as the catchment approach used by FESSA, overall figures on the amount of land needing rehabilitation or on the areas suitable for crops, livestock or trees was generally unavailable. Defining the problems as widespread deforestation or rampant erosion, however compelling, is simply wholly inadequate to determining what to do in response.

Without reasonable data on the magnitude of the problems, there is a real chance that the pressures provoking land degradation may be out-pacing the efforts at rehabilitation-- the "drop in the leaky bucket syndrome". Only with a better quantitative and qualitative picture of the land-use problems can a project make the right choices about where the greatest impact to improving food security through NRM linked to agricultural productivity enhancement can be achieved.

It should be noted here that most of the projects visited are on the right track-- one identified and implemented through common sense and accumulating experience, for which there is no substitute. This generally poor capability for planning, too, is understandable. Most are relatively young projects, many with high staff turnover, building on the experience of relief programs. Relief is a simpler (albeit not an easy) problem-- feeding hungry people. The transition to agricultural improvement and natural resources management is a great leap forward into a much more complex arena. It is an arena as well, where almost by definition, because of underdevelopment, good quantitative information on land-use and land capabilities has not been previously collected.

## **Planning- the First Step on the Road to Impact Assessment...**

Over the course of the last fiscal year, USAID/Ethiopia has been encouraging the NGOs to improve their capabilities to assess and report on the impact of their programs. This is a logical step given almost ten years of program implementation. A highly improved planning capability; better able to target both food aid and natural resources management activities, will be necessary, however, before good impact analysis is possible. The potential improvements to program effectiveness (impact) and efficiency (cost effectiveness) from improved planning are significant and the steps to achieving it are relatively simple.

A combination of the results from the upcoming census, the annual crop assessment exercise along with more detailed baseline studies in project areas may help to put some parameters on the food needs of the population. This is an area, however, which will not be easy to quantify because many rural inhabitants will want to hedge their future food security by claiming such needs-- an example of a growing dependency on food aid. The NGOs will have to expand their capabilities for rural sociological investigations and begin to utilize some of the tools and techniques (eg. rapid rural appraisal) available for probing this issue. It may be necessary to use proxy indicators of food insecurity related to rural poverty to further define the food needs situation.

There will be a need as well to make a distinction between rural people living in a structural food deficit situation (for whom food aid will be only have short-term or immediate impact) and those who for one reason or another (drought, war, losses of assets) are presently unable to feed themselves temporarily. This data need not be exact but should rather estimate the percentage of the population in the project area who are food needy and might be willing to participate in a FFW program. Without an understanding of the potential labor pool likely to be attracted to FFW, it is virtually impossible to proceed to the next step, that of deciding on the NRM activities to be undertaken.

### **The Catchment Approach...**

In all probability in a well chosen project area, there will also be a direct correlation between the magnitude of food needs and the land-use problems. Food needs, however, should not necessarily dictate a labor-intensive response. The intensity of the interventions chosen is an important variable and one that has received inadequate attention in most of the projects visited. For example, in a given project area, it may make very little sense to undertake gully rehabilitation at the rate of 15-25 hectares per year if the total area needing treatment is in the hundreds of hectares.

Using a single catchment or sub-watershed as the basic planning unit may help to alleviate these issues. Such an approach would allow the NGOs to compile a broader, better quantified estimate of the magnitude of the land-use problems facing the people in the area. It provides as well a coherent frame of reference for analyzing the upstream/downstream linkages so vital to controlling run-off and erosion. The catchment model also provides the baseline for estimating and monitoring what will be required in achieving impact in bringing the watershed into a more stable and sustainable production status.

It is somewhat surprising that the NGOs do not already use the catchment approach for quantified planning of the needs and opportunities for NRM interventions. Information of a very practical nature on how to do so is already available in Ethiopia.<sup>29</sup> There may be some question as to whether catchment boundaries coincide with administrative boundaries and therefore whether the people to be involved in a given area can work easily together to resolve the land-use problems they are facing. Typically, however, rural people do define their physical boundaries using terrain features such as ridgelines, summits and stream courses. An effort to match and identify Peasant Association boundaries with catchments is bound to be useful.

Several examples, in Tigray, Omosheleko and Gurage were seen where site treatment was overly intense, thereby limiting the amount of land that could be rehabilitated in a given year. Protection through closure, stone bunds, check-dams, tree-planting and cactus planting on the same site may not be necessary if the former would have achieved the same impact-- the rehabilitation of a degraded site. More food could be distributed and more land treated if larger areas within contiguous catchments were closed, guards from among the food insecure population hired, and the remainder of the food retargeted to FFW supported direct improvements on other lands in the same catchment.

Intensive activities are also more difficult to spread over a wider geographic area thus limiting the numbers of food insecure people who can be reached by the program. Without the data on the real magnitude of the land-use problems, sustainability is almost impossible to achieve. Projects need to take account of the followup and maintenance costs of treated areas. Informed decisions by local participants will only be realistically achieved

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<sup>29</sup> Annex 9- "Form 1: Description and Problems of Your Area" can be found on page 92 of the manual: Guidelines for Development Agents on Soil and Water Conservation in Ethiopia, prepared in 1986 by the Community Forests and Soil Conservation Development Department, of the then Ministry of Agriculture. This practical guidance is directly applicable to the needs of the current projects.

if they have a good sense of their options. Will achievements in one area have negative impacts elsewhere, for example, shifting land degradation pressures, for fuelwood, grazing or new farm lands, to other areas where degradation may accelerate?

Logistical constraints should also figure prominently in the planning and decision-making about program activities. It is very difficult to understand how the NGOs currently plan for staff needs and the logistical support (communications, transport, food and input deliveries) they will need (see discussion below on field staff efficiency, support and morale in the section on administrative issues). In certain instances, discrepancies between plans as expressed by field project staff and those proposed to USAID by NGO headquarters differ significantly <sup>30</sup>, another indication that planning is weak.

There is an optimum mix between the intensity of the operations, their geographic spread and the food and NRM needs of the area. There can be no blueprint, however, applicable across the breadth of Ethiopia, or for any other country for that matter. Improved data on the kinds of degradation, their scale and location and the interplay with agricultural improvement are critical to answering the question of the correct mix of technical interventions to address the problems. With data and information of this kind in hand, the important questions of how to match food needs with natural resources management needs for enhanced food security become more obvious. A few examples of more focused questions for planning and programming follow below, although admittedly they are only a small sample:

- Will upstream rehabilitation improve the downstream conditions for agricultural productivity, and if so, how can it be achieved and who should take the responsibility for doing it?
- Are tree crops an alternative for stabilizing the land and/or an income generation alternative? Where should they be planted and by whom?
- Can soil and water conservation on farmlands provide direct returns to the farmer or will and should they be subsidized? Which practices are the most appropriate ones?

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<sup>30</sup> In the two World Vision sites, discrepancies were noted in examining the 95-97 MYOP proposal. In Kilde Awlaelo, project staff were unaware that their request for 7 earth dams over the MYOP period had been reduced to 4. In the same document, the activity summaries, by activity category and by project site for Omosheleko differ substantially with no explanation. Project staff there were unaware of and unable to explain these latter discrepancies.

- Would additional direct investments in raising agricultural production offset the production trade-offs that may be the result of land-use changes elsewhere, such as through closure of degraded grazing areas and herd reduction?

#### Conclusions:

- ◆ Planning capabilities among these projects are wholly inadequate to the needs of these projects. Until and unless they improve, the NGOs will find it difficult to justify the continuing requests for support from USAID; proving impact will be even more difficult.
- ◆ Enhanced capabilities in planning are necessary to estimate both realistic food aid demand and the magnitude of land-use problems and opportunities as a prerequisite to making the fundamental improvements in both effectiveness (impact) and efficiency required by these projects.
- ◆ There can be no substitute for genuine popular participation as a basic and early step towards defining project objectives during the planning process. Consensus on local priorities, clearly identified by the participants and acted upon by the project will convince local people that change is possible and that they themselves can resolve their problems with help from outside entities. This is development.
- ◆ The catchment approach as the basic analytical unit would facilitate planning and implementation of these projects.
- ◆ Logistics related to staff coverage and displacement, food aid deliveries and other important practical needs for implementation also need to be carefully taken into account when planning these projects.

#### Recommendations:

- ◆ The Evaluation Team recommends that USAID organize and support a planning training course-- geared to both food aid needs and land-use problems cum NRM intervention assessment for technical personnel of the NGOs. External technical assistance will be required to bring to the forefront more of the present state-of-the-art for both rural socio-economic analysis and participatory NRM strategies.
- ◆ Special attention should be accorded to training project personnel in putting in place participatory development mechanisms during the planning process for rural development projects. This will require enhanced socio-cultural and institutional capabilities within the staff of the NGOs.

### 3.3 Tree-Planting and Forestry Technologies

Even the most casual observer, travelling through rural Ethiopia cannot fail to notice that this is a country with a deep understanding of tree-planting. Virtually, every tree seen in easily accessible rural areas has been planted by the hand of man.

Many farmers are today themselves planting large numbers of trees-- particularly Eucalyptus spp. and especially in the better watered zones of Southern Ethiopia. Countless examples of farm tree-planting were observed, including some of the most intensive tree-planting found anywhere in the world. Farmers in the southern zones collect their own Eucalypt seed, raise small informal nurseries in their home gardens, and out-plant the resulting seedlings in extremely tight spaced (sometimes as little as 30 to 50 cms. between seedlings) stands. These trees are being established on field boundaries, in small woodlots in a corner of the property, along normally flooding water courses and around the homestead. Farmer consciousness about the opportunities for tree-planting is very high, perhaps because the products of these plantations in the form of posts, poles and fuelwood are so very much in evident demand.

It is small wonder then that these food aid projects feature tree-planting and reforestation as central elements of their NRM programs. All of them have nurseries and undertake tree-planting with FFW. In general, the Evaluation Team feels that this is a successful component of most projects, albeit with ample room for incremental changes and improvements to how reforestation is currently being approached and implemented. The Team would argue that in some cases, tree-planting occupies too much of a project's time and resources, which might otherwise be utilized for meeting other degradation and agricultural challenges. So much attention has been focused on the issue of deforestation in Ethiopia over the years that it would appear to be seen as a wholesale panacea for many of the land-use problems. In fact, in the view of the Evaluation Team, defining the problem of land-use in Ethiopia as deforestation, as mentioned earlier, is an example of oversimplifying the analysis. In most cases, it is what happens afterwards on a piece of land, once it has been deforested, whether turned over to agriculture or grazing, that decides the fate of the land and the level of its degradation.

#### The Zero Sums Situation...

Tree-planting can actually accentuate the land-use problem, as the examples from Omosheleko and the Gurage Zone (ACS Project area) described in the previous section so vividly demonstrated. Well-intentioned desires to plant trees to meet local needs for wood products and to stabilize the land resulted in trees being planted on existing and already stressed grazing areas. In both these areas, without other options, the livestock pressure was doubtlessly displaced onto adjacent lands, exacerbating the over-grazing problem there. In the densely populated areas of the southern portion of the country, tree-planting must definitely be viewed in the context of the land-use it displaces (what the economists term, the opportunity costs for land). Future endeavors in tree-planting must take more careful account of the place and impact of trees as a component of the rural land-use mosaic.

Continuing emphasis on tree-planting must be centered on three distinct niches for which it is well suited:

- on-farm plantings where it is in the economic interests and decision domain of the farmer to decide to plant trees either for home use or for sale;
- in the fields in genuine agroforestry configurations where the addition of the trees will have a net positive effect on overall productivity, of both the land and the crops; and,
- on lands that should be neither cultivated or grazed.

#### Conventional Reforestation Technologies-- Can They be Improved?

Another important aspect of the present reforestation efforts of most of the NGO projects reviewed, and perhaps the one of greatest concern, is their capacity for absorbing the limited resources (food, finance and human) with which these projects operate. Most projects use a predominantly conventional approach to reforestation involving the full range of activities from seed collection to out-planting and post-planting maintenance which such an approach demands. It is an approach which is extremely costly in terms of labor, thereby consuming inordinate amounts of the regular food aid allocated to each of the projects.

Several common problems were routinely observed to be associated with this approach as well which further undermine the impact they might be having. Relatively low quality seedlings are the norm rather than the exception, with consequent losses due to poor survival and mediocre growth of the plantations. The use of potted (polypot) seedlings causes high losses as well as these type of seedlings are easily damaged in transport. Examples of discarded dead or empty tree seedling pots were observed on several occasions during field visits. Mixed plantations with many species are unlikely to be optimizing site/species matching<sup>31</sup> requirements

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<sup>31</sup> The Evaluation Team has noted that these projects seem to be poorly informed about site requirements for different species. For example, Leucaena leucocephala does not do well above 1000 meters; Sesbania sesban has been reported to have an altitude limit of 1200 meters. Part of the problem seems to lie in a frequently used Summary of Suitable Species by Agro-Ecological Zone guide available in Ethiopia (for example, in Vol. III of the Ethiopia Forestry Action Program. This guide does not provide adequate explanation of site conditions to be useful in matching species to site. A full review of the reforestation species used in these programs (there are more than 50, itself probably a problem) is beyond the scope of this evaluation exercise. The Team did,

meaning that some percentage of the seedlings planted are bound to fail or at best grow too slowly thereby wasting the resources (food aid and funding) invested to plant them.

The following quick synopsis of the labor involved gives some understanding of the amount of investment required for tree-planting on FFW sites (one hectare- 2500 seedlings at 2mx2m spacing):

<u>Activity</u>	<u>Work Norm</u>	<u>Total Labor</u>
Seedling production	10 pd/1000 x 2.5=	25 pd
Pitting	50 pd/ha	50 pd
Planting seedlings	15 pd/1000 x 2.5=	37.5 pd
Weeding (3x/yr.)	5 pd/ha x 3=	15 pd
Site guard	4 pd/ha/yr	4 pd
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Total-		121.5 pd

These figures do not take account of the cash costs associated with seedling production (seed collection, polypots, nursery management), the handling and transport of seedlings (with seedlings lost through damage), opportunity costs for use of the site, or any soil and water conservation techniques that might be applied on the site (most sites are by definition in need of treatment<sup>32</sup>). Using the cash equivalent of food aid currently recognized in Ethiopia (days ration of wheat and oil valued at Birr 5.46<sup>33</sup>), each hectare of plantation is costing roughly Birr 663. This is a reasonable cost for plantation forestry, even considering the other overhead charges mentioned above. It begins, however, to lose ground if the activity is less efficient than anticipated, if site treatments are more intensive than need be, on highly infertile sites, or if there are real losses with the plantation.

Each NGO would be well advised to carefully calculate its overall costs of tree-planting and compare them with the above figures. Similarly, they would do well to estimate the total costs of their overall efforts in seedling production and tree-planting

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however, agree to track down suitable reference materials for some of the species. These references are listed in Appendix G.

<sup>32</sup> Hillside terracing, the most common treatment for degraded sites which are going to be planted would add another 150 pd per hectare (1000 linear meters at 10 meters intervals spaced evenly across the slope).

<sup>33</sup> Estimated economic value of the FFW regular ration: Wheat- 3 kg x Birr 1.50/kg= Birr 4.50; Oil- Birr 0.008 per gram x 120 grams= Birr. 0.96 = total of Birr 5.46.

as a percentage of their total resources. The argument has been made many times that tree-planting in Ethiopia is an economically feasible undertaking, and the present market circumstances (see additional discussion of this point below) seem to amply corroborate that point. Why then must communal tree-planting be so heavily subsidized? And why have so many of the NGOs chosen to make it a key part of their efforts? Certainly, the many farmers now planting trees throughout the nation without benefit of either food aid or other incentives underscore the national conviction that reforestation is a worthwhile activity.

Both the economics, discussed above, and the ecology of tree-planting on degraded sites in Ethiopia suggest that it would also be worthwhile to explore lower cost alternatives to reforestation or revegetation. Direct seeding of nitrogen-fixing tree species, or the use of vegetative materials for direct planting, thereby foregoing the charges associated with nursery-seedling-plantation continuum, merit attention. Expanding the role of closures and site protection is an alternative whose effectiveness has been widely demonstrated in Ethiopia, even on degraded sites (as can be readily seen in Tigray). As a matter of course, sites intended for replanting should first be protected for a year or more so as to be able to judge whether natural regeneration would successfully revegetate the site-- with well adapted native species. In any case, protection will be required as part of the techniques to be applied on all reforestation sites; why not give it a chance to begin with?

