MID-TERM EVALUATION

OF THE

CARE

DEVELOPMENT THROUGH CONSERVATION (DTC) PROJECT

(Grant Number 617-0124-G-00-91-01-00)

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LIST OF ABBREVIATIONS AND ACRONYMS

AID	Agency for International Development (AID/Washington)
ARENA	Agro-Forestry Research Networks for Africa
ANR	Agriculture and Natural Resources
APE	Action Plan for the Environment
API	Assessment of Program Impact
BINP	Bwindi Impenetrable National Park
CEA	Conservation Extension Agents
CIAT	International Bean Research Institute
CIP	International Potato Institute
DA	District Administrator
DAO	District Agriculture Officer
DES	District Executive Secretary
DFO	District Forestry Officer
DTB	German Animal Protection Society
DTC	Development Through Conservation Project
EEC	Commission of the European Communities
FD	Forest Department
FFPS	Fauna and Flora Preservation Society
GEF	Global Environment Facility
GMU	Grant Management Unit (of USAID)
GOU	Government of Uganda (or Government of Uganda field staff)
ICDP	Integrated Conservation and Development Program
ICRAF	International Council for Research in Agro-Forestry
IFCP	Impenetrable Forest Conservation Project
IGCP	International Gorilla Conservation Project
ITFC	Institute of Tropical Forest Conservation
LCSC	Local Community Steering Committee (GEF Trust)
LOP	Life of Project
LRU	Local Resource Users
MBIFCT	Mgahinga and Bwindi Impenetrable Forest Conservation Trust (GEF-funded)
MBO	Management by Objectives
M&E	Monitoring and Evaluation
MEP	Ministry of Environmental Protection
MFEP	Ministry of Finance and Economic Planning
MGNP	Mgahinga Gorilla National Park
MISR	Makerere Institute of Social Research
MTWA	Ministry of Tourism, Wildlife and Antiquities
MUIENR	Makerere University Institute of Environment and Natural Resources
NEAP	National Environmental Action Plan
NEIC	National Environmental Information Centre
NGO	Non-Governmental Organization
NPA	Non-Project Assistance
PIR	Project Implementation Reports (CARE)
PMAC	Park Management Advisory Committee

PVO	Private Voluntary Organization
PRA	Participatory Rural Appraisal
RC	Resistance Committee
RDD	Rural Development Department
TAU	Trust Administration Unit (MBIFCT/GEF)
UNDP	United Nations Development Programme
UNFA	Uganda National Farmers Association
UNP	Uganda National Parks
USAID	United States Agency for International Development
UTGC	Uganda Tea Growers Corporation
WWF	World Wide Fund For Nature/World Wildlife Fund

1.0 Executive Summary

The CARE Development Through Conservation (DTC) Project is now in Year Three of its second phase of implementation. Phase I was implemented by CARE under a sub-contract with the World Wildlife Fund's (WWF) Impenetrable Forest Conservation Project (IFCP) funded under an AID/Washington "biodiversity" grant. Phase II of DTC has been funded by USAID/Uganda.

The "final goal" (goal) of the DTC Project is "to contribute to the conservation of Bwindi and Mgahinga Forests and to improve the natural resource based economic security of 9,600 farm families in the surrounding farmland by 1996." The "intermediate goals" (objectives) of the Project are to:

- Work with the Government of Uganda (GOU) to carry out coordinated resource planning around Bwindi and Mgahinga.
- Assist the GOU to implement natural resource conservation around Bwindi and Mgahinga.
- Help 9,600 farm families around Mgahinga and Bwindi change conservation attitudes regarding farms and forests.
- Help farmers and the GOU to increase sustainable production of goods and services from forests and farmland.

The underlying premise of the Project "is that forests and farmers can exist side by side if the causes of declining farm productivity are addressed and forests are brought under sustainable management."[1]

The most important element in Project implementation has been the complex task of trying to integrate protected area conservation with community development, as enshrined in both the Project's problem statement (and underlying premise) and in its goals. Phase II of the Project, as well as the first phase, was viewed by Project designers as an innovative attempt, a set of pilot activities, designed to address these issues.