### Completing the Cycle...

Several NGOs now have established plantations ready for harvest in their project areas; none were observed to be actually harvesting them. They must turn their attention to ensuring that these reforested areas properly and effectively yield benefits to the farmers and the communities who were encouraged to plant them. The prospects for doing so appear good given the widespread local and national demand for fuelwood and construction materials. Forestry, however, must be treated as an enterprise capable of diversifying the income generation opportunities for rural people. A number of principles for financial success of forestry enterprises and some important caveats about them arose from the review of these established plantations. Successful reforestation goes well beyond counting the number of seedlings leaving the nursery. Indeed, forestry is a long-term proposition (typically a minimum of 7 to 10 years to harvest) in Ethiopia and the first step towards the sustainability of these enterprises-- replication by the people themselves will be the real challenge. The cycle must come full circle.

The NGOs are certain that local people will gladly and responsibly accept the handing-over of these new woodlots for management and utilization. There should be little reason why they

would not; standing wood in the plantations established with food aid amounts probably to billions of Birr. In general, the assumption is that establishment costs will be written off as social investments. The communities will take over the followup: protection, management and maintenance, harvest sales and marketing, plus any down-line investments such as replanting (if necessary) or expanding the planted area. Will revenues from sales of product cover the costs of longer-term management? It remains to be seen, even with the present high demand for wood.

For one thing, it is very clear that none of the projects have given adequate, if any, attention to making financial estimates about the costs and returns from maintenance, management and harvest and marketing. There is an almost universal belief in bottomless demand for wood products, both locally and nationally. In some localities visited (Southern Ethiopia Peoples' Region and the Gurage Zone), wood supply may already exceed demand and woodlots are still being planted. For these same localities and others, transport costs may make it marginally attractive to ship wood to Addis. Even where local demand for fuelwood is still running high, plantation wood will have to compete with firewood produced from remanent of the natural forest, harvested by people with low opportunity costs for their labor and transport. In effect they have positioned themselves, albeit inadvertently, in the unenviable situation of "supply in search of demand"--- with consequent weakening of their market leverage.

The communal or peasant association woodlot model also brings with it a legacy of problems. Most NGOs claim they are making the transition to more private forestry; many (including those who claim otherwise) continue to pursue this approach. It is a realm of their endeavors which although they know better, seems to continue because it is one way to use food aid. NGOs have promoted these woodlots, asserting that it would not be a repeat of the past government communal reforestation which was interpreted, in some cases correctly, by the people as a plot to usurp their grazing lands. The onus is on the NGOs to now demonstrate that the promised benefits will flow to the communities; it will not be easy (as the situation with the Sorage Forest so vividly reveals; see Food for the Hungry field visit report). Communal management will bring high transaction costs and finding equitable models for sharing the flow of benefits will also not be easy. One lesson with this approach seems clear; one needs to begin with (or getting moving quickly on) discussing future management arrangements with these communities and use them to facilitate plantation establishment, and not vice-versa.

### Conclusions:

- ◆ Although tree-planting is a generally successful element of most NGO Title II programs, it is not a panacea for the land-use problems of Ethiopia.
- ◆ In many areas, because of population density, achievements in planting trees may have a direct impact on other land-uses, in particular land normally allocated for grazing. In these "zero sums situations", displacement of livestock may exacerbate over-grazing elsewhere and accelerate erosion elsewhere.
- ◆ Quality counts. There is ample opportunity to improve NGO reforestation efforts by: raising the technical standards of nursery production and outplanting, improving species/site matches, and using more cost-conscious approaches to revegetation.
- ◆ There is a persistent problem of mis-matching of species to site and in choosing mixed plantations, both of which mean lower effectiveness with tree-planting.
- ◆ The use of closure areas should be expanded significantly by all NGOs.
- ◆ The real test of the success and sustainability of tree-planting efforts will only be evident as rural people replicate the patterns. Serious attention is needed to the issue of harvesting and marketing the products of these plantations. Supply and demand for wood products should not be taken for granted.

### Recommendations:

- ◆ The combined NGO community should carefully re-examine its tree-planting programs in order to improve the quality and applicability of these activities. This may perhaps best be achieved by contracting the services of a local consultant to review the findings of this section of the evaluation report and to prepare detailed guidance for improving the tree-planting and forestry components of the projects. The consultant would work in close collaboration with senior foresters from each of the NGOs who in turn would use the guidance as the basis for training their field staff. An important objective of this work would be to resolve the species/site matching prescriptions used for reforestation in Ethiopia.
- ◆ Careful attention should be focused on the instances where mature plantations established under these projects are now ready for handing-over, local management and harvest. The efforts at the Sorge Forest by FHI should be developed as a pilot model for similar operations elsewhere.

### 3.4 Soil and Water Conservation Technologies

Most of the NGOs view soil and water conservation activities as important interventions aimed at restoring the productive capability of the land. A good start has been made in utilizing these technologies for both land rehabilitation and improving agricultural land, although in both cases there are issues with the present approach and range of practices. The Evaluation Team also came away with the perception that soil and water conservation was losing ground in the array of activities undertaken. This perception was prompted both by field observations and the analysis of annual performance reports on accomplishments in this area.

#### Avoiding Unfortunate Precedents...

This latter point is undoubtedly the most important issue. There is some danger that the food aid approach to soil and water conservation is setting an unfortunate precedent (as has already occurred in other countries): namely, that rural people view it as an employment opportunity. With an improvement to the rainfall regime, they are less motivated to engage in FFW for conservation, whether to earn additional food for the household or to raise the productivity of their lands. Erosion control should not be an end in itself; it should be vigorously promoted and implemented as part of the investment strategy aimed at improving land-use and/or farm productivity. The issue of managing the land-use rather than just treating the land, discussed earlier, is quite pertinent here.

To counter this growing perception, NGOs must enhance the quality of the dialogue with farmer participants so that they clearly understand that the objective is to increase local food security. Food aid must be seen as a resource to be applied in carrying out activities to meet this objective. The use of food aid for these purposes must be promoted as the equivalent of a socially and economically justified incentive to address the consequences of soil erosion-- declining productivity and famine vulnerable populations. Erosion is only the symptom of the larger land-use and social problems. In this regard, the food aid model used in Tigray, "food for recovery", seems better suited to supporting local determination to meet the challenges by the participants themselves.

One of the reasons why this situation is occurring is that few farmers see tangible short-term benefits from the present range of conservation practices. There are several factors involved here. Too much of the present conservation work is structure-oriented (bunds and terracing) aimed at containing soil erosion and slowing run-off. While these are certainly important, more attention is needed to direct action to improve and nurture the soil itself so that crops will grow better. There are a wide range of other

conservation options <sup>34</sup> which could and should be applied to farm lands. Most are in the realm of biological interventions (no tillage, green manure cover crops, compost, crop rotation, etc.) where the outcome intended is improved soil conditions. Practices which raise the level of organic matter in the soil and thereby enhance moisture retention capabilities or others which add fertility (nitrogen fixation) will be important in the near-term until access to ag inputs improves. Even with more fertilizer availability, these techniques can raise the effectiveness of its use and build in resilience to drought vulnerable farming systems.

### Farm Lands or Communal Lands ?...

Some NGOs use food aid for soil and water conservation on private farmlands; others do not. This important difference in approaches needs to be discussed and the opposing viewpoints reconciled. Clear policies in this regard are especially important where projects with different viewpoints on the matter operate in adjacent areas. This is a complex issue and the Evaluation Team is reluctant to take a stand on it. Several points, however, should be born in mind in addressing the issue of incentives for soil and water conservation on private farmlands. In many areas of Ethiopia, farmers are already working together to complete agricultural tasks (known as "debo") on each others' farms, such as joint plowing. This model could serve as the vehicle for a local conservation investment plan carried out community-wide with incentives provided through FFW. Farmers would agree to ensure a high level of maintenance (something not up to par at the present!) of established bunds in order for the program to continue. In return, they would become eligible for additional technical guidance and participation in an enhanced ag inputs supply chain, thereby maximizing the potential returns from the investment in conservation. One needs to bear in mind a fundamental conservation principle: "Conservation cannot be built on the shoulders of those least likely to be able to afford it".

The catchment approach discussed in the section on planning is particularly vital to successful soil and water conservation for several reasons. The most important question related to size and

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<sup>34</sup> The excellent publication: "Guidelines for Development Agents on Soil and Water Conservation in Ethiopia", produced in 1986 by the Community Forests and Soil Conservation Development Department, provides ample guidance to the range and applicability of soil and water conservation practices. It does not seem to be in wide use nor is the technical guidance it provides (albeit it too emphasizes structures) satisfactorily applied. Merely using this manual more assiduously would raise the technical standard of soil and water conservation significantly in these projects. Additional references for technifying present conservation practices are included in Appendix G.

scale of conservation is that of 'impact threshold', i.e., what percentage of the farmers would have to accept the conservation mandate or what percentage of the land would have to be treated to return the area to sustainable productivity and environmental stability. Unless the approach is focused at the catchment level, projects run the risk of high levels of achievement without bringing real stability to the area in question, either because too little is being done over a series of catchments without fully treat one, or because degraded sites within a catchment give rise to off-site consequences as a result of uncontrolled run-off. The pilot catchment approach can also play the role of classroom and demonstration area for learning about what it takes to achieve stability and sustainability-- in all probability a combination of both treatment and land-use changes and improvements. The present approach by many of the NGOs does not fully address the causes of degradation in the watersheds in which they work, leaving some part of the erosion equation unaltered.

The order of works in soil and water conservation, particularly as related to the rehabilitation of highly degraded areas is another area in which the projects might improve. Dead barriers of some type (stone bunds, brushwood check-dams) are only part of the package. In general, protection is the first step on the road to rehabilitation, both of the degraded sites and the source of the run-off in the case of gully formation. Protection is almost always a question of management-- helping farmers through genuine participatory dialogue to understand the causes of degradation and to find ways to mitigate these conditions. Structures may then be put in place with the conviction that they are suited to the present conditions of erosion and run-off. Planting and other revegetation techniques are perhaps best done once the structures have been in place for awhile and begun to accumulate soil, so as to enhance the potential for survival of the plants being established. The participatory arrangements for conservation should also include the responsibility and accountability for post-treatment maintenance and future management of the site.

Finally, the Evaluation Team must remark that one of the prime causes of soil erosion in the Highlands of Ethiopia is often overlooked. Misaligned roads and paths are major factors in concentrating run-off and causing erosion and gully formation. Work being carried out on constructing feeder roads is both useful and important. The constraint, however, in many cases is that people and animals prefer to walk to the side of these structures because the stone/rock pavement is hard on the feet. Almost none of the feeder roads includes enough water diversion structures (culverts and cut-offs); for that matter, neither do many of the roads being constructed by government services. This is one area where the traditional public works orientation of FFW can be effectively applied; working together for the common good. Farmers

need to be convinced, however, that such infrastructure benefits them and not just people with cars.

#### Conclusions:

- ♦ The application of soil and water conservation needs to be rethought and revitalized in these projects. Food aid policies for conservation (working on private land, delinking food aid as payment) for these interventions must be clarified so as to ensure that local people do not come to regard it as either employment opportunities or the responsibility of third parties.
- ♦ Soil and water conservation is not an end in itself. Present efforts are too narrowly focused on structures for containing run-off and erosion. More work is needed on improving soil quality and thereby ensuring direct benefits from these investments in the form of improved agricultural productivity.
- ♦ Both pre-treatment protection of degraded areas and post-treatment maintenance of soil and water conservation practices would increase their effectiveness significantly.
- ♦ The NGOs are not utilizing the present range of known technical conservation interventions nor are the activities being implemented reaching a high enough standard of quality to guarantee even their short-term impact.
- ♦ Soil and water conservation practices are most effective when carried out on a catchment basis.
- ♦ Roads and paths have a significant and largely unrecognized impact on land degradation. In general, protecting rural infrastructure through the useful application of food aid for public works projects is an excellent target for FFW.

#### Recommendations:

- ♦ The policy concerns raised above regarding conservation efforts should be tabled by the food aid policy working group mentioned above and field-informed recommendations clarifying the issues should be sought.
- ♦ This is another area where the Evaluation Team recommends that a knowledgeable local consultant be contracted to plan and implement a state-of-the-art conservation training course for senior NGO technical personnel.
- ♦ The NGOs must widen the array of soil conservation technologies they are using and move beyond those intended to

control and contain water run-off and soil erosion. Specific measures to improve soil quality should be increasingly employed, including: green manure, composting, cover crops, managed use of crop residues, crop rotation and inter-cropping, enhanced fallow, no tillage, etc.

### 3.5 Agricultural Development

The common denominator for all of these regular program food aid projects is that they are supposedly working in areas where food security is a risk or is threatened. Part of their objectives is to help raise agricultural productivity so as to mitigate the vulnerability to famine. Most of the environmental degradation in Ethiopia is the result of inappropriate agricultural (especially livestock; see the following section) practices on fragile lands by rural people-- albeit in just pursuit of meeting their basic needs. As population grows, so do these needs. Vosti, in his paper, "Constraints to Improved Food Security: Linkages among Agriculture, Environment and Poverty" (Webb et al 1992) concludes that although soil and water conservation efforts will play important roles in the medium to long-term, they are unlikely to provide the short-term yield responses required to achieve even moderate levels of food security.

The Evaluation Team concurs; too little attention is being given to raising agricultural productivity (the ag diversification activities notwithstanding) in these projects. The Evaluation Team would propose that an important precept for both these projects and future efforts of rural development in Ethiopia be constantly at the forefront, namely, that good agriculture is good natural resources management. Food aid, especially as currently utilized, it would appear, is not always well suited to the emerging needs for ag extension and farming systems improvement. Per capita food production and consumption has been declining in the country for the past two decades. The present political, social and economic transition suggests, emphatically, that now is the moment to carefully review how the food aid program and the more integrated projects which must follow, can contribute to turning this situation around.

#### Agriculture-- the Engine of Growth...

Agriculture will remain the engine of growth in Ethiopia for years to come; as many farmers as possible need to be encouraged and assisted to get on board. Not all, however, will be able to do so. Farming strategies evolved to meet the vagaries of weather and pests are being undermined by the pervasive spread of soil degradation. Soil and water conservation will be important to ensuring that the mixed farming systems specially put in place to provide a margin against these inherent risks continue to flourish. But what of the farmers in areas characterized as being in

"structural food deficit", i.e., those areas where the inherent resource limitations (small farms and/or poor lands) and current technology make it next to impossible to feed the burgeoning populations resident there? Hopefully, improved linkages to the marketplace may make it possible for some of these farmers to intensify their agriculture (as is manifest already in many parts of Highland Ethiopia) and derive more income from their efforts.

But what of the others, whose landholdings are simply too small or too poor to allow the full development of modern agriculture. Sector development specialists, including those presently working in these NGO food aid programs must attempt to "get ahead of the curve". They must be especially wary that their efforts are not too timid or represent minor changes which simply reinforce the "status quo" and thus postpone the inevitable crash of a subsistence-based rural economy-- with the likelihood that both the natural resources degradation and the social disintegration it brings will be more extreme and more difficult to remedy (Catterson 1994). Subsistence farmers unable to achieve more than marginal gains in productivity, however sustainable, because they cannot afford the added costs of inputs on their inherently poor lands will not be able to feed their households. Similarly, rural migration may erode the labor base needed to implement the full set of soil and water conservation and improved farming practices (most of which tend to be labor intensive) even on better lands.

#### Taking the Longer-term View...

These realities have not been lost to the typically "risk adverse" small farmers. Their reluctance to invest may be a common sense reaction to the futility of the meager returns to agriculture from eking out a living on poor lands. Their energies may best be channeled into diversifying their income opportunities, as many have already been doing wherever and whenever possible. Will soil and water conservation and tree-planting, with or without food aid, really be able to make a difference? Food comes first; there is no fuelwood problem if there is no food to cook. In planning their intervention strategies, the NGOs must take the longer view about the evolution of agriculture in the areas where they are working over the short to medium term. It seems likely that the present nascent efforts at agricultural and income diversification will have to become both part of the message and the programs they are implementing if the full range of opportunities for achieving food security are to be realized.

The present efforts at crop diversification, adding horticultural and fruit crops to the range of farming enterprises are a good strategy. Important questions, however, remain about whether in fact there are adequate lands available for doing so. Many of these new crops need more rainfall or supplemental irrigation in order to become fully productive. More importantly,

are there other options for improving the productivity of staple crops-- cereals and Inset-- which can and should be more emphatically explored? Few agricultural societies, especially those with a predominance of small farmers living in remote areas, have been able to diversify the agricultural production base without first reaching a fairly high level of crop security for the staples. The demonstration plots are good but are they demonstrating the right thing. Few of them seem to be as vital as they should be, demonstrating the full set of skills need for successful diversification-- how to utilize the products and/or harvest and sell them.

Similar, albeit less extreme concerns about the many present NGO activities allocating free or subsidized agricultural inputs and credit to participant farmers also seem warranted; are they leading to or fostering self-reliance? No doubt, the small farmers of these areas in which the projects are operating have bonafide needs, but will random acts of charity no matter how well intentioned be either sustainable or able to make a difference? More attention must be given to building farmers skills as micro-entrepreneurs, conversant with the simple concepts of investment and returns, savings, and capital accumulation. Many farmers already understand these concepts: the point is raised here because it coincides with the concern about program dependency raised early-on in this report.

#### Investment, not Subsidies...

Program policy and objectives need to be clear and not dependent on the ad hoc and essentially opportunistic availability of collateral funding derived from other sources when food aid is not wholly adequate to the challenges of area development. There is indeed a small but significant risk of confusing the farmers themselves who begin to count on these subsidized inputs. Subsidized inputs may also lead to uneconomical production models; cheap fertilizers, tools, or credit may not be sustainable. The precedents so set are indeed hard to reverse. Is this one of the reasons some projects continue to use food aid when it is very clear that it is no longer the optimum development resources for the conditions of an area? The Evaluation Team fully recognizes that this suggested evolution of NGO support to rural development in Ethiopia will be a challenging situation for both the people and the staff of the projects concerned. They believe, nevertheless, that making such a transition is critical to maintaining the vitality of the projects themselves and offer greater guarantees to continued funding to meet the evolving needs of client peoples.

Finally, as regards agriculture, the Evaluation Team feels it must comment on the current "contact farmer" extension model. In the view of the team there are questions about whether it is actually working as well as could be expected. These hard-working, innovative farmers typically chosen for these positions seem well

placed to influence their peers. Several conditions learned elsewhere in the world, however, are fundamental to ensuring that this approach is sound. They need to be especially well trained, both as innovators in crop and agronomic practices and in leadership. Their abilities in explaining to their follow-farmers both how and why certain new practices can benefit them is as important as a willingness and capability to innovate. Among the contact farmers visited, most seemed better suited, in terms of land or resources, to undertake the risks involved in new farming practices. Additionally, their participation in the various schemes, however potentially productive seemed over-subsidized. The Team, without the real ability to converse in the local languages with these farmers must of course underscore that this statement is only a shallow perception born of extensive field experience. The outcome of this model, i.e., replication by other farmers in increasingly larger numbers was not readily observable. Replication, it will be recalled, as stated earlier, is the first step towards sustainability.

#### Conclusions:

- ◆ The real challenge is to raise agricultural productivity; soil and water conservation will not be enough.
- ◆ Roads, markets and social services will be important components of diversification of rural economies for structurally food deficit areas. Off-farm employment opportunities for the poorest small farmers will be the only vehicle for resolving their food security risks.
- ◆ Working on the improvement of staple crop productivity is being largely overlooked. Present agricultural diversification efforts while important may have small impact given average land holdings.
- ◆ Earthen dams and similar small-scale irrigation works seem to be useful activities for increasing local agricultural productivity. They are, however, both costly and extremely technocratic undertakings. A high level of professional expertise, rarely available at the NGO level, is needed in order that such works be fully effective and efficient.
- ◆ Food aid may not be well adapted to the challenges of raising agricultural productivity. Projects must build in micro-entrepreneurship as one of the skills towards self-reliance.
- ◆ Replication is the best measure of impact for agricultural extension.

## Recommendations:

- ◆ If regular food aid programs are indeed to have greater impact on the food security issue, the Evaluation Team strongly recommends that they expand their efforts aimed directly at improving agricultural productivity. This may require going beyond the means available through the use of food aid as the primary resource.
- ◆ The NGOs should review their staff capabilities and determine if they have the sufficient level of technical expertise needed to address the challenges of improving agricultural productivity, in particular as concerns small-holder farming systems and small-scale irrigation.

### 3.6 The Challenge of Livestock

One of the points that has emerged throughout the projects visited is the fact that over-grazing is a major problem in almost every area, with major direct and massive implications for land degradation. Few of the projects reviewed have as yet to find an effective solution to the livestock issue; others, regrettably, seem to be ignoring it. The Evaluation Team recognizes, as well, as been witnessed throughout Africa, that it is indeed a very complex problem. Large numbers of largely unproductive animals are directly responsible for land degradation and soil erosion, whether in the barren uplands of Tigray or in the better watered middle slopes of Southern Ethiopia.

#### Livestock- A Part of Farming Systems...

Livestock plays a formidable role in Ethiopian farming systems. In addition to providing food and products of value to the household, either for direct consumption, sale or barter, animals have long served the farmer as a means of animal traction for plowing the fields. In other areas, they serve as a tool for harvesting and converting scarce nutrients into manure essential to crop yields. Because of increasing human and animal populations, this very useful synergism is threatened and land-use options are closing down. In more sedentary farming areas, even in the better watered highlands, finding grazing and refuge for the animals during the cropping season is an ever more difficult challenge. Even the most carefully nurtured farm lands of Highland Ethiopia, witness the lands on the roads between Hosanna and Gurage Zone, bear the scars of land degradation caused by over-grazing. At the pastoralist/farmer interface in the more arid areas of the north, massive over-grazing is undermining watershed stability and leaving the areas even more at risk from drought and famine.

Managing animal numbers in relation to carrying capacity of the farm cum rangelands has never been an easy proposition, fraught with difficulties because of the need to overcome resistance to

animal off-take. In Ethiopia, where animals numbers are a sign of accumulation of wealth and prestige and also represent one of the primary coping strategies against periodic drought, it is even more difficult a proposition. Reportedly there is also an issue of an imbalance in ownership of animals with the majority held by a minority likely to be able to better defend their rights. Despite these constraints, it is an important road sign on the crossroads of agriculture and natural resources management and one in which the right path is likely to lead to significant benefits for all concerned (Catterson 1994).

### **The Message: Raise Livestock Productivity...**

The quick response and the real challenge is that of reducing the number of unproductive animals in the herds. The Evaluation Team in its early discussions about this issue with the NGO personnel began on this tack; it became obvious, however, that a new strategy will be needed. Projects must undertake a realistic dialogue with participants about the possibility and means to raising the productivity of the livestock element in local production systems. It seems likely that the participants themselves will identify and take up herd reduction as one of the principal components to such a strategy.

But much more will be needed to fully realize the benefits from improved livestock husbandry. Raising the nutritional status of the herd is a first challenge, both through the enhanced availability of additional feed and water. Providing veterinary services so that farmers have some recourse when their animals fall ill must also be part of the package. Improved marketing conditions must be responsive to the greater value of improved animals making it possible for those who accept the production tradeoffs of fewer animals to fully benefit from their decision. In Ethiopia, the NGOs could also help by trying to change the terms of "prestige" associated with animal ownership, shifting to quality rather than quantity as a determinant. Finally, projects must seriously reconsider some of the present benefit programs which are adding animals to the herd or attempting to improve the breed while the existing herd cannot be adequately fed.

### **Some Reasons for Optimism...**

There is some reason for optimism as regards the challenge of livestock in Ethiopia. On the one hand, intensified livestock husbandry is already carried out in many areas of the country, including "cut and carry" fodder provision and stall-feeding of dairy animals such as can be seen in highland Gurage Zone. These existing examples, albeit forced upon the people by the shortage of grazing, could provide models and demonstration/training sites for participants from other areas. Then too, the fact that the International Livestock Center for Africa (ILCA) is based in Ethiopia is an opportunity that should not be overlooked. They

reportedly have technical recommendations regarding both animal quality and animal management which should be incorporated into these NGO programs.

#### Conclusions:

- ◆ The real challenge of livestock has as yet to be adequately addressed in these NGO food aid programs. Over-grazing is the single most important cause of land degradation in Ethiopia today.
- ◆ Improved livestock husbandry is a complex issue requiring a broader approach than is currently being attempted. Beginning to address it cannot be postponed if real progress in both productivity and sustainability are going to be achieved.
- ◆ Raising animal productivity must be the message; how it can be accomplished will be part of the dialogue with farmers. Focus on the positive.

#### Recommendations:

- ◆ Each of the NGOs must seriously consider how it is dealing with the livestock and over-grazing problem; further delay is simply postponing finding real solutions to the major land-use issue in the country.
- ◆ USAID and the NGO community should appeal to ILCA for assistance in addressing the challenge of over-grazing. USAID should provide direct support if necessary for mounting a preliminary training course by ILCA personnel for the staff of the NGOs on this issue.

### 3.7 Socio-Economic, Institutional and Administrative Issues

The NGOs with the combined support of their donor partners cannot save the peasants; they will ultimately have to do it themselves. Although it is very clear that for the short to medium term, a food aid safety network to counter the potential for drought-induced famine must remain strong, the medium to long-term response to food security lies in building viable rural economies and production systems. This can only be achieved, as experience in many other countries has so amply demonstrated, by putting people themselves in charge of and responsible for their own destiny. The present political, social and economic transition in Ethiopia is the first real opening to do so in the last twenty years. It is an opportunity that must be seized upon and enhanced.

### **Participation- a Project Objective...**

The present NGO food aid projects were born in an era of catastrophe and great human suffering where a centralized approach to meeting emergency needs was the only recourse. In the judgement of the Evaluation Team, it has left a certain legacy of "top-down" approach, one that certainly many of the NGOs have already begun to try and change. Building representative local organizations which speak for the people and enable them to effectively (and eventually equitably) participate in the development process is a challenge in any country, let alone one where a totalitarian regime has actively suppressed local initiative. At the moment, most projects, with the possible exception of REST which has an evolved social strategy, define their objectives in terms of outcome, mostly related to food availability and environmental stability. In order to achieve real sustainability, they will have to begin to focus on assisting local people to build in-situ institutional capabilities for analyzing and resolving these problems themselves. Treating land-use, rather than just land, one of the primary findings of this evaluation exercise, can only be accomplished with a strong participatory approach. As was pointed out earlier, building these capabilities will out last physical interventions and grow beyond them.

Beyond this essentially philosophical point of view (itself, however, built on the pragmatism of worldwide experience including both success and failure with rural development), there are some tangible indications that participation could be significantly improved. The absence of good baseline studies, data and knowledge of the needs and aspirations of the population can only mean that project personnel who are planning the destiny of their clients are doing so from an uninformed basis. Nascent efforts at rapid rural appraisal, at least in one instance by an NGO, has demonstrated that local people have other compelling priorities for which they would like assistance.

### **Quantity versus Quality...**

The Evaluation Team is wholeheartedly convinced that the individuals and organizations at the core of the regular food aid program recognize these needs for improved participation. And yet, in many instances, staff seem overwhelmed and overburdened by the challenge of meeting their essentially quantitative mandates, i.e., to deliver significant quantities of food to large numbers of people while still completing their assigned physical interventions. The considerations and achievement of real participation and problem analysis and resolution are being overwhelmed by the demanding quantitative elements of these projects, something which has occurred in many other food aid projects worldwide.

These projects which began as undeniably people-oriented relief efforts seems to be shifting to an implied project focus wherein the natural resources activities become ends in and of themselves, and the people the means to achieve them. One can perceive this confusion by reviewing the stated objectives of the projects which seem to vacillate between food aid and natural resources management ends. Are these mandates indeed compatible or better yet should the mandate be that they are projects using food aid and natural resources to achieve development goals-- improved household food security and incomes, sustainable agriculture and land-use models, and environmental stability?

Considering the numbers of participants, these projects, even where they have been able to incorporate local Ministry personnel, seem too thinly staffed to deal adequately with the demands of the more participatory approach. Then too, they are predominantly technicians with background and training in the agriculture or forestry. Participation must be seen as a development goal with lasting benefits, and not a vehicle for more effectively harnessing the labor of local people to complete the tasks chosen by the project in terms of natural resources management. A wider array of specialists with training in rural sociology, local institutions and extension should be part and parcel of the project teams so as to aid and guide the technicians, some of whom are already trying to work on a more participatory basis, to enhance their effectiveness in this regard.

#### **Working with Ministry Personnel-- an Opportunity...**

The aforementioned fact that some NGOs incorporate local Ministry (Ministry of Natural Resources Development and Environmental Protection or Ministry of Agriculture) personnel to increase extension capabilities is a welcome and wise choice. In many areas, government personnel do not have as yet adequate resources at their disposal to have a real impact in the field. There are some cases of localized problems arising from inter-institutional jealousies which could easily be circumvented by giving these government staff roles and responsibilities within the projects. Central government personnel interviewed suggested that such arrangements would be welcome developments. There should be, however, a broad discussion between the NGO, the regional authorities and the Ministry, to ensure that the terms of such cooperation are well understood by all concerned.

#### **NGO Field - Headquarters Coordination...**

In some NGOs, field projects/home office coordination could be improved. Several instances of conflicting planning and/or reporting between the center and the field were observed, including in one case, the failure by the headquarters to "call forward" food aid earmarked for the project and badly needed. There is also too much of a top - down relationship between headquarters and the

field sites within the operational-modalities of some NGOs. The tireless dedication and real commitment of field staff outposted often in remote situations with infrequent opportunities to see family and friends buys them insight and credibility in the view of the Evaluation Team. High levels of staff turnover at the field level is, reportedly, more the result of frustrations than waning commitment. It should give each of the NGOs which have such a staff turnover cause to reexamine carefully the reasons behind it.

#### Inter-Organizational Coordination...

Another issue that came to the forefront, more as a result of the evaluation exercise than by design, was the need and opportunities associated with more interchange among the NGOs involved in this program. There seems to be too little opportunity, especially for field staff (even in adjacent projects) to meet and exchange experience on lessons learned and new approaches to the inherently similar set of challenges they face. There would appear to be an opportunity as well for some coordination both from the policy point of view (food aid use on private lands, personnel salary standards and incentives, etc.) and from the technological perspective-- sending the same message to client farmers. Coordination cannot take place in the absence of communication. This coordination need not be limited to those NGOs using Title II food aid.

#### Conclusions:

- ◆ Building representative local organizations as a vehicle for ensuring wide popular participation in these programs (and for the future) should be a stated development objective as important as any physical interventions.
- ◆ Project field staff seem overworked by the excessively quantitative nature of the projects (delivering food aid and achieving NRM targets), perhaps to the point where they have inadequate time to consider the qualitative dimensions: planning, participation and impact assessment.
- ◆ Incorporating local personnel of the Ministries into project field staff is an opportunity that makes sense and is well worth pursuing. This staff, however, may need additional training and preparation to be fully effective in these roles.
- ◆ NGO field staff-headquarters relationships-- in particular as concerns communications and coordination need to be improved.
- ◆ The NGOs involved in the Title II program do not have adequate opportunities to meet together and exchange experience about their essentially similar efforts; lessons learned are being lost.

## Recommendations:

- ◆ USAID should encourage the NGOs to add personnel to their staffs with suitable training and experience in the area of participatory development and institution building to counter the issues identified above.
- ◆ The NGOs must seek additional opportunities for inter-organizational interchange wherever and whenever feasible, both at the field level and among headquarters personnel. Hopefully, the policy working group recommended at the outset could serve as the primary nexus for achieving this objective.
- ◆ USAID should continue to encourage the NGOs to improve their working relationships with the emerging government ministerial capabilities, both at the field level and in Addis. Where feasible, ministry personnel should be included in training activities set up for NGO personnel engaged in these programs.