Project implementation has been complicated by the difficult geographic setting around the two forests (now gazetted as "national parks"), by the diverse farming systems in the area, by the heterogenous population in the area, by the numerous interested parties and players in protected area conservation, by the civil strife in neighboring Rwanda, and by an ever-changing set of institutions and agencies with which the Project works. The Project's counterpart agencies have changed over the past two years at both a national and a local level. Project implementation has been further complicated by numerous changes in CARE/DTC management over the past three years.

Other factors have played a prominent role affecting Project implementation. These include the GOU's moves towards decentralized planning and development, the creation of the Global Environment Facility's "Mgahinga

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[1]. DTC "Project Paper", p. 14.

and Bwindi Impenetrable Forest Conservation Trust" (MBIFCT), the onset of tourism (with its potential for local revenue-generation), and the evolution of the concept of park "multiple use", among others.

The Project stands at a critical juncture in its implementation cycle. Project management has been markedly strengthened and improved over the past year. Project relations with counterpart agencies, especially at a local level, have also improved considerably over the past year. The Project has evolved from essentially a conservation education project, focusing on sensitizing park neighbors to the importance of the two parks (during its first phase), to a community development project with a primary focus on improving on-farm agriculture, soil conservation and agro-forestry.

The Project is now a hybrid "integrated conservation and development" project which is working to help communities develop, to assist the Uganda National Parks (UNP), communities and other agencies to develop sound park management plans, and to enable communities to realize more benefits from the two parks than they have been able to realize since the parks' creation.

The present situation provides both opportunities and risks for CARE/DTC. The most important opportunity is that the Project can actually facilitate development through conservation by providing a crucial, meaningful interface between the two parks and the surrounding communities. The most important risk facing the Project rests with the possibility that park management may not evolve with a strong enough community focus. This runs the very real risk of jeopardizing DTC's efforts to demonstrate tangible benefits to local communities from the parks in such fields as multiple use of forest products, and benefits from tourism and GEF Trust revenues. Insufficient community support also risks identifying DTC with the less "friendly" aspects of park management, particularly with enforcement.

The Evaluation Team believes that DTC's community development package (outside the parks) is essentially sound and that, with improvements, it will meet the project's development goals. The Team's major recommendations for improving DTC's out-of-park development activities are to adapt extension and training messages more to the prevailing diverse environment found around the two parks. That is, extension and training should be more adaptive and needs-driven. The Project is already moving in these directions, and DTC should be encouraged to develop a more needs-driven approach.

The Evaluation Team also believes that DTC has gone far towards meeting the conservation objectives set out in the Project Paper, particularly with regard to research, educating communities on the value of the parks, and setting the stage for communities to participate in sharing "benefits" from the parks (particularly multiple-use). Improvements can be made, but not without concomitant improvements in park management, and improvements in park relations and interactions with surrounding communities.

The major challenge faced by the Project is that messages from the Mgahinga and Bwindi protected areas have changed twice in as many years. The status of these two protected areas, and people's access to them, has changed from that of "forest reserves", in which extractive utilization was permitted (and in which most members of the communities around the two areas participated in some form of forest product extraction) to complete alienation from the two areas following gazettement of the Mgahinga Gorilla National Park and the Bwindi Impenetrable National Park.

In the present case (as national parks), communities are completely excluded from extractive use of park resources. DTC is pioneering, with UNP and other key players, organizing communities to extract a limited amount of products from Bwindi Impenetrable National Park (BINP). This is viewed by communities very positively; many members consider DTC their entry point back into the parks. Should DTC not be able to deliver on such expectations (or not manage them effectively), DTC could lose credibility with communities and other parties (eg, UNP).