## Appendix A-

### STATEMENT OF WORK

#### INTRODUCTION

Periodic famine has been a reality in Ethiopia for centuries, however the last two decades have seen an increase in the frequency and severity of famine in the country. War and poor economic policies bear much of the responsibility for this, but declining per capita food production is also due in great measure to widespread, severe environmental degradation. Deforestation, soil erosion, nutrient depletion and overgrazing have left the land exhausted.

USAID, through its P.L. 480 Title II food programs, has sponsored large, though localized, soil and water conservation efforts and reforestation projects implemented through NGOs using food for work. As USAID develops a broader development agenda in Ethiopia, the Mission seeks to understand what lessons have been learned through the natural resources management (NRM) efforts supported by Title II in order to better inform its broader development agenda.

#### BACKGROUND

P.L.480 Title II resources have been serving relief and development needs in Ethiopia since the mid-1980's. These resources, provided almost exclusively through NGOs, are best known for supporting emergency relief programs, but they have also supported "regular" program activities which have tried to address the underlying causes of food insecurity through community development efforts. The central focus of most regular program activities has been NRM interventions including soil and water conservation efforts and reforestation projects organized through food for work. The Transitional Government of Ethiopia (TGE) has stated that one of its priorities is to protect and rehabilitate the environment and the land and water resources upon which productive potential exists. Such long-term objectives are the best hope of meeting the challenges of population pressure on the land, while simultaneously improving the economic well being of the people.

The Title II regular program has traditionally involved six NGOs: CARE, Catholic Relief Services (CRS), World Vision (WV/E), Save the Children/U.S. (SCF/US), the Ethiopian Orthodox Church (EOC), and Food for the Hungry International (FHI). Not all of these have a strong NRM program, although most do. It is expected these organizations will continue to participate in the Title II regular program, while the Mission intends to include other indigenous organizations over time, such as the Relief Society of Tigray (REST).

The level of the Title H regular program has been increasing steadily over the last eight years. In FY92, a total of 32,755 MT of commodities were shipped to support the program. In FY93 this rose to 400896 MT. For FY94, the program involved 56,796 MT. The bulk of these food aid shipments were used to support NRM activities implemented through food for work.

Regular program activities are implemented in coordination with relevant TOE ministries, local government and community leaders. The degree and means of involvement of these other players varies from project to project, but are key to the success or failure of project initiatives,

A review of the Tide II-supported programs with the greatest focus on NRM activities shows that agencies often employ the same techniques in seeking solutions to long-term environmental concerns. A prospective consultant would be expected to explore the similarities and differences among the various organizations, gauge their strengths and weaknesses, and apprise USAID/Addis Ababa on the advisability of, and level of, continued support.

CARE-Ethiopia - CARE has long been involved in large food for work activities in eastern Shoa and in Hararghe. Due to security constraints and other problems, its operations in Haraghe were suspended in 1992, although they were resumed in FY94.

In FY94, its program emphasized hillside terracing, soil and rock bunds, area closure, seedling production and planting.

Food for the Hungry International - FHI has an extensive portfolio of conservation initiatives in its Title II FFW program. The geographic foci are southern and western Shewa, and southeastern Gondar.

FHI's activities include environmental restoration, and the production of fuelwood and building materials. FHI produced and planted 2.7 million seedlings of various varieties, including fruit, forage and nitrogen fixing trees in FY93. It also supported sizable terrace maintenance efforts, checkdam construction and area enclosure.

World Vision - WV/E sponsors the most extensive and complex Title II program in Ethiopia. The ambitious program operates simultaneously in eleven widely scattered locations throughout Ethiopia. Many of the same components are found in the project proposals for each individual area.

Tree planting and agroforestry applications of vegetation management for erosion control, fodder and fruit production, timber, fuelwood, etc. figure importantly in WV/E plans.

Collectively, there are 21 nurseries operating in FY94, producing 11 million seedlings per year. The nursery operations are complemented by terracing and bunding efforts and checkdam construction.

The Ethiopian Orthodox Church - EOC is currently the only indigenous cooperating sponsor directly supported by the Title II regular program. Like the others, its program emphasizes terracing, checkdams, seedling production, planting and distribution.

Catholic Relief Services - CRS has had a modest food for work NRM component in its Title II program in years past. Under its FY94-FY96 MYOP it substantially expands such programs. What distinguishes the CRS program is that it is carried out through implementing partners, most of whom are church related, with CRS providing logistical support and playing a fairly removed role in monitoring.

Non-Tide II supported NGOs are also involved in environmental conservation and rehabilitation efforts. One such agency is the Relief Society of Tigray (REST). This group was originally organized to provide relief assistance during the war to those who could not be reached from government controlled areas of Ethiopia. REST was actively involved in organizing mass food-for-work efforts which produced extensive terracing works throughout Tigray. REST is an implementing Title II partner in FY94 under CRS.

Another important non-Tide II partner active in resource conservation activities is the Irish NGO "Concern." This group has been very active for several years in southern Shoa. Their work has been cited as an example of successful soil and water conservation/rehabilitation efforts.

#### OBJECTIVE

To provide an evaluation analyst with a strong NRM background to do an evaluation of the environmental rehabilitation, reforestation and agricultural extension programs implemented by NGOs under the Title II program in Ethiopia.

#### STATEMENT OF WORK

- A. The contractor will head a three-man team. The other two team members will be from USAID's Forestry Support Project.

- B. Upon arrival, join with Mission staff and Title H Cooperating Sponsors active in NRM activities, as well as selected non-USAID supported agencies engaged in similar activities, to finalize scope of work and structure of evaluation.
- C. Review documentation relevant to the field operations which have significant environmental activity (e.g. MYOPS, annual reports).
- D. Travel to one or more of the strategic project sites of each of the NGOs being reviewed. They are, among the Title H supported agencies: CARE-Ethiopia, World Vision, Food for the Hungry/Ethiopia, and Catholic Relief Services; and among the non-Title 11 agencies: Concern and REST. In the case of FH/E, both the Alaba/Siraro and the Ameya sites will be visited. In the case of World Vision, a minimum of four sites will be visited.
- E. Assess the appropriateness of technical interventions being employed by NGOs in conservation and natural resources management, from the standpoint of:
  - 1. choice of intervention to meet the intended purpose;
  - 2. appropriateness of the suite of interventions under those specific rainfall conditions, soil type, temperature and altitude regimes;
  - 3. circumstances of social and cultural acceptability;
  - 4. the role played by governmental organizations, e.g. central and regional line ministries, in the design and execution of projects; and
  - 5. other criteria which bear on their practical application.
- F. Assess the effectiveness of NGO NRM programs to determine:
  - 1. extent to which community participation is present in project planning, management and evaluation;
  - 2. whether or not NRM interventions are valued by participants so that they are willing and able to continue the work in the absence of food aid programs;
  - 3. extent to which NRM practices are being adopted by individuals for use on their own property absent food aid incentive;

4. degree to which local community human resources are being developed to take over project implementation beyond NGO involvement;
  5. whether food aid is a disincentive to the sustainability of NRM programs over the long term;
  6. what can be learned from situations where both food needs and NRM concerns need to be addressed;
  7. potential impact of food for work supported NRM activities on food insecure households;
  8. ability of NGOs to manage food for work supported NRM activities; and
  9. what indicators for success or performance are used by NGOs to monitor their NRM activities.
- G. Conduct a one or two day workshop with Title II cooperating sponsors and other interested parties on the evaluation's preliminary findings in order to clarify perceptions and share thoughts on how NRM activities supported by Title II resources can be strengthened or improved.
- H. Prepare an article on the assessment's findings for publication in the USAID's newsletter "Frontlines".

#### REPORTS

- A. A draft final report will be submitted within 60 days of completion of the investigation. The report will become the property of USAID/Addis Ababa. Copies of the report will be distributed by USAID/Addis Ababa to interested parties, at their own discretion.
- B. Written recommendations will be made regarding how to improve the effectiveness of Title II-supported NRM activities. Such recommendations and modification might include, but not be limited to: new species or varieties of trees, shrubs and/or grasses to best maximize the soil capability in the areas of operation; refinement of the natural resources and/or conservation components to make them more efficacious or sustainable; description of additional conservation or natural resource management components which might be missing and which might enhance the synergy in the existing land management systems.
- C. Locations of field activities and their NGO affiliation will be recorded on a map and referred to in the body of the report by an appropriate code. A legible map of the NGO operations

and codes will be presented to USAID/Addis Ababa as part of the final report.

- D. Ten copies of a final, type-written report will be prepared for USAID/Addis Ababa. If a computer-driven word processor is used in drafting the report, a computer floppy diskette in WordPerfect 5.1 format will also be submitted in addition to the 10 paper copies.

#### RELATIONSHIPS AND RESPONSIBILITIES

- A. The contractor will work under the general direction of the chief of the Food and Humanitarian Assistance Office in USAID/Addis Ababa. He will be expected to otherwise work directly with the senior staff of NGOs whose activities will be reviewed under the proposed evaluation.
- B. The contractor will also work in collaboration with two team members provided by USAID's Forestry Support Project. One of these two team members will support field efforts, while the second will assist in preparing the final report and conducting the workshop.

#### PERFORMANCE PERIOD

A period of up to five weeks is authorized to do a desk review of on-going activities, undertake field investigations, conduct a workshop for Title H Cooperating Sponsors on preliminary findings, and to draft a final report. Six days per week in the field are authorized for payment purposes.

#### SPECIAL PROVISIONS

- A. Work will be preformed in Addis Ababa and at numerous project sites throughout Ethiopia.
- B. Logistical support will be arranged by the Title II cooperating sponsors and the contractor based on initial discussions held upon arrival in Ethiopia.
- C. Qualifications

The consultant chosen must be qualified to assess the technical appropriateness of currently employed conservation and natural resource management interventions, and to recommend changes and/or modifications to improve their efficiency. The consultant will have at least 10 years of professional experience in a technical field which includes academic preparation and field experience in one of the following fields: forestry, soil conservation, agroforestry, crop production, or nursery management. The consultant must

have prior long-term experience (one year or more) in East Africa and demonstrate an ability to thrive in a rural setting. He/she will also demonstrate a working knowledge of one or more of the associated fields of expertise which pertain to the range of field activities in conservation and natural resource management being carried out by the NGOs in question.

## **Appendix B**

### **Schedule and Itinerary of the Evaluation Team**

- Sept. 8-** Team arrives in-country. Reading background materials.
- Sept. 9-** Meetings in Addis with USAID Staff and combined NGO Addis Representatives. Separate meetings in the afternoon with representatives of Relief Society of Tigray (REST), World Vision Ethiopia (WVE), and Food for the Hungry International (FHI). Background readings continue.
- Sept. 12-** Catterson and Buccowich travel by road to Ginager with Ethiopian Orthodox Church (EOC) representative Mr. Esubalew W. Selassie.
- Sept. 13-** Meetings in Addis with USAID and CARE. Additional readings and team management discussions.
- Sept. 14-** Catterson, Buccowich, and MNR Planning and Programming Expert Ahmed Hussien travel by air to Ende Selassie (Shire) in Tigray to begin field visit with REST. Preliminary briefing by REST personnel. Visit to MCH Center in Shire and travel to Axum, with stopover at Seleckleka Enclosure Forest and with side visit to historical sites with REST Forestry Specialist Mr. Tsehaye.
- Sept. 15-** Visits to REST project sites in Haheile and Maiknetal with Mr. Tsehaye and REST Environmental Rehabilitation and Agricultural Development Department Head Mr. Kiflom Belete.
- Sept. 16-** Site visits in the Abi-Adi area (Welegesa, Adiha Small-Scale Irrigation Scheme) and continuing travel over the new road through Tembien to Mekelle. Meeting and brief discussion with Mel Peters of Oxfam/Canada designing food aid project for REST/CIDA cooperation program.
- Sept. 17-** Visit to REST Headquarters, introductory meetings with REST staff and discussions with REST Deputy Director Berhane. Field visit to project site in Adi Goodom with Rural Credit Program Manager Mr. Gebremariam and earthen dam site on road back towards Mekelle.
- Sept. 18-** Catterson, Buccowich and Hussien travel from Mekelle to Wukro. Meeting with WVE staff and overview presentation with afternoon visit to nearby AIDAB project sites in Atsbi woreda.

- Sept. 19- Visits to a variety of WVE Kilde Awlaelo project sites in Wumberta Woreda including earthen dams, plantation and nursery sites with WVE staff.
- Sept. 20- Morning wrap-up meeting with WVE Kilde Alwaelo staff and afternoon travel to Mekelle.
- Sept. 21- Buccowich returns to Addis on the morning flight; Catterson and Hussein delayed until early evening. Additional readings of materials provided by REST.
- Sept. 22- Buccowich travels by air with Care Program Coordinator Mike Rewald to Dire Dawa to visit CARE project sites. Travel with Project Coordinator, Mr. K.V. Janardanan, and Assistant Project Coordinator, Mr. Getachew Haile to Babile and Gursum Woredas.
- Catterson and Hussein travel to Alaba with FHI Reforestation and Soil Conservation Coordinator Mr. Demisse to visit FHI project sites. They are joined by CRS team from Addis. Afternoon visits to field sites including a nursery/horticultural demonstration site and a communal woodlot.
- Sept. 23- Buccowich visits CARE project sites in Babile and Gursum woredas with CARE project staff. Return to Dire Dawa evening of 23rd.
- Catterson and Hussein visit Sorghe Forest, soil conservation sites, slow sand filtration system and a contact farmer with FHI Alaba Project Staff.
- Sept. 24- Buccowich travels by air to Addis.
- Catterson and Hussein travel to Shashamene for wrap-up discussions with FHI staff and in particular, FHI Forester Chali about Sorghe Forest. Afternoon, attempt to move to World Vision site at Omosheleko; unable to locate; return to Alaba.
- Sept. 25- Buccowich in Addis, preparing report.
- Catterson and Hussein accompanied by FHI Soil Conservation Specialist Yohannes travel to WVE project sites in Omosheleko.
- Sept. 26- Buccowich in Addis, preparing report.
- Catterson, Hussein and Yohannes visiting WVE project sites in Omosheleko including, reforestation, a contact farmer, the nursery at Osheto with local staff.

Afternoon visit to Bada Highlands area of Omosheleko to view replanting of natural forest, mini-nursery site and conservation works in Hazambara Peasant Association area.

Sept. 27- Buccowich meeting with USAID and return to US.

Maskal Holiday: Catterson, Hussein and Yohannes visit nearby protection forest area at Omosheleko. Remainder of the day spent reading and report outlining.

Sept. 28- Catterson, Hussein and Yohannes hold wrap-up meeting with World Vision Omosheleko staff in the morning. Mid-morning travel by road to Hosanna to meet CRS personnel; continue journey to Imdibir. Afternoon met by ACS Coordinator Mr. Mulugeta and CRS Addis staff; briefing on activities of Archdiocese Catholic Secretariat. Visit to gully restoration works and nursery/horticultural demonstration site near Imdibir. Early evening travel to Wolkite.

Sept. 29- Catterson, Hussein and Yohannes with CRS and ACS personnel carry out site visits in Gurage Highlands between Imdibir and Wolkite. Sites visited included gully restoration sites (various) and a nursery/horticultural demonstration area. Wrap-up meeting held in the early afternoon with ACS.

Catterson, Hussein, Yohannes with CRS staff visit FESSA sites in the Wasamar-Gedet Catchment Area, ending the day at FESSA Headquarters in the Highlands of the Gurage Zone.

Sept. 30- Catterson, Hussein, Yohannes with CRS staff visit FESSA sites in the Yesray-Wort Catchment area, including gully control sites, a soil fence site, small-scale reforestation and a contact farmer.

Afternoon Catterson, Hussein, Yohannes and CRS staff travel to Addis.

Oct. 1- Catterson working on preparations for Workshop and drafting report.

Oct. 2- Catterson working on preparations for Workshop.

Oct. 3- Catterson meeting with Mike Harvey and other members of USAID staff in preparation for Workshop. Helin arrival in Addis.

Oct. 4- Catterson and Helin working with USAID personnel staff in preparation for Workshop.

- Oct. 5-6- Food Aid/Natural Resources Management Workshop in Addis at Red Cross Training Center with participation of representatives of all the NGOs and TGE Ministry personnel.
- Oct. 7- Debriefing Meeting with USAID Mission Director and staff. Report Preparation.
- Oct. 8- Catterson departs.