In contrast to the positive opportunities at BINP, the case of Mgahinga Gorilla National Park vividly demonstrates the danger in a multiple use approach for DTC if park management will not accept and accommodate such an approach. In the case of Mgahinga, families have been relocated from the park, people have been denied access to the park and especially its essential water resources, and park-community relations have suffered accordingly. UNP staff working with DTC have been harassed by an increasingly alienated community, and DTC's very credibility as an "advocate" for people's development is being called into question by community members. If this process continues, DTC will either have to cease its community work around Mgahinga, or it will further lose the credibility and capability necessary to meet Project objectives.

Mgahinga provides an important lesson to DTC (and other conservation development projects) insofar as it demonstrates that no matter how well a project can work to address the development needs of a community around (outside) a protected area, these efforts will be thwarted unless park management is improved and park managers become partners in the communities' development. There is real potential that, unless park management is supported and strengthened in this vein at BINP, DTC will lose credibility and leverage with the communities it has worked so hard to assist over the past six years.

1.1 Summary of Recommendations

The above issues are explored further in this Evaluation Report. However, the Evaluation Team's primary recommendations can be summarized as follows:

- Development (out-of-park) activities should be more needs- and demand-driven, reflecting the diversity of the area and peoples around the parks. Development support needs to evolve and adapt to these needs, and results need to be monitored continuously to provide DTC staff and communities with true indicators of progress.

- DTC must work closely with MGNP and BINP park management to strengthen community-park interfaces, to enable people to realize more tangible benefits from the parks, to resolve conflicts in a non-confrontational and constructive manner, and to develop a true partnership between the parks and surrounding communities. The DTC Project should provide direct technical, logistical and other assistance to the UNP to improve management capabilities (in the broadest sense) and to strengthen park-people relations. The Team views this as an urgent priority.

The Evaluation Team believes DTC has the skills, the goodwill, the initiative and the framework to achieve the above results. The Team's recommendations are intended to provide DTC, USAID, the GOU and other

interested parties with a framework to move further in these directions. In brief, the Evaluation Team views DTC's progress to date as positive, but believes it can be improved. Continuity in management, a clearer vision of the Project's objectives (outputs and inputs required), more support for UNP park management, and improved monitoring and evaluation of Project interventions will, in the Team's view, lead to much wider and more positive Project impact.

The Team believes the remaining two and a half years provide DTC with the opportunity to "fine tune" its approaches, to experiment further with new approaches, and to test the assumptions set out in the Project Paper. This process should be iterative and should be closely monitored and, where proven useful, implemented. The Team views the Project, and the activities it is pioneering, as a long-term effort.

If DTC is able to develop a more adaptive, needs-driven approach to its development and conservation programs, then, the Evaluation Team strongly recommends CARE, USAID and the GOU consider designing a third phase of the Project. This implies that the Project's progress be carefully examined and reviewed by the end of the fourth year of the current Project with an eye towards recommending whether or not to extend the Project. If it is recommended at that stage to proceed with a third phase, then, design of Phase III should be undertaken.

2.0 Evaluation Methodology

A six person team carried out the "mid-term evaluation" of Phase II of the Development Through Conservation (DTC) Project between the 13th and the 30th of July 1993. The Evaluation broadly followed the Terms of Reference presented to the Team by CARE/Uganda and USAID/Kampala (Annex 1). The Evaluation Team was comprised of Mike Bess (Team Leader and Community Conservation Advisor), Joy Tukahirwa (Community Development Specialist), Peter Trenchard (Conservation Management Specialist), David Hughes (Agronomist), J. R. Kamugisha (Forestry and Rural Development Specialist), and Richard Pellek (Agro-forester and Soil Conservation Specialist).

The Evaluation Team met with key individuals at a national and local level (Annex 2). Numerous interviews were conducted with CARE/DTC field staff, with farmers, with other GOU extensionists, with District authorities and with other individuals. Extensive discussions were also carried out with USAID/Kampala and CARE/Uganda. DTC's wide documentation and materials from other key agencies and individuals were widely utilized by the Team (Annex 3).