## **Appendix C-**

### **List of Persons Met**

#### **USAID**

Ms. Marge Bonner- Mission Director  
Mr. R. Douglas Arbuckle- Executive Officer  
Mr. Michael Harvey- Food for Peace Officer  
Mr. Mamu Mulugeta- Food Program Monitor  
Ms. Meg Brown- Agricultural Development Officer  
Ms. Ashton Douglas- Food for Peace Office  
Mr. Getahun Belai- Food for Peace Office  
Mr. Solomon Shiferraw- Food for Peace Office  
Ms. Kay Sharp- FEWS Representative

#### **CARE Ethiopia**

##### **Addis:**

Mr. Robin Needham- Country Director  
Mr. Michael Rewald- Program Director

##### **Dire Dawa:**

Mr. K.V. Janardanan- Project Coordinator  
Mr. Getachew Haile- Assistant Project Coordinator  
Ms. Genet Beyene- Site Engineer  
Mr. Muktar Hassen- Senior Extension Supervisor - Babile  
Mr. Araga- Extension Agent - Babile  
Mr. Muktar Abduke- Senior Extension Supervisor - Gursom  
Mr. Abella Challa- Extension Agent - Gursom

#### **Catholic Relief Services**

##### **Addis:**

Ms. Lisa Kuennen- Assistant Country Representative  
Mr. Amsalu Gebre Selassie- Regular Program Section Head  
Mr. Getachew Alemu- Program Officer  
Mr. Moges Worku- Project Officer  
Mr. Messele Endalew- Project Officer  
Mr. Dawit Eshetu- Project Officer

## **Archdiocese Catholic Secretariat**

Mr. Mulugeta Boyyene- ACS Coordinator  
Mr. Tsefaye Shinkur- Zonal Coordinator  
Mr. Yohannes Yoseph- FFW Coordinator  
Mr. Yoseph Wolde-Michael- Agronomist  
Mr. Abdella Yassin- Chief Agricultural Technician  
Mr. Menure Misgane- Agricultural Technician  
Mr. Kinfe Mammo- Agricultural Technician

## **Fessa Adventist Development Office**

Mr. Gelgelu Sadu- Development Coordinator  
Mr. Tafesse Yeshitela- Agronomist  
Mr. Binyam Amtataw- FFW Coordinator

## **Ethiopian Orthodox Church**

Addis:

Mr. Esubalew W. Selassie- Food for Work Coordinator

Ginager :

Mr. Tadese Duga- Project Manager  
Mr. Kebede Tato- Consultant

## **Food for the Hungry International**

Addis:

Mr. Paul Erickson- Country Director  
Mr. Gabriel Galatis- Assistant Director  
Mr. Demissie Lesane Work- Soil Conservation and Afforestation  
Coordinator  
Ms. Elspeth Cole- Donor Liaison  
Mr. Waka Aduigna- Gonder Project

Alaba:

Mr. Gossaye Taffesse- Acting Project Manager  
Mr. Yohannes Belihu- Soil Conservation Specialist  
Mr. Chali Guteta- Forestry Specialist  
Mr. Haileyesus Tedla- Assistant Forester

## **Relief Society of Tigray**

### **Addis:**

Mr. Berhane Wordetensaie- Deputy Director  
Mr. Tetemke Yibrah- Program Coordinator

### **Tigray:**

Mr. Berhane Gebre Ezigabhar- Deputy Director  
Mr. Fissaha- Department Head: Planning  
Mr. Kiflom Belete- Head: Environmental Rehabilitation and  
Agricultural Development  
Mr. Tsehaye Gebre Selassie- Forestry Specialist  
Mr. Gebremarim- Rural Credit Program Coordinator  
Mr. Tadesse Woldu- Agricultural Development Program  
Coordinator  
Mr. Dras Dimisse- Maternal Child Health Center Director

## **World Vision Relief and Development, Inc.**

### **Tigray- Wukro:**

Mr. Yonathon Kiros- Project Manager  
Mr. Kebede Woldegiorgis- Program Development Coordinator  
Ms. Kidan Halefom- Trainer  
Mr. Kassahun Gebremichael- Forester  
Mr. Dawit Gebremeskel- Engineer  
Mr. Woldekiros Getachew- Agronomist

### **Omosheleko:**

Mr. Tesfaye Beyene- Forester  
Mr. Asnake Abera- Soil and Water Conservation Engineer  
Mr. Tesfaye Asefa- Agriculturalist  
Ms. Ethiopia Agegnehu- Assistant Forester  
Mr. Mathus- Contact Farmer

## **Government of Ethiopia**

### **Addis and in the Field:**

Mr. Ahmed Hussien- Senior Officer- Planning Dept. MNRDEP

### **Tigray:**

Mr. Abadi Araya- MNRDEP, Kaobi Nursery

## **Appendix D-**

### **Documents Received/Consulted During the Evaluation**

- Bekele, Ermias 1989. Inventory of Forestry Projects in Ethiopia. World Bank Consultancy Report.
- CARE Ethiopia 1994. Response to Evaluation Questionnaire.
- CARE Ethiopia 1994. Multi-Year Operational Plan: FY 1995- FY1999, plus 202(e) Request - Monetizing Local Funding Request.
- CARE Ethiopia 1993. Rapid Assessment of the Food and Nutrition Security Impact of CARE Food Programming Activities in Eastern Shewa and Western Hararghe.
- CARE Ethiopia 1994. Food For Work Manual.
- CARE Ethiopia 1994. Project Implementation Report: Eastern Hararghe Emergency Feeding Project: January - June 1994.
- Catholic Relief Services 1994. Response to Evaluation Questionnaire.
- Catterson, T. et al 1993. Natural Resources Management and Program Food Aid in Niger. Agricultural Policy Analysis Project II, Technical Report No. 129. Abt Associates, Inc.
- Diriba, Getachew 1994. After Famine: Rural Resources for Recovery and Development. Volume 1: Summary of the Major Findings - A Case Study of Adama Boset and Habro. CARE Ethiopia's Food Information System.
- EFAP 1993. Ethiopia Forestry Action Program: Draft Final Report- Volume I, Executive Summary.
- EFAP 1993. Ethiopia Forestry Action Program: Draft Final Report- Volume II, The Challenge for Development.
- EFAP 1993. Ethiopia Forestry Action Program: Draft Final Report - Volume III, Issues and Actions.
- Ethiopian Orthodox Church 1994. Response to Evaluation Questionnaire.
- Ethiopian Orthodox Church 1994. Report on Ginager FFW Project 1991 - 1994.
- Ethiopian Orthodox Church 1993. Food for Work Multi-Year Operational Plan for 1994 - 1996.

Food Aid Management 1993. Directory of Food-Assisted Projects-1993.

Food for the Hungry International 1994. Response to Evaluation Questionnaire.

Holt, Julius, and Mark Lawrence 1993. Making Ends Meet: A Survey of the Food Economy of the Ethiopian North-East Highlands. Save the Children.

Hurni, Hans 1986. Guidelines for Development Agents on Soil Conservation in Ethiopia. Ministry of Agriculture, Community Forests and Soil Conservation Development Department (CFSCDD). Addis Ababa.

Mulugeta, Mamo 1994. Project Site Visit Report: Travel to CARE Project Sites in Dire Dawa Region.

Owubah, Charles. Food Aid in Africa: Issues Affecting PVO Natural Resource Interventions. Food Aid Management.

Rewald, Michael 1992. The Future of Food For Work Within CARE Ethiopia: A Discussion Paper. CARE Ethiopia.

Relief Society of Tigray 1994. Response to Evaluation Questionnaire.

Relief Society of Tigray nd. 1991/92 Report.

Relief Society of Tigray 1994. April to June 1994 Update.

Sharp, Kay 1994. FEWS Vulnerability Assessment 1994/5.

Styzcen, Merete 1989. Inventory of Soil and Water Conservation Projects in Ethiopia. Danish Hydraulics Institute.

USAID 1993. FY'93 USAID FFW Projects: Summary of Accomplishments.

USAID 1993. FY'93 USAID FFW Projects: Number of Beneficiaries, Person-days Contributed, and Commodities Distributed.

Webb, Patrick, et al., eds 1992. Famine and Drought Mitigation in Ethiopia in the 1990's. Famine and Food Policy Discussion Paper no. 7. International Food Policy and Research Institute.

Webb, P. et al 1994. Vulnerability Mapping and Geographical Targeting: An Exploratory Methodology Applied to Ethiopia. Report to USAID Health and Human Resources Analysis for Africa Project, International Food Policy Research Institute, Washington, D.C.

Webb, P. et al 1992. **Famine in Ethiopia: Policy Implications of Coping Failure at National and Household Levels.** International Food Policy Research Institute, Research Report 92. Washington, D.C.

World Resources Institute. **Fuelwood and Social Forestry: Country Profile - Ethiopia.** Tropical Forests Action Plan Project.

World Vision Relief and Development, Inc./Ethiopia 1994. **Response to Evaluation Questionnaire.**

World Vision Relief and Development, Inc./Ethiopia 1994. **Multi-Year Operational Plan (MYOP) for Ethiopia 1995-97 and FY'95 Section 202E request.**

World Vision Relief and Development, Inc./Ethiopia 1993. **Evolvement of WVE Strategies at Different Phases (1984/85 - 1993/94).**

World Vision Relief and Development, Inc./Ethiopia 1993. **MYOP FY'94 Update and Section 202(e) Request.**

World Vision Relief and Development, Inc./Ethiopia 1993. **FY'93 USAID Food Assisted Program: Annual Work Progress Report.**

World Vision Relief and Development, Inc./Ethiopia 1993. **Memo from Yonathon Kiros to Ato Zelalem Ayenew: Subject - Annual Report.**

***Workshop on:***  
**An Evaluation of Food-Assisted**  
**Natural Resource Management Projects in Ethiopia**

**Schedule (Final)**

**October 5**

8:30 - 10 Welcome and Introductions  
USAID/Ethiopia Perspectives on Food-Assisted NRM  
Projects (M.Harvey), Participants' Expectations  
10 - 10:15 Break  
10:15 - 11 Overview of Food-Assisted NRM Projects (W. Helin)  
11:00 - 12 Presentation of Issues and Findings (T. Catterson  
with Participants' comments, questions, and input)  
Noon - 1 Lunch  
1:00 - 2:30 Presentation of Issues and Findings (continued)  
2:30 - 2:45 Break  
2:45 - 4:30 Presentation of Issues and Findings (continued)  
4:30 - 5:30 Reception/Social Hour

**October 6**

8:30 - 10 Working Groups: Conclusions to Issues and Questions  
10 - 10:15 Break  
10:15 - 11 Working Groups (continued)  
11:00 - 12 Presentations by Working Groups and Large Group  
Comments  
Noon - 1 Lunch  
1:00 - 2:45 Presentations by Working Groups (continued)  
2:45 - 3 Remarks by Ms. Marge Bonner, Mission Director,  
USAID/Ethiopia  
3:00 - 4:30 Plenary - Recommendations

## **Remarks by Ms. Marge Bonner, Mission Director, USAID/Ethiopia**

On behalf of USAID I want to reiterate that we feel you are working in an area that is critical for Ethiopia and wish to commend you for your efforts. In my brief remarks I want to mention a few important points. An important example is, how do we start worrying about impacts? This is important for food-assisted, as well as, projects supported by cash. We need not only to worry about feeding people, but how to use food in development.

I feel this workshop is important for two reasons:

- First, we often get involved in our day to day work and see only the trees and not the forest. It is important for us to step back and share experiences, to see the forest. Workshops such as this allow you to do that.
- Second, we need to start focussing more on impact assessment and this workshop gives you the opportunity to think and talk about this more.

There is often a discussion about the relief to rehabilitation to development continuum. We need to look at the various activities that fit under programs within each stage, and to keep looking out for vulnerable groups. However, at the same time, we need to look so that catastrophes will not happen. As such, food fits into this as a development tool.

I understand that you have a time constraint and need to finish a number of things yet today. As such, I would be happy to just answer any questions or respond to any comments that you may have and then sit back and listen to what you are working on. Thank you.

## **Remarks by Mr. Mike Harvey, Food for Peace Officer, USAID/Ethiopia**

I would like to begin by welcoming all of you here to this two day workshop. What I want to emphasize is that this is part of an on-going discussion, where regular food aid programming is going, and not an end in itself.

Natural resources management is the bulk, the core, of the food-for-work activities that USAID is sponsoring in Ethiopia. It is at a level of \$US 26 million per year, the largest part of USAID programming in the country.

I am impressed with your accomplishments to date and also hope that a new understanding will come out of the discussions. This is particularly in regards to rural development. It has been said

many times that one of the problems in Ethiopia is environmental degradation. To reverse this one of the key concepts that needs focus, or grounding, is natural resource management. This has ties to soil and water conservation, forestry, and so on.

Mr. Catterson has come back enthusiastic from his visits to your sites. He is encouraged about what is happening and also your willingness to wrestle with what are tough problems. I understand that there was some apprehension on your parts about shutting down activities. That is not the case. Our only concern is to improve programs.

There is no threat at present concerning food aid funding. However, we are insistent that programs supported by USAID are the best in the world. They are not now. To help make sure that they are USAID is willing to devote resources to training and improving programs.

We want you to think if food makes sense with your project. Are cash resources needed instead? Let me know.

Again, I am very pleased that all of you could come and look forward to a productive session.

## *Participant Expectations*

The participants were asked what they hoped might be covered during the two days. It was emphasized, however, that in such a short period it was most probably the case that not everything could be covered. If not, the items not covered potentially could be covered in a follow-up session. After going through the exercise it was noted that, in some form, most of the points would be touched on, if only briefly.

- The ultimate goal is to stop regular food aid. Discussions on how to avoid dependency.
- Focus not only on highland zone but also on pastoralist zone.
- On agricultural lands need to encourage other inputs, e.g., fertilizer rather than food aid.
- Consider the population aspect in NRM. NRM development and people development.
- Careful in identifying an approach to dealing with community woodlots; the 'fruits of food aid'.
- Consider if measures, e.g., soil conservation are appropriate and sustainable.
- Community ownership of food-assisted projects.
- Build literacy into programs as a way of sustaining programs.
- Discuss failures of food-assisted NRM projects (and successes!)
- Appropriateness of food aid. Are there other, more appropriate, mechanisms with food aid other than food for work?
- How do you determine when to stop using food for work?
- The role of the community in the entire project process.
- How do you show participation of the people?
- How do "we" encourage communities to develop?
- Methods of intervention to address environmental degradation.
- How to reconcile programs implemented by NGOs with different methods to achieve NRM success?

- Different areas have different food deficits and those with less deficit may need other inputs, e.g., cash. NOTE: Food insecurity should be the program focus, not deficits.
- Share experiences with others on working with strong local groups.
- Who should plan for whom?

## Overview of Food-Assisted NRM Projects (W.Helin)

My presentation is an overview of USAID's use of Title II, with an emphasis on Africa. If you will allow me I will start with general information that many of you may know already. PL (Public Law) 480 was passed forty years ago, in 1954. The law is commonly known as Food for Peace. To give some idea on the amount of commodities exported from the US under PL 480, from 1954-1985 (about thirty years a total of more than 50 billion tons worth more than \$US 10 billion were donated by the US to developing countries.

Food aid has been used to promote economic development through programs such as maternal child health (MCH), school feeding, and food-for-work (FFW). Projects such as forestry and soil conservation are common FFW initiatives in many countries.

A number of international players are involved in FFW. One of the larger is World Food Programme. In June 1990, for example, worldwide WFP was supporting 99 forestry projects valued at US\$ 566 million.

According to WFP, in a 1984 report, problems and constraints of food aid include: location of projects in remote areas, often dispersed sites where infrastructure is weakest, where natural conditions are least favorable, and involving the most disadvantaged populations. Evaluation also entails certain special difficulties, resulting from the often remote and dispersed sites, the slow rate of achievement, and the long-range nature of many project's impacts.

In 1982 (12 years ago) USAID began looking more closely at the efforts it was making in the area of reforestation and other natural resource management initiatives. That report estimated that more than half of all tree planting taking place under U.S. Foreign Assistance was actually being accomplished under P.L. 480 food programs.