Most field interviews followed the format set out in Annex 4. In addition, the Evaluation Team was fortunate to be able to work with, and draw upon, the work of two external reviewers who were contracted by DTC to carry out independent "focus group" interviews in fourteen communities around MGNP and BINP.[2] Members of the Evaluation Team were able to spend several days with these reviewers during their field interviews, and to benefit from their analyses and recommendations.

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[2]. Ms Apophia Atukunda and Ms Olive Kyampire.

CARE/DTC staff, USAID/Kampala personnel and many other individuals and agencies provided the Evaluation Team with both logistical support, and with invaluable guidance and assistance during the course of the Evaluation. The Team is very grateful for all the assistance and time provided by the many parties concerned with DTC Project implementation.

3.0 Recommendations

A number of recommendations are contained in this Evaluation Report. The following sets out the key recommendations in major categories. Section 3.1 briefly summarizes the recommendations, while Section 3.2 repeats the recommendations with full explanation. The context and rationale behind the recommendations are found in subsequent sections of the Report.

3.1 Summary of Recommendations

3.1.1 General Recommendations

- Establish Coordination Committee: Establish a Project Coordination Committee, comprised of key players, including GOU agencies, to meet regularly to discuss project issues.

- Resolve MGNP-People Conflicts: USAID/Kampala and concerned GOU agencies should carefully examine the current park-community situation in and around Mgahinga Gorilla National Park and devise a plan of action to resolve those conflicts.

- Assess Impact of Relocation: An assessment of the impact on approximately 200 families recently relocated from MGNP by GOU should be undertaken, and a plan of action (if necessary) devised.

- Batwa Around MGNP and BINP: The condition of the Batwa people around Mgahinga and Bwindi should be examined as soon as possible; immediate humanitarian needs should be addressed and long-term solutions sought.

- Revise DTC's Operational Plan: Key players, including relevant GOU agencies, should review the recommendations in this Evaluation Report and determine the optimal strategy for implementing the remainder of the Project. The Project's objectives should be reexamined to determine the inputs necessary to achieve the desired outputs.

- Tailor Project Activities to Community Needs: Extension, training, and other components of Project implementation should be tailored more to the specific needs (as well as agro-ecological, environmental, ethnic, etc. contexts) of the communities in which DTC is operating.

3.1.2 Specific Recommendations: Park Conservation and Management

- Participatory Park Management: DTC should continue to take a leading role to encourage participatory park management.

- Strengthen BINP Management: The DTC Project should work closely with the BINP management to support and help improve overall park management and set up a working community conservation program.

- DTC Support to Mgahinga Park Management: DTC should take a more pro-active approach vis-a-vis park management in Mgahinga (including liaising with UNP Headquarters in Kampala, USAID, district officials, etc).

- Dissemination of Research: DTC should use the proposed "Project Coordination Committee" to present reports, evaluations, and proposed activities to all GOU parties concerned with the Project.

- Technical Advisor: DTC should hire a park manager to act as technical advisor to the Warden-in-Charge at BINP (see 3.1.2, Section 5, and Annex 5).

- Park Research Plan: DTC should assist UNP, in coordination with ITFC and IGCP, in developing a comprehensive research plan that addresses park management needs at BINP.

- Reduce Other Protected Areas Support: The Evaluation Team recommends that DTC should not continue with plans for active management of Echuya Forest Reserve.

3.1.3 Specific Recommendations: Women in Development

- CEA Gender Sensitization: CEAs should be trained and educated in the importance of women in the rural economy.

- Hire More Women Extension Agents: DTC should try, where possible, to recruit more women as CEAs and other Project extensionists.

- Attention to Impact on Women: DTC interventions, to the extent possible, should ameliorate labor requirements for women and should improve their positions regarding the household economy.

- Encourage and Work with Women's Groups: The Project should take advantage of the relatively high level of group mobilization of women in the Project area.

- Household Energy: DTC should continue its current pilot efforts in household energy management and conservation.

- Attention to Indigenous Knowledge and Practices: The Project should incorporate women's existing knowledge of indigenous agricultural practices into extension, so as to make extension and training more relevant and acceptable to women.

3.1.4 Specific Recommendations: Training

- Training Officer for RDD: DTC should employ a training officer in the Rural Development Department

(RDD).

- More Focus on Local Training: DTC should undertake community training in local centers, making training more accessible to target groups.

- Expand Use of PRA: DTC should ensure that trainers are trained in and familiar with participatory rural appraisal (PRA) techniques. These techniques should be employed on a pilot basis, especially in the Project's extension program.

- Continue the Newsletter: The DTC Project "Newsletter" is a valuable extension tool; it should be continued and expanded.

- Test and Refine Various Extension Tools: The Project should continue testing and refining extension tools, and attempt more adaptive approaches on a pilot basis in different zones.

3.1.5 Specific Recommendations: Extension

- Improve Operational Procedures and Reporting: Reporting lines should be changed; reporting and supervision should be undertaken by DTC Field Officers.

- Create Development Manager Position: The project should recruit a "Rural Development Manager" to coordinate all development activities outside the parks.

- Redeploy GOU Officers: GOU officers should be redeployed as "consultants" to the Project rather than Project "line Personnel. They should be enlisted by the Project on a pilot basis to assist with more needs-driven interventions.

- Conduct Needs Assessments: Utilizing PRA methods, a needs assessment should be undertaken to determine community priorities.

- Field Evaluation and Feedback: Using a simple, clearly-understood framework, farmers should be encouraged to evaluate Project-promoted interventions and recommend improvements.

- Central Nurseries: More central nurseries should be established on a trial basis.

- Study Traditional Soil Conservation Methods: More careful study should be undertaken of traditional soil conservation and soil fertility improvement methods.

- Adaptive Interventions: The Evaluation Team believes that several interventions show promise and should be promoted on the basis of the participatory, needs-driven approach set out in this report. These should include:

    - Improving production of major agricultural crops
    - Improving soil fertility

- Improving vegetable production
- Promoting indigenous trees on-farm
- Promoting bamboo on-farm
- Promoting improved household energy management

3.1.6 Specific Recommendations: Monitoring and Evaluation (M&E)

- Enhance Monitoring and Evaluation: M&E need to be strengthened and broadened to provide DTC management with feedback and indicators regarding Project effectiveness. M&E should cover all major aspects of the Project, including extension, education, training, multiple use, and resource management, among others.

- Incorporate M&E in CARE PIRs: CARE Project Implementation Reports (PIRs) should incorporate the monitoring and evaluation information developed for each Project component.

- Follow USAID Guidelines on M&E: DTC should assist USAID in developing Monitoring and Evaluation guidelines and, once established, follow them. In addition, DTC should engage in dialogue with USAID regarding USAID expectations in M&E and Assessment of Program Impact (API) reporting.

- Review Soil Conservation Approaches: There should be a detailed review of the soil conservation approaches which are promoted through the Education Center and extended through CEAs and the Extension Division.

- Gender: Future reporting of project activities and accomplishments should include disaggregation of data by gender where appropriate.

3.2 Expanded Recommendations and Conclusions

3.2.1 General Recommendations

3.2.1.1 Project Coordination Committee

A Project "coordination committee" should be set up in Kampala where CARE/Uganda, USAID/Kampala, and key Government of Uganda (GOU) representatives, including the Ministry of Planning and Economic Development, the Uganda National Parks, the Forest Department and the Ministry of Environment should meet regularly to discuss Project progress and key issues arising in the course of Project implementation. This coordination committee should meet on a six-monthly (biannual) basis. Relevant reports (e.g., progress reports, management plans, research reports) should be made available to all members prior to these meetings. Project progress, implementation issues, and coordination with various agencies should be major items on the agenda.