In 1984, and again in 1987, P.L. 480 supported forestry projects were inventoried. In 1987, twenty-two Title II FFW projects were being implemented by PVOs. Of these, 15 were in Africa, 3 in Asia, and 4 in Latin America/Caribbean. In 1993 Food Aid Management compiled a directory of all Title II projects undertaken by PVOs.

USAID commissioned the U.S. Peace Corps in 1984/85 to do a more in-depth study of projects in seven African countries: Ghana, Senegal, Niger, Rwanda, Kenya, Somalia, and Lesotho. Based on the study a workshop was held in 1987 in Mombassa, Kenya. Much of the workshop focussed on developing country strategies.

Going back to the 1984/85 study, a number of issues were identified. In the seven countries, population pressure was the major contributing factor to deforestation, decreased soil fertility and soil erosion.

The principle constraints hindering government and donor reforestation efforts included:

- \* inadequate staffing and funding levels,
- \* mounting land use pressure,
- \* unclear ownership, and
- \* lack of counterpart community organizations.

At the time of the 1984/85 study PL 480 FFW programs were on the decline. According to the authors, a primary factor was that the PVOs lacked the financial, technical, and administrative capabilities to implement them successfully.

The study goes on to say that critics of P.L. 480 also contributed to the decline by citing charges such as:

- \* FFW projects foster dependency by rewarding community motivation and participation with food aid, and
- \* FFW projects provide "make work" rather than further long-term development.

Concerning FFW and dependency the study points to cases in Lesotho and Niger where there was an erosion of self-help due to food aid. However, the authors argue that it is not whether food is appropriate or not -- the issue is more of appropriate vs. inappropriate programming of food aid.

Concerning FFW and long-term development, the authors state that this is a problem when projects are poorly designed, when they lack technical and material assistance, and when the quality of the labor force is low.

This study focussed on Peace Corps and its potential for an expanded role in FFW, however, the studies' recommendations can be seen in a broader context.

Increased Collaboration. This was noted as important in all countries.

Strengthen On-Going Projects. Areas of importance were noted in: 1) Direct technical support, 2) Developing standard work norms for planning and evaluation purposes and to help assure a clear linkage between food rations and work performed, 3) Institute a process of

forward planning to achieve optimal organization, sequence, and timeliness of work tasks, and 4) Establish a management information system, essential for monitoring, sound management decisions, and as a communication tool.

One project that developed out of the Mombassa workshop was the Collaborative Community Forestry Initiative in Ghana. A copy of a four page article is included in your packet. Though a forestry project I believe the conceptual model and lessons learned are important for any NRM initiative.

Also in your packet is an article entitled "Food Aid in Africa: Issues Affecting Natural Resource Interventions." The paper may raise more questions than it answers, it is a useful document and I urge you to read it.

The document suggested a need for a PVO-organized workshop that would discuss appropriate strategies to improve the effectiveness of food aid as a resource. That workshop was held in August, 1994. Some points raised include:

#### What Has Worked?

- \* Programs which people believe as directly beneficial,
- \* Improved synergy of local currency and food resources in FFW activities,
- \* Encouragement of small group activities in creation of infrastructure,
- \* Long-term planning and "rolling" designs,
- \* Participatory project design,
- \* Changing attitudes of technocrats in forestry departments to favor social forestry,
- \* Clear and favorable land tenure systems, and
- \* Patience and relaxed attitude by donors for project reports, impacts, etc. but
- \* PVOs/NGOs must be sensitive to norms and make changes where needed/possible.

#### What Has Not Worked?

- \* Projects that tend to neglect the issues raised above,
- \* Inability to build aspects of sustainability into projects:
  - + institutional enthusiasm not sustained,
  - + wrong projects prescribed to communities,
  - + spirit of self-help not adequately developed,
  - + operation of project conflicts with societal norms,
  - + entirely new resource management with no roots in traditional land management systems, and
  - + short-term resources committed towards long-term problems.
- \* The pursuit of multiple and diverse project goals:
  - + lack of focus in project management and
  - + conflicting objectives.

**Presentation of Issues and Findings (T. Catterson with Participants' comments, questions, and input)**

Note: The notes below constitute an outline for this segment of the workshop

**NATURAL RESOURCES MANAGEMENT AND TITLE II  
FOOD AID: AN EVALUATION**

**FINDINGS:**

**GREAT DEAL ACCOMPLISHED; YOUR WORK IS VISIBLE EVERYWHERE  
IN THE PROJECT AREAS!**

**COMMITMENT AND MOTIVATION OF FIELD STAFF AND HARD-  
WORKING RURAL PEOPLE- A CAUSE FOR HIGH OPTIMISM**

**LITTLE DOUBT PROGRAMS MAKING A DIFFERENCE**

**MACRO OVERVIEW OF WHAT HAS BEEN DONE**

**NGOS - BEACON OF HOPE FOR MANY; YOUR RESPONSIBILITY:  
MAKING SURE BEACON BURNS BRIGHT WITH THE MESSAGE OF HOPE  
KINDLED BY SELF-RELIANCE AND SELF-REALIZATION FOR YOUR  
CLIENTS - THE RURAL PEOPLE**

---

**AND YET, EARNEST QUESTIONING GOING ON EVERYWHERE:**

- ARE THESE THE RIGHT TECHNICAL PACKAGES?**
- ARE WE CREATING FOOD AID DEPENDENCY?**
- OTHER DONOR PROJECTS USE OTHER APPROACHES; WHY NOT US?**
- WANTED: NEW IDEAS AND CREATIVE WAYS TO ADDRESS THE  
CHALLENGES OF AGRICULTURE/NATURAL RESOURCES**

**NATURE OF THIS PRESENTATION:**

**A CHALLENGE TO GENERALIZE AND STILL IDENTIFY IMPORTANT  
ISSUES**

**NOT ALL PROJECTS SHARE ALL ISSUES**

**NEVERTHELESS, ALL PLEASE CAREFULLY CONSIDER THE ISSUES IDENTIFIED AND LESSONS LEARNED**

**ALL OF YOU CAN CONTRIBUTE TO THE DEBATE-- THAT IS THE POINT OF THIS WORKSHOP**

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**SOME POINTS ABOUT MY ROLE:**

**-- TO BE CLEARLY UNDERSTOOD BY MANY, I HAVE TRIED TO SPEAK PLAINLY IN SIMPLE STRAIGHT-FORWARD MANNER!**

**-- ACTING AS AN ANALYST, DRAWING ON NGO INPUTS AND FIELD OBSERVATIONS: FEW RECOMMENDATIONS TO MAKE AT THIS POINT**

**-- CONCLUSIONS AND RECOMMENDATIONS SHOULD COME OUT IN THE COURSE OF THE WORKSHOP; WILL BE INCORPORATED INTO THE EVALUATION REPORT.**

**SOME POINTS ABOUT YOUR ROLE:**

**-- CONVINCED YOU ARE BEST PEOPLE TO ADDRESS THE CHALLENGE OF CONCLUSIONS AND RECOMMENDATIONS, AND THEIR IMPLEMENTATION AFTER THE WORKSHOP**

**-- CONCLUSIONS/RECOMMENDATIONS SHOULD BE AS FIELD-BASED AS POSSIBLE - FROM THOSE WHO LIVE THESE FFW/NRM PROGRAMS DAY-TO-DAY.**

**TECHNOLOGICAL FINDINGS:**

**OVERALL, THE TECHNICAL INTERVENTIONS ARE APPROPRIATE (TREE-PLANTING, SOIL AND WATER CONSERVATION, AGRICULTURAL DEVELOPMENT), HOWEVER:**

**-- OVERALL SIMILARITY CAN BE BOTH:**

**REASSURING-- (ALL ADDRESSING SAME PROBLEMS!)**

**DISCONCERTING-- (PROBLEMS ARE NOT THE SAME!)**

**DEGRADATION: THE RESULT OF INAPPROPRIATE LAND-USE; THE NEED TO MANAGE USE, NOT JUST TREAT THE LAND!**

**PLANNING/PROBLEM ANALYSIS/PROGRAM DESIGN:**

**COMMON DIFFICULTY IN EXPLAINING EITHER FOOD AMOUNTS REQUESTED OR NRM ACTIVITIES PLANNED**

**RELATIVELY SHALLOW PROBLEM ANALYSIS-- QUALITATIVE/OFTEN ANECDOTAL/OCCASIONALLY CONFLICTING**

**WHY THIS SITUATION?**

- **YOUNG PROJECTS BUILDING ON RELIEF PROGRAMS**
- **RELIEF A SIMPLER PROBLEM (FEED PEOPLE) THAN AGRICULTURE/ NATURAL RESOURCES DEVELOPMENT**
- **DIFFICULT TO GET QUANTITATIVE INFORMATION:**
  - **WHO HAS LAND USE DATA?**
  - **FARMERS DISLIKE DISCUSSING HOLDINGS**

**WHAT CAN BE ACHIEVED FROM IMPROVED PLANNING?**

- **UNDERSTANDING THE MAGNITUDE OF THE PROBLEM: HOW MANY PEOPLE ARE HUNGRY/ WHAT NRM ACTIVITIES ARE NEEDED?**
- **MATCHING NEEDS TO RESOURCES AND THE CORRECT INTENSITY OF INTERVENTIONS**
- **PROJECTING COSTS**
- **LINKING ACTIVITIES TO THE BIOLOGICAL CALENDAR**
- **TAKING ACCOUNT OF LOGISTICAL CONSTRAINTS**
- **BETTER ABLE TO PROVIDE FARMER PARTICIPANTS WITH REALISTIC INFORMATION ABOUT THEIR OPTIONS:**
  - **ZERO SUMS SITUATIONS!**

**-- FINDING THE PATH TO IMPACT, NOT JUST ACTIVITY!**

**-- ABILITY TO DOCUMENT IMPACT IN TERMS OF PROBLEMS, NOT JUST PHYSICAL ACHIEVEMENTS**

**ELEMENTARY PLANNING:**

**BASELINE STUDIES; WHAT IS THE MINIMUM AMOUNT OF DATA AND INFORMATION WE NEED TO PLAN?**

**ANALYZING THE COLLECTED INFORMATION; STARTING WITH THE MACRO VIEW FIRST**

**CLEAR PROBLEM ANALYSIS AND DEFINITION-- LEADS TO GOALS; OBJECTIVES ARE INTERMEDIATE STEPS TO ACHIEVING GOALS; WHICH IN TURN HELP TO IDENTIFY ACTIVITIES AND THEIR OUTCOMES. THEN WE DECIDE ON THE RESOURCES NEEDED TO ACCOMPLISH THE ACTIVITIES.**

**RECOGNIZE THAT CANNOT DO IT ALL OR ALL AT ONCE: THUS WHO CHOOSES THE PRIORITIES?**

**PRESENT THE OPTIONS TO THE PEOPLE IN THE SIMPLEST FORMAT POSSIBLE; THEY MAY CHOSE TO MAKE IT MORE COMPLICATED BUT WILL EVENTUALLY FILTER THE PRIORITIES**

**SEE THE SOIL AND WATER CONSERVATION GUIDELINES FOR AN EXCELLENT DESCRIPTION OF HOW TO EVALUATE AND QUANTIFY LAND-USE.**

**TREE-PLANTING/FORESTRY TECHNOLOGIES**

**ETHIOPIA-- A COUNTRY WHICH UNDERSTANDS TREE PLANTING**

**MANY FARMERS ALREADY PLANTING TREES WITHOUT ANYONE'S HELP!!!!**

**DEFINING THE PROBLEM AS DEFORESTATION TOO LIMITED; IT IS USUALLY WHAT HAPPENS AFTERWARD THAT DEGRADES; THUS REFORESTATION IS NOT THE WHOLE SOLUTION**

**SEEING FORESTRY AS A COMPONENT OF THE LAND-USE MOSAIC:**

- ON-FARM PLANTINGS**
- GENUINE AGROFORESTRY- ADDITION OF TREES HAS NET POSITIVE IMPACT ON LAND PRODUCTIVITY.**
- LAND THAT SHOULD BE NEITHER CULTIVATED NOR GRAZED**

**CONVENTIONAL REFORESTATION WITH NURSERIES AND POTTED SEEDLINGS: COSTLY-- LABOR, TIME AND CASH DEMANDING.**

**DIVERSIFICATION OF INCOME GENERATION OPPORTUNITIES FOR THE FARMERS; FORESTRY AS A FARM OR COMMUNAL MICRO-ENTERPRISE; SOME CAVEATS:**

**COMMUNAL AND/OR PEASANT ASSOCIATION WOODLOTS; ARE THEY A VIABLE ALTERNATIVE?**

**SOIL AND WATER CONSERVATION**

**BUILD AND INTENSIFY BASED ON PRESENT RANGE OF PRACTICES WHICH ARE A GOOD START; WIDE RANGE OF OTHER OPTIONS ALREADY AVAILABLE AND KNOWN**

**EXCELLENT GUIDANCE ON THE APPLICATION OF SOIL AND WATER CONSERVATION BY AGROECOSYSTEM AND SLOPE; IS IT BEING FULLY UTILIZED?**

**AVOIDING THE UNFORTUNATE PRECEDENT-- FARMERS COME TO THINK OF SOIL AND WATER CONSERVATION AS EMPLOYMENT; PROMOTE THE NOTION OF CONSERVATION AS PART OF FARM INVESTMENT STRATEGY**

**SOIL AND WATER CONSERVATION: WHO PAYS (I.E. WORKS IN FFW) AND WHO GAINS?**

**SOIL AND WATER CONSERVATION IS NOT JUST CONTROLLING RUN-OFF AND AVOIDING EROSION; SHOULD BE SEEN AS A PROCESS OF NURTURING THE SOIL**

**MAKING SOIL AND WATER CONSERVATION PAY OFF FOR THE FARMER-- FINDING WAYS TO INCREASE/DIVERSIFY AGRICULTURAL PRODUCTIVITY ON TREATED LANDS**

**ROADS AND PATHS-- A MAJOR SOURCE OF EROSION AND GULLY FORMATION; WATER MANAGEMENT PRACTICES NEED BIG IMPROVEMENT**

**DEAD BARRIERS (STONE BUNDS, BRUSHWOOD CHECK DAMS) ARE PART OF THE PACKAGE; NEED PROTECTION AND BIOLOGICAL MEASURES TO BE REALLY EFFECTIVE**

### **AGRICULTURAL DEVELOPMENT**

**FOOD COMES FIRST; NO FUELWOOD PROBLEM IF NO FOOD TO COOK!**

**CAN WE MAKE SUBSISTENCE FARMING SUSTAINABLE?**

**RECOGNIZING "STRUCTURAL FOOD DEFICIT"; WILL SOIL AND WATER CONSERVATION AND TREE-PLANTING (WITH OR WITHOUT FFW) REALLY MAKE A DIFFERENCE?**

**CROP DIVERSIFICATION- A GOOD STRATEGY BUT...**

**ALLOCATING AGRICULTURAL INPUTS; DOES THIS LEAD TO SELF-RELIANCE?**

**THE CONTACT FARMER MODEL; IS IT WORKING?**

**REPLICATION- THE FIRST STEP ON THE ROAD TO SUSTAINABILITY!!!!**

### **THE CHALLENGE OF LIVESTOCK**

**OVER-GRAZING A MAJOR ISSUE IN ALMOST EVERY AREA, WITH DIRECT AND MASSIVE IMPLICATIONS ON LAND DEGRADATION: PROJECTS NOT ADDRESSING IT ADEQUATELY**

**REDUCING THE NUMBER OF THE HERD OF UNPRODUCTIVE ANIMALS; THE REAL CHALLENGE**

**LIVESTOCK HUSBANDRY CARRIED OUT IN THE MORE DENSELY POPULATED AREAS OF HIGHER LANDS**

**THE PATH TO SUSTAINABLE LIVESTOCK HUSBANDRY SYSTEMS**

**AVOIDING THE BACKWARDS START: ADDING ANIMALS TO THE HERD  
OR IMPROVING THE BREED WHEN YOU CAN'T FEED THE ONES YOU  
HAVE**

**SOCIO-ECONOMIC/INSTITUTIONAL/ADMINISTRATIVE**

**CAN'T SAVE THE PEASANTS; THEY HAVE TO DO IT THEMSELVES**

**NEED TO INCREASE THE LEVEL OF GENUINE PARTICIPATION: TREAT  
LAND-USE, NOT JUST LAND!!!!**

**WORKING WITH THE M/NR OR MOA; AN OPPORTUNITY???**

**ECONOMICS OF NATURAL RESOURCES MANAGEMENT; STARTING TO  
KEEP BETTER TRACK OF THE REAL COSTS**

**FOOD AID PROJECTS TOO QUANTITATIVE IN NATURE; EVERYBODY  
RUNNING-RUNNING-- NEED MORE TIME FOR REFLECTION**

**TOP DOWN-- HEADQUARTERS AND FIELD STAFF RELATIONSHIPS**

**NOT ENOUGH INTERCHANGE BETWEEN NGOS ( USAID OR OTHER  
DONOR FUNDED)**

## ***Working Groups***

Based on the order of presentation by Tom Catterson (on the previous day) four working groups were formed. Each addressed a separate topic. Questions were posed to the group and, based on the question(s), the group decided on a set of conclusions. The groups were asked to put their conclusions in 'bullet form' on flip charts. That is what is contained below and, thus, it only constitutes a summary of their work.