3.2.1.2 Resolve MGNP-People Conflicts

USAID/Kampala and concerned GOU agencies should carefully examine the current park-community situation in and around Mgahinga Gorilla National Park. Tensions around MGNP are very high at present due to relocation of households from the Park (and compensation paid to households who relocated from MGNP), and MGNP management's approach to community relations (including severely limiting people's access to water resources in the area vacated). USAID assisted the GOU to relocate over 200 families from MGNP. **It is very important for USAID to follow-up on this exercise to determine its impact.** Park relations have major implications not only on DTC but also on USAID's and other donors' credibility in MGNP and other protected areas receiving donor support.

3.2.1.3 Batwa Around MGNP and BINP

The Batwa around Mgahinga Gorilla National Park and Bwindi Impenetrable National Park have been marginalized over the years by the alienation of their principle economic resource (the forest). Their plight today, if only for humanitarian reasons, is serious as they are generally landless. Lacking access to forest resources, and having few, if any, means for agricultural production, the Batwa around these two parks are suffering from a number of problems. In the past, local landowners would allow the essentially nomadic Batwa to reside temporarily (generally for several months) before the Batwa then moved on through the forest. The Batwa are now excluded from the forest (the parks) and neighboring people have expelled many Batwa from their lands.

The Evaluation Team understands that USAID has earmarked funds under the Action Plan for the Environment (APE) Project for studying the Batwa situation in Uganda. The Team recommends that the condition of the Batwa around Mgahinga and Bwindi be examined as soon as possible with an eye toward addressing their immediate humanitarian needs, and with the further objective of determining what, if anything, can be done in the longer term to enable the Batwa to benefit from the two parks.

to monitor more closely park-people interactions, and to help the BINP develop a unified management program which is consistent with its community message.

This is important because of the rapid evolution of community conservation in the Park (and the need for Park management to be able to deal with these issues), and the fact that, at present, no other agency is in a position to provide this support. Such support should include logistical and technical assistance, and support to UNP staff working in the Park.

3.2.2.3 DTC Support to Mgahinga Park Management

DTC should take a more pro-active approach vis-a-vis park management in Mgahinga (including liaising with UNP Headquarters in Kampala, USAID, district officials, etc). Issues such as fencing and access to water have created antagonistic relations between Park management and surrounding communities. Rather than withdraw from MGNP because of these problems, DTC, in conjunction with UNP, USAID and others, should assist Park management in developing a more participatory approach. Only through improved people-Park relations will the conservation message of the Project be realized.

3.2.2.4 Dissemination of Research

The DTC Project has carried out some excellent work on such issues as ethnobotany and multiple use of park resources. The Team recommends that DTC use the proposed "Project Coordination Committee" to present these reports to all GOU parties concerned with the Project. Moreover, many other groups are interested in DTC's applied research. This material, and future work, should be disseminated to as wide an audience as possible.

3.2.2.5 Technical Advisor

DTC should hire a park manager to act as technical advisor to the Warden-in-Charge at BINP (see Section 5 and Annex 5). The Technical Advisor should assist park management to adopt an adaptive management approach to test various hypotheses, particular with regard to multiple use, community conservation education, and other benefit-sharing (e.g., tourism revenues, GEF Trust). The Technical Advisor should also assist the UNP to establish a unified park management structure in Bwindi.

3.2.2.6 Park Research Plan

DTC should assist UNP, in coordination with ITFC and IGCP, to develop a comprehensive research plan that addresses park management needs at BINP.

3.2.2.7 Reduce Other Protected Areas Support

The Evaluation Team recommends that DTC should <u>not</u> continue with plans for active management of Echuya Forest Reserve, but should continue to concentrate on Bwindi and Mgahinga. However, DTC should play an informal role in promoting sound resource management in areas such as Echuya and Mfuga Forest Reserves. That is, the Project should help local government and other GOU agencies wherever possible, and without

detracting from the essential focus on Bwindi and Mgahinga, in the field of improved management in these other protected areas.

3.2.3 Specific Recommendations: Women in Development

3.2.3.1 CEA Gender Sensitization

CEAs should be trained and educated in the importance of women in the rural economy. They should also be encouraged to develop site-specific responses which improve womens' economic and social status, rather than add to their workload.

3.2.3.2 Hire More Women Extension Agents

DTC should try, where possible, to recruit more women as CEAs and other extensionists. At a minimum, there should be more training of CEAs on womens' issues and means to enlist their support.

3.2.3.3 Attention to Impact on Women

DTC Project personnel should pay close attention to the potential impact of any Project-promoted intervention which could affect women. To the extent possible, interventions should ameliorate labor requirements for women and should improve their positions regarding the household economy.

3.2.3.4 Encourage and Work with Women's Groups

The Project should take advantage of the relatively high level of mobilization of women in the area. It should promote activities which groups can undertake. It should use groups more as mechanisms for extending Project messages, including conservation (soil, energy, etc.). Not only should the Project work more with groups, but it should also assist them in such areas as management. The role of CEAs as "facilitators" should be improved, particularly in light of revenue-sharing and the GEF Trust whereby groups will have access to funds for development.

3.2.3.5 Household Energy

DTC should continue its current pilot efforts in household energy management and conservation. This is an area of particular relevance to DTC and is one that is natural in DTC's conservation and development approach. DTC should do more testing of the modified three-stone fire technology before extending it as a proven technology. In particular, there should be some recommended mixture of clay and sand to prevent cracking.

3.2.3.6 Attention to Indigenous Knowledge and Practices

Many women in the area continue to practice indigenous agricultural activities, ranging from crops to soil conservation. The Project should examine these areas more closely so as to incorporate existing knowledge into extension, and to make extension and training more relevant and acceptable to women.

3.2.4 Specific Recommendations: Training

3.2.4.1 Training Officer for RDD

DTC should employ a training officer in the Rural Development Department. This will be crucial to Project success, given the importance of training in the Project, and given the increased emphasis the Evaluation Team suggests be placed on decentralized training.

3.2.4.2 More Focus on Local Training

DTC should undertake community training in local centers, making training more accessible to target groups (especially women) than is possible under the current, more centralized training approach. This implies less emphasis on resident training at Ikumba and Ruhija, and more training through centers (e.g., churches, schools, sub-county offices, etc.) in more dispersed areas.

3.2.4.3 Expand Use of PRA

It is recommended that within 12 months, a pilot Participatory Rural Appraisal (PRA) intervention be established in six parishes (one in each zone) in the Project area. These methods should be introduced and tested in the Project's extension program. If the approaches prove successful, then PRA can and should be expanded to cover all Project extension activities.

The DTC Project should ensure that trainers are trained in, and are fully familiar with, (PRA) techniques. This reinforces the Evaluation Team's findings, and those expressed by DTC management and field personnel, that Project field staff need to work more closely with communities to help the communities define their own needs and their own solutions to those needs.

PRA could be used to design, initiate and test new extension approaches, as well as to carry out needs assessments. Helping communities to prioritize their needs is essential in an area as complex as that covered by DTC. In addition, helping communities address those needs is essential to guarantee both Project success as well as improving communities' socio-economic well-being. As with adaptive extension techniques, the Evaluation Team recommend this be tried on a pilot basis (e.g., starting in pilot areas, with key CEAs in, say, one parish in each of the Project's six zones) to test the approach and gauge its impact.

The Evaluation Team cautions against wholesale adoption of PRA (and other adaptive extension techniques) because such a change in approach (on a large-scale) runs the risk of sending conflicting messages to extensionists and to communities. Again, the Evaluation Team stresses DTC's pilot and experimental nature as an integrated conservation development project, and encourages Project management to continue to innovate and adopt innovations into the overall approach, if these prove successful.

3.2.4.4 Continue the Newsletter

It is recommended that the DTC Project 'Newsletter" should be continued. This is a useful extension tool

which can have even more impact than at present if it incorporates information about all major components of the Project (including training, conservation/park management, and conservation education) as well as extension.