After the working groups presented their conclusions the large group provided additional comments. These follow the conclusions. Included in these comments are responses by the working group. Note that these comments are often one individuals' input thus it may only reflect the point of view of one person.

### **Forestry and Soil and Water Conservation**

#### **Question Number 1:**

*Are you convinced that you have chosen the right interventions given the land-use problems identified and the resources available?*

#### **Conclusions:**

##### **I. Dependent on Circumstances**

- A. Environmental Degradation (including)
  - deforestation
  - overgrazing
  - poor farming practices
- B. Socio-Economic Factors (including)
  - starvation/food shortage
  - poor health
  - no education

##### **II. What is Appropriate**

- to enhance soil and water conservation
- reforestation
- meet immediate food needs
- improve working practice
- improve nutritional status and generate income

### III. Limitations

- resource limitations
- lack of planning
- lack of extension works
- create dependency
- land tenure
- land use policy

#### Question Number 2:

*How else might we address the land-use problems?*

#### Conclusions:

- integrating land use system
- improving cattle management
- land tenure
- awareness

#### Large Group Comments

Regarding Limitations (III): It is easier to create dependency when resources are more limited. However, it is important to also recognize that soil and water conservation measures can not be achieved overnight. It requires patience and energy. Dependency needs to be overcome, in part, through generational change.

The group did not discuss private vs. communal forest lands. This relates directly to land tenure, which needs to be solved (at least in part) first. Concerning communal land, if the community - or association within a community - is more homogeneous - then communal forestry is easier. It is a different story with a heterogeneous group.

There was no discussion on the indigenous forest issue. This, too, relates to land tenure. If it is allocated to the people then there is the chance to manage it better. (A case from Senegal where this allocation did just the opposite was interjected as a cautionary note.)

A point was raised that the relationship of population to environmental degradation was not covered. The working group acknowledged they did not spend any time on it.

A question was raised as to what role NGOs can play in policy development. This was not covered by the working group. It did foster more discussion about who should be involved in managing various classifications of forest land. It was observed that forest land by: 1) peri-urban, 2) farmland, and 3) indigenous. The

last needs government management, the former two can be managed by communities and NGOs.

### **Planning/Problem Analysis/Design**

#### **Question:**

*What needs to be done to improve capabilities in these areas at the local, NGO, and national level?*

#### **Conclusions:**

- All NGOs have more less the same experience in planning.
- Baseline survey, needs assessment, PRA, and RRA are differently understood by different NGOs. This is a concept problem.
- Needs assessment is key to planning. There is a budget constraint and a technical expertise shortage.
- At the grass roots level (at project site) planning should be strengthened with sufficient data, participation of the community, and government institutions.
- Orientation of the programs among NGOs showed different planning and approaches for NRM. Training workshops and manuals on acceptable planning approaches are needed.
- To a large extent planning was a top down approach.
- Programs are resource driven.
- All failures in nearly all projects are due to problems related to planning.

In addition, the group mentioned that planning requires time. Also, that they did not look at national planning but that it should be incorporated into their plans.

#### **Large Group Comments**

Question: Is local expertise available or not? There are planners available but not within the NGOs themselves or NGOs do not have the budget to pay. Then there is the question of whether or not the available planners are even the right people to employ - if money is available. Should outsiders be hired or should more be

done by the NGOs themselves. It was generally agreed that NGOs should do more themselves. First, they need to get the baseline data/information before doing more planning. This, and follow-on planning, can be done more by the field staff.

Planning has not been given a priority, rather, NGOs jump to implementation.

Planning can be most thoroughly strengthened within the NGOs. It is a function of day-to-day life.

Concerning problem analysis, the correct problem needs to be identified before selecting a solution. The differences between drought, desertification, and dry land degradation were discussed and it was noted that organizations have, for example, often confused drought with degradation.

It was noted that constraints vary from organization to organization, for example, time for planning. It was also noted that NGOs are pushed to areas of food insecurity, thus there are less resources available locally, and it is harder to plan.

### **Socio-Economic/Institutional**

#### **Question Number 1:**

*if we have identified the problems well, how then do we improve implementation, in particular in terms of effectiveness (impact) and efficiency?*

#### **Conclusions:**

- Design a system of implementation, identify the roles by stake holders, delegate the responsibility and power to the target community.
- Increase the awareness and change of attitude of the key players who are resolving the problem.
- Make available the necessary inputs.

## **Question Number 2:**

*How do we make participation real and substantive?*

### **Conclusions:**

- Have conviction on the importance of participation as an NGO.
- Increase awareness of the participants and make attitudinal changes.
- Maintain participation at all levels of the development cycle.
- Enhance individual's role and/or interest.
- Build institutional capacity of the community.
- Empower the powerless in decision making.
- Follow different approaches.
- Participation should include material, labor and cash contributions.

## **Question Number 3:**

*How to improve the relationship between the community, NGOs, and government institutions?*

### **Conclusions:**

- Understand and value the socio-economic and cultural set-up of the community.
- NGOs' plans and priorities should match the governments' objectives.
- Involve NGOs in policy formulation and define roles and responsibilities of NGOs and government.
- Design proper information systems among NGOs, government, and communities at all levels.
- Have mutual understanding and be aware that they are working towards one goal.

- Create a forum for exchange of ideas, views, and experience between NGOs, government, and communities.
- Increase donors' awareness to understand the objective realities of a given society.

### **Large Group Comments**

Concerning participation (last point under second conclusions section), the point was raised that if the people are poor they have little to nothing to contribute. In response, another person suggested that even if they contribute a nominal amount that they still will feel that the program is more theirs. Also, there are models in place where such participation is occurring, e.g., food for recovery and local monetization. In yet others people contribute labor. They may be resource poor but they may have know-how.

## **Agriculture and Livestock**

### **Question Number 1:**

*Are you convinced that you have chosen the right interventions given the land-use problems identified and the resources available?*

### **Conclusions:**

We are not convinced that our intervention is right because:

- No attempt has been made to change/correct the improper land use.
- Livestock economic sector is not given due consideration in NRM project formulation.
- No proper farming systems.
- No proper community participation.

## Question Number 2:

*How else might we address the land-use problems?*

### Conclusions:

- Establish sound land use policy and pay due consideration to implement it.
- Establish strong extension system to bring change in attitude.
- Use agricultural inputs for work.
- Establish and strengthen credit system with community cost-sharing participation.
- Improve agricultural implements and tools.
- Decrease the number of livestock while increasing the productivity.
- Intensify veterinary services.
- Make livestock development market oriented.
- Develop seed (?) preparation, hay (?) making and utilization.

### Large Group Comments

To reduce the number of livestock is a sensitive issue. There was then discussion about the ratio of oxen to total livestock and agreement that the numbers of oxen should not be reduced; they are a small percentage now. The issue is the ratio of productive to non-productive animals. It was observed that there needs to be a change in the farming system itself. This needs to take time.

A comment was made that the points raised by the group seem a bit optimistic and that there need to be more specific points. In response, it was observed that there have been some effort by NGOs, but that they have been too small scale. There is a need for larger scale policy changes, e.g., in land use. Not just talk. There also need to be policies towards credit. There is a need for community empowerment, that is, for people to decide their own fate but with outside technical support. This means great investment, devotion, and patience.

Concerning point 6 under the second conclusion section - decreasing the number of livestock - the question was, how is it related to the social context or is it just reducing numbers? In response, it was noted that the numbers can not just be decreased. There is a need to change attitudes via extension (and have patience). Extension includes all methods, including mass media.

Related to the above, it was observed that we need to be able to see what may happen fifty years from now.

If there are fewer, more productive, livestock they will have more input needs (food, medicine, and so on). However, one of the main limiting factors is carrying capacity. There is a need to increase veterinary services, and so on, to guarantee to the people that the remaining livestock will thrive.

Perhaps we should say increase productivity NOT focus on decreasing the herd size.

It was suggested that organizations perhaps should be involved more in buying fertilizer and other inputs to increase productivity, even if it costs money. For example, fertilizer credit via monetization. However, not to get farmers dependent on it by giving it for free.

Livestock. We have not been able to study the problem nor have alternatives been made available to farmers. Do we know that the alternatives are better? The farmers are keeping many livestock for multiple reasons. The Ethiopia livestock problem is tied to livestock - but there is a need to promote alternatives.

Concerning storage of grains. There is a storage problem and a need to find better ways to do it.

The above is a post-harvest loss problem. In some areas there is a major pre-harvest loss problem from rodents that live in terraces/bunds. One suggestion was the use of grass strips but this was countered as perhaps not a viable solution. It was suggested that a solution could not be found in the room and where an outside expert opinion may be needed.

## ***Plenary: Recommendations***

After the working groups made their presentations and the large group commented the next - and final stage of the workshop - was to prepare a set of recommendations. Due to time constraints the following method was employed: a) Each participant prepared two recommendations. It was essentially an individual 'brainstorming' session. They could be for any of the four topic areas covered by the work groups, not only the one they were in, and b) Tom Catterson and Mike Harvey quickly reviewed the recommendations, made comments, and asked for further input from the large group. Below, by topic area, are the recommendations. Again, note that each recommendation is one individual's response.

There was some attempt during the workshop to draw out major themes. As time was short the process was brief. The themes are included (except for socio-economic as time ran short) but should be taken in light of the time constraint.

### **Forestry and Soil and Water Conservation**

#### **Themes/Points:**

- Increase extension capabilities.
- There was a diversity of opinion regarding the use of food aid on private land.

#### **Recommendations:**

To establish food insecurity, we have to stop food-for-work activities on farm lands. If the farmers do the physical structures by their own initiation then we should give provision of agricultural inputs like improved tools and fertilizer on a credit basis. When you give credit the farmer should pay some amount of interest.

(Note: This recommendation was cause for some discussion. Some NGOs provide FFW on private lands and others do not. A primary rationale to do so is that the land is a national heritage, not just one persons or a families, thus its protection is important for all. However, the farmers are not communicated with concerning this reason and they may well just consider it a payment for services, which is not good. Erosion is a major problem that needs to be dealt with, thus this discussion - and proper actions - needs further emphasis.)

**Training for NGOs' staff at field level on NRM activities.**

**Create appropriate methods to encourage indigenous knowledge of the local people than to introduce labor intensive techniques to improve the soil and water conservation works.**

**Give increased emphasis on extension work in NRM.**

**There is a need for a multidisciplinary approach for an integrated land use system as a sole panacea for the improvement of situations at rural areas.**

**Promote training services for farming community members at the grass roots level to create awareness on how to tackle problems with regard to environmental degradation, which is the root cause of almost all problems.**

**Develop sense of ownership to increase the forest cover and fulfill the demand for energy.**

**Give more emphasis for private forestry than communal forestry.**

**Enhance technical capability for working staff.**

**Regarding forestry, soil, and water conservation, in the discussion the main problem of the intervention implementation and technical feasibility were: a) lack of baseline data, b) lack of needs assessment, and c) lack of full participation of the community in planning. Therefore, the intervention should consider socio-economic aspects of the community.**

**For forestry and soil & water conservation the resource should not be limiting. There should be enough budget (resource).**

**There should be a land use policy.**

**Planning and implementing of soil and water conservation activities should be done on a catchment basis with standards given - uniform guidelines for all NGOs.**

**Establishment and management of nurseries for good survival of afforestation programs is a very important point.**

**Have a clearly defined land tenure system, which is well thought out and enables the sustainability of NRM programs.**

**More emphasis should be given to extension services, that is, equal to that of physical conservation measures.**

**Major problems with NRM are: a) deforestation, b) overgrazing, and c) poor farming practices.**

## **Planning, Problem Analysis, Design**

### **Themes/Points:**

- More training needed in the planning process.
- People need to be deeply involved in the process.
- If we are not good planners we will not know where to work.

### **Recommendations:**

Take time to plan with the communities, government, and NGOs.

Try to understand the expectations of the donors in terms of planning, reporting, etc.

Create possibilities to experience sharing workshop.

NGOs' plans should correspond with the national plans.

Familiarize programmers with simple techniques of baseline data collection and impact analysis through training and work.

Training in planning, problem identification, baseline surveys, etc.

A guideline has to be prepared as to how to undertake baseline surveys, carry out impact assessments, etc.

We have to be clear enough in selecting an area of operation whereby we can show some impact of our intervention. This is by proper planning in selecting a site. It should not be both resource poor and food deficit as it impacts our intervention heavily.

Needs assessments are key to planning.

As we have come to understand the need for planning we need to: a) Enhance the technical capacity of NGO staff in NRM activities and b) Training the staff of the implementing NGOs to be updated and good planners.

Outsiders can help, but the PEOPLE should do the work. Therefore, all interventions should focus to PEOPLE development and by any means; not material development.

There should be a training workshop in planning.

A socio-economic survey has to be conducted. To deal with this there should be a budget.

Professional training and experience sharing within NGOs and government organizations must be one of the program activities.

The community should participate in priority set up, intervention, and evaluation.

Give great emphasis to the participation of the community in planning, design, and implementation process of NRM.

USAID has to change its attitude to the use of food aid in other developmental activities rather than forestry which could help food production, e.g., irrigation scheme development and off farming activities.

Training in project design, needs assessment survey, etc. (for NGOs at the field level).

Create conditions for the community to be involved in needs identification and planning.

Enhance technical capacity of NGOs staff through training in: a) problem analysis and design and b) monitoring and evaluation of projects (at the field level).

Emphasis has to be given to planning.

At grass roots level (project site) planning should be started and worked very seriously for the future success of the project.

Training workshops and manuals on acceptable planning approaches are needed.

Organize a workshop on bottom-up approach to planning.

Organize a workshop so as to come out with minimum parameters for planning NRM (planting trees, soil and water conservation, etc.)

### **Socio-Economic/Institutional**

#### **Recommendations:**

Involve NGOs in policy-formulation and define the roles and responsibilities of the NGOs, government, and concerned communities.

Involve NGOs in government policy formulation and define roles and responsibilities of NGOs and the government.

Create a credit system in the community.

Develop or build NGO capacity on extension techniques (rural) in reaching communities.

Make efforts, at all levels, to influence government institutions to change the actual land tenure so as to prevent environmental degradation.

Awareness should be built among communities in NRM.

Maintain the participation of the community in all levels of the development cycle to ensure the sustainability of programs. Examples: in planning, implementation, monitoring, and resource contribution.

Greater emphasis should be given to encourage and strengthen traditional indigenous associations as a prerequisite for the formation of LOCAL NGOs.

Increase the capabilities of NGOs to integrate the different program components of NRM during planning and implementation.

Institutional capacity plays a vital role in a sustainable development program.

Donors should be aware so that they can understand what is going on (i.e. to say). Donor awareness should be increased.

High involvement of the communities in solving their problems.

Allocate more funds for other developmental activities, e.g., credit facilities to earn some income for women, etc.

Give emphasis to other non-agricultural sectors in the economy.

### **Agriculture and Livestock**

#### **Themes/Points:**

- Have to think more about livestock in programs.
- Need for improved agriculture extension services - and fold livestock in.
- Linking of farm income and off-farm income sources.

## **Recommendations:**

**Training (special) for field demonstrators on afforestation, water and soil conservation, vegetable gardening, and so on.**

**Give increased emphasis on livestock sector in design of activities.**

**Intensify agricultural extension system as a whole.**

**Establish sound land use policy and pay due consideration to improve it.**

**I suggest agroforestry to be given a great concern in order to avoid conflicting ideas regarding agricultural and livestock development since it helps us to undertake both in harmony.**

**Integrated approach to rural development including: ag-crop husbandry, livestock, forestry, soil & water conservation.**

**Incorporate the issue of livestock productivity in our NRM programs.**

**Make a pilot project within the farmer's area which is a good example of efficient livestock production.**

**Develop an extension program in order to change the attitude of the community in terms of land use management.**

**Wherever we do our work we first of all have to consider about awareness of our work towards the community.**

**There should be an extension system to use the land use according to its capacity and encourage/initiate to reduce the livestock number.**

**Try to create off-farm employment and job opportunities to avoid dependency on agriculture - wherever there is potential.**

**Increase productivity by providing farmer input instead of food aid and investment on water resource, e.g., using irrigation.**

**A new technology should be applied to increase the productivity of livestock. This should be done with the proper participation of the concerned communities to give due attention to the problem.**

## LIST OF PARTICIPANTS

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3. Ato Dawit Eshetu
4. Ato Gelgelu Sadu
5. Ato Tafesse Yeshitela
6. Ato Tesfaye Shinkur
7. Ato Abdela
8. Ato Kibru Mamusha
9. Ato Binyam Amtataw

### EOC

1. Ato Esubalew W. Selassie
2. Ato Bahru Bedasso
3. Ato Sertsu Tekle Haimanot
4. Ato Tadesse Duga

### FHI

1. Mr. Paul G. Erickson
2. Ato Waka Adugna
3. Ato Daniel Brook
4. Ato Yohannes Belihu
5. Ato Chali Guteta
6. Ato Demis de Lisanework

**REST**

1. Ato Kiflom Belete
2. Ato Tsehaye Gebre Selassie

**SCF/USA**

1. Dr. Fesseha Meketa

**WVRD**

1. Ato Tadesse Eshetu
2. Ato Tsegaye Legesse
3. Ato Tesfaye Bekele
4. Ato Kassahun G. Michael
5. Ato Abebe Haile
6. Ato Biru W. Kidan

**MIN. OF NATURAL RESOURCES DEVT.**

1. Ato Ahmed Hussein
2. Ato Mohammed Abdul Wahab
3. Ato Berehe W. Aregay

**USAID/FHA**

1. Mr. William Helin
2. Mr. Thomas Catterson
3. Mr. Michael T. Harvey
4. Mrs. Ashton Douglass
5. Mrs. Margaret Brown
6. Ato Mamo Mulugeta
7. Ato Getahun Belai
8. Ato Solomon Shiferraw

## **Appendix F**

### **Questionnaire and the Replies Received for NGOs Implementing Food-Assisted Natural Resource Management Projects in Ethiopia**

#### **GROUP 1 Questions**

Project/Activity Title

Name of implementing organization(s)

Counterpart organization(s)

Contact person(s)

Contact address/phone/FAX

What was the origin of the project?

What are the funding sources for the project?

How much food aid is used per year?

How is the food aid used?

In what types of natural resource management interventions has the project worked?

=====

#### **GROUP 2 Questions**

Project Activity/Origin

What role did your organization play?

What other organizations played key roles? What were the roles?

What role did the local community (communities) play?

### **Project Development**

What is the problem(s) that the project is trying to address?

What are the project's goals and objectives

Who determined the problem(s) and goals and objectives, and how were they decided?

How was the project developed and designed?

### **Project Management**

Who manages the project

How are other cooperators involved in the management project?

### **Funding**

How large is the budget?

How much funding do you need per year?

How much comes from monetization of commodities?

### **Food Aid**

Is the food aid well received by the communities?

Type of ration?

Acceptability and timeliness of rations?

Who and how many get rations?

How long has it been given?

When will it be stopped? How will that be done?

If it has already been stopped, why?

How is the food aid managed and by whom?

How are problems with food aid resolved?

### **Project Monitoring and Evaluation**

How is the project monitored and by who?

Has monitoring and evaluation led to changes? If so, how?

### **Project Accomplishments**

Training: What types have been done, for whom, and how much?

What "other" things has the project done and what is planned?

### **Collaboration**

How important has collaboration been?

What role did different organizations play?

### **Satisfaction**

Are you satisfied with the project?

Would you be willing to do it all over again?

How could a higher level of satisfaction be gained?

**Problem Resolution**

What types of disagreements have there been on the project and how have they been resolved?

Do you think there is a better way?

**Sustainability/Replicability**

What is the future of the project? Where is it going

When should it end?

In what ways could this project be sustained? What would be needed?

Are incentives used? What are they? How are they used?

**Lessons Learned**

From your experience, what are the important lessons learned?

Which of these is the one most important thing that you have learned?

If a similar project was being initiated, what words of wisdom could you offer the design team?

What would be your best advice?

## **Appendix G-**

### **Suggested Additional References of Potential Interest to the NGOs and others Carrying Out Food Aid-supported Natural Resources Management Activities in Ethiopia.**

#### **General Reference Materials or Newsletters Worth Acquiring:**

**Forests, Trees and People (FTP) Newsletter-** a quarterly publication distributed to field projects, institutions and individuals interested in and/or working with community forestry activities. The FTP Programme is a network jointly run by the International Rural Development Centre (IRDC) of the Swedish University of Agricultural Sciences and the Community Forestry Unit of the FAO Forestry Department. It is provided free on request to interested parties in the developing world. African institutions and individuals should contact: Kenya Energy and Environment Organizations (KENGO), P.O. Box 48197, Nairobi, Kenya (Tel. 254-2-749747, Fax. 254-2-749382 or Telex 25222 KENGO KE). The FTP also has a recent list of available publications (May 1994) which can be obtained from the same sources and lists a large number of useful and informative publications.

**Rural Development Forestry Network Newsletter-** published twice a year, the topics include: forest policy, extension, local participation in the management of woodlands, farm forestry, nurseries as extension tools, and institutional matters. Membership in the network is free of charge although they ask that members send in occasional reports of their own. A list of available publications is also available. Contact: The RDFN Network Secretary, ODI, Regent's College, Inner Circle, Regent's Park, London NW N, United Kingdom.

**Forestry Support Program Memo -** produced by the Office of International Forestry, USDA Forest Service in Washington, D.C. to provide support to USAID activities in the field of forestry and related areas. The Memo normally contains lots of up-to-date information on the state of the art in international forestry, as well as information on upcoming training courses and the latest in journals and publications. They would probably be willing to provide the memo, published quarterly, to NGOs requesting it. The address is as follows: Forestry Support Program, USDA Forest Service, International Forestry, P.O. Box 96538, Washington, D.C. 20090-6538, USA.

**Agroforestry Today -** published quarterly by the International Centre for Research in Agroforestry (ICRAF) and available free to interested parties in developing countries by writing to ICRAF at: ICRAF House, P.O. Box

the present state-of-the-art with agroforestry, including information on the tree crop, agronomic and soil conservation dimensions of this technological approach to improved rural land-use.

**Nitrogen Fixing Tree Association Network** - This network (soon to be known as the Farm and Community Tree Association) offers technical guidance on tree species and is now being published by the Farm and Community Forestry Program of the Winrock International Institute for Agricultural Development; address: NFTA Network, Winrock International, Rt. 3, Box 376, Morrilton, Arkansas 72110, USA (Tel. 501 727-5435; Fax. 501 727-5417). They have a publications list which offers field manuals (eg. Perennial Sesbania production and use) for certain tree species and the NFTA Highlights, a series of short notes on specific nitrogen fixing species (among the species in this series of interest in Ethiopia: *Acacia saligna*, *Cajanus cajan*, *Casuarina* spp., *Faidherbia albida*, *Juliflorae acacias*, *Leucaena* spp., *Prosopis* spp. and *Sesbania* spp.). There is a fee for participating in the network, currently US\$10/year for developing countries nationals although they may be willing to waive it for interested NGO personnel and others in Ethiopia.

**Vetiver Network** - This network managed and run by Mr. Dick Grimshaw, recently retired World Bank agricultural staff person, provides a wealth of information on the use of Vetiver Grass for soil and water conservation. It may be a species of utility for Ethiopia. To receive the regular free newsletter of the Network, write to Mr. Grimshaw at the following address: Vetiver Network, Rt. 2, Box 60, Lovettsville, Virginia 22080, USA (Tel.- 703 822-9029; Fax. 703 822 9029).

**Arid Lands Information Network** - supported by Oxfam, this network almost exclusively focused on rural development in arid and semi-arid Sub-Saharan Africa also publishes three times yearly its magazine- Baobab. There may already be a group of people in Ethiopia functioning as an ALIN group. Find out more by writing to them at: ALIN, Casier Postal 3, Dakar-Fann, Senegal.

#### Soil Conservation:

**From Soil Conservation to Land Husbandry - Guidelines Based on SIDA's Experience** - by L. Lundgren and G. Taylor 1993. Available from BOK-SIDA, S-105 25 Stockholm, Sweden. The title itself conveys part of the notions contained in this report about the need to move beyond treating the symptoms of land-use problems to a more integrated and land-use management orientation. It is unknown whether there is a

charge for this publication but it is likely that SIDA would be willing to provide it free to NGOs and other developing country based interested individuals. SIDA has a long history of support to community forestry and soil and water conservation in the developing world and it is suggested that when writing for this publication, readers request a list of other related available publications.

**Farming Systems Development and Soil Conservation** - by D.W. Norman and M. Douglas. This is a publication of the Food and Agriculture Organization (FAO) of the United Nations and is available on request from their representative in Addis. It is unknown whether there will be a charge for this document. It should be noted that Malcolm Douglas, one of the authors, is currently working on an FAO assignment in Ethiopia and may be able to assist interested organizations and parties to acquire copies of this interesting and informative document.

**Watershed Management Field Manual: Road Design and Construction in Sensitive Watersheds** - This FAO Conservation Guide No. 13/5 (1989) is available from the FAO Forestry Dept. in Rome or perhaps through the office of the FAO Representative in Addis. It is a fairly technical document meant for road engineers but would be of great utility to those building food aid supported rural roads in Ethiopia which are, in the author's opinion, most useful but in much need of improving water management, drainage and run-off control to enhance their sustainability as contributions to much needed rural infrastructure.

Other publications in this same FAO Conservation Guide Series:

**13/1-FAO Watershed Management Field Manual: Vegetative and Soil Treatment Measures**

**13/2-FAO Watershed Management Field Manual: Gully Control**

**13/3-FAO Watershed Management Field Manual: Slope Treatment Measures and Practices**

**Protect and Produce: Putting the Pieces Together** - An FAO publication highlighting the importance of soil erosion and how to combat it, from both protection and production perspectives. Well illustrated and thought provoking. Available from FAO.

**Soil and Water Conservation in Semi-Arid Areas** - by N.W. Hudson. Another FAO publication and part of the FAO series: FAO Soils Bulletin No. 57. Provides good information of a technical nature to those interested in the difficult

prospect of soil and water conservation in semi-arid areas; a state-of-the-art publication, albeit now somewhat dated (1987). Available from FAO or the FAO Representative.

**A Study of the Reasons for Success or Failure of Soil Conservation Projects** - Another of the FAO Soils Bulletins (No. 64) dated 1991 also authored by N.W. Hudson. Discusses the understanding of setting objectives and evaluation methods during project planning, implementation and post-project. Available as above.

**The Conservation and Rehabilitation of African Lands: an International Scheme** - A thought provoking, well illustrated "idea" publication which takes an integrated viewpoint of conservation of croplands, grazing lands and forests. Prepared by the FAO and available as mentioned above. Publication ARC/90/4- publication order no. Z5700E, 1990.

**New Vegetative Approaches to Soil and Moisture Conservation** - by M. Yudelman, J.C. Greenfield and W.B. Magrath and published by the World Wildlife Fund/The Conservation Foundation, Washington, D.C.

Four publications from the Soil and Water Conservation Society sound as if they would be of interest to colleagues in Ethiopia concerned with soil conservation; they include:

**Working with Farmers for Better Land Husbandry** - by N. Hudson and R.J. Cheatele. A publication based on Africa experience, which according to the catalog is described as follows: "Land degradation is better controlled through improved land husbandry than by engineering-based soil conservation, which only tinkers with the symptoms". 1993. 272 pages. \$25.50/copy.

**Soil Conservation for Survival** - by Kebede Tato and Hans Hurni. These two individuals are as is well known, the gurus of soil conservation in Ethiopia. The book, among other things discusses: "the difficulties of applying conservation techniques, particularly the problems arising from the competing needs for short term gain and long term survival". 1992. 420 pages. \$35/copy.

**Development of Conservation Farming on Hillslopes** - edited by W.C. Moldenhauer, N.W. Hudson, T.C. Sheng and San-Wei Lee. Based on a 1989 conference held in Taiwan. the book discusses the problems of hillside farming, the use and conservation of hillslopes, and the strategies for development of hillslopes. 1991. 332 pages. \$30/copy.

**Land Husbandry: A Framework for Soil and Water Conservation** - by T.F. Shaxson, N.W. Hudson, D.W. Sanders, E. Roose and

W.C. Moldenhauer. "Participation by the people is paramount, and better land management must be a bottom-up or grass-roots movement." 1989. 64 pages. \$12/copy.

All four of the above are available from the Soil and Water Conservation Society, 7515 Northeast Ankeny Road, Ankeny, Iowa 50021-9764. Tel. (515) 289-2331, Fax. (515) 289-1227.

Forestry Development:

**Neem: A Tree for Solving Global Problems** - An up-to-date treatise on this species of wide international importance. Note that the author observed that many of the trees planted in Ethiopia and called Neem were in fact Persian Lilac, a closely related species (*Melia azedarach*) which may be distinguished by its lilac like light purple flowers as opposed to the small white flowers of the Neem tree (*Azadirachta indica*). The publication should be available from the U.S. National Academy of Sciences, 2101 Constitution Avenue, N.W., Washington, D.C. 20418; request Neem Report FO 2060V, asking further that they send a free copy to the interested parties working with USAID/Ethiopia.

Other similar titles available from the same source:

**Casuarinas: Nitrogen-fixing Trees for Adverse Sites.** BOSTID 1984.

**Leucaena: Promising Forage and Tree Crop for the Humid Tropics.** BOSTID 1977.

**Calliandra: A Versatile Small Tree for the Humid Tropics.** BOSTID 1983.

**Vetiver Grass: A Thin Green Line Against Erosion.** BOSTID 1993.

**Community Forestry Publications** - The 1994 list of community forestry related publications available from the FAO Forestry Department, Forestry Policy and Planning Division, Viale delle Terme di Caracalla, Rome 00100, Italy (Tel. 39 6 52253256; Fax. 39 6 52255514). Those writing or sending a fax to obtain this list should also ask the procedure for acquiring the publications it mentions and explaining that they work for an NGO in Ethiopia. The list and the publications may be available through the FAO Representative in Addis.

**Casuarina equisetifolia** - by J. Parrotta 1993. A new publication on the silvics of this species often employed, and by this author's reckoning off-site, in Ethiopia may be useful and informative. Request it from the Inst. of

Tropical For., Call Box 25000, Rio Piedras, Puerto Rico  
00928-2500

**Useful Trees and Shrubs for Ethiopia - Identification, Propagation and Management for Agricultural and Pastoral Communities** - by Azene Bekele-tesemma with Ann Birnie and Bo Tengnas 1993. Published by SIDA's Regional Soil Conservation Unit in Nairobi, Kenya. Suggest contact the development attached or the SIDA representative at the Swedish Embassy in Addis for a copy.

Participation and Institutional Issues:

PACT - An excellent source of publications on issues of concern to NGOs, PACT (Private Agencies Collaborating Together) acts as a clearinghouse for materials related to participation and institution-building, at both the grass-roots level as well as concerns the NGOs themselves. Contact them at: PACT, 777 United Nations Plaza, New York, N.Y. 10017 or Tel. (212) 697-6222; Fax. (212) 692-9748.