3.2.4.5 Testing and Refining Various Extension Tools

The Project should continue testing and refining extension tools. Given the variety of farming systems found in the area, the varied agro-ecological zones, and the heterogenous nature of communities around the two parks, an "adaptive" extension approach should be adopted. Closer examination of possibilities to work with established groups (e.g., churches, womens' groups, farmers associations, other groups) should be undertaken in this adaptive approach.

The Evaluation Team recommends that attempting more adaptive extension approaches should be tried on a pilot basis in different zones (e.g., perhaps one revised extension package in one parish of each of the Project's six zones) to test the effectiveness of adaptive extension. This will require examining the "Baseline Survey", Project experience to date, other available information, and developing simple information bases in each area by which to measure progress.

3.2.5 Specific Recommendations: Extension

3.2.5.1 Improve Operational Procedures and Reporting

There should be changes in the reporting lines for Project extension staff. It is recommended that both reporting and supervision be undertaken by the DTC Field Officers. In addition, support and supervision system for CEAs be altered and that the extension component of the Project be strengthened.

CEAs currently report to the Field Officers, but are supervised by GOU staff. There is no direct reporting line between the GOU agent and the Field Officers, who currently indirectly administer up to 13 CEAs.

To streamline reporting and to increase accountability, it is suggested that the Project employ one Field Officer for each zone and that these field officers directly supervise the CEAs. It is accepted that these staff positions would continue to require technical assistance and that this would continue to be provided by the GOU. However, it is recommended that these GOU staff be consulted as needed and that allowances be paid based on their performance. For example, the Project Field Officers could hold bimonthly or quarterly meetings at a sub-county level with relevant GOU personnel (agriculture, forestry, education, health) and CEAs from the relevant parishes. The technical assistance requirements for the next period could be planned and agreed upon, and GOUs employed and supported as "consultants" to fit the plan.

Such an approach provides the opportunity for the Project to broaden the technical base of GOU contacts to provide quality technical assistance to the Project on an as-needed basis. It also should ensure greater accountability. Moreover, this could fit well with, and even support, Government's movements towards decentralized planning.

However, the Evaluation Team realizes that this approach represents a major departure from previous Project

extension methods. It is untested, and it could prove unwieldy and difficult to monitor. Moreover, it does not fit with traditional patterns for linking with Government field staff. Therefore, the Team suggests that a pilot program using this proposed methodology be tried and evaluated in several parishes (perhaps one in each of the Project's six zones). If successful, this approach could be broadened to other parts of the Project area.

In practice, the Field Officers would report to a Field Coordinator who would become part of a development group headed by a newly-created position termed "Development Manager". Within this group, but supporting the initiatives of the extension agents, would be the agronomist (who would additionally have responsibility for PRA and aspects of Project monitoring), a Training Coordinator (with responsibility for development of extension messages and the newsletter), and a Womens Group Development Coordinator (with responsibility for rural energy).

There will be greater coordination of training and extension functions, with the training department having specific responsibility for developing training modules for CEAs. This will be an additional task to their ongoing operation of the training center at Ikumba.

As interventions are developed, a monitoring and evaluation system, to monitor the effect and impact of an intervention, should be established. The Development Manager would work with each of the Coordinators to set out a simple framework for primary information needs for monitoring and evaluation. Field Officers would also be involved in setting this framework. Then, CEAs would have the primary responsibility for collecting most of the basic data, although they would be supported as needed by the Monitoring and Evaluation team. Information collected would provide the Project with a good gauge of the Project's impact, and would be easily updated and analyzed.

3.2.5.2 Create Rural Development Manager Position

The Project should recruit a "Rural Development Manager" to coordinate all development activities outside the parks.

3.2.5.3 Redeploy GOU Officers

The GOU staff should be redeployed as "consultants" to the Project, rather than Project "line" personnel. GOU officers should be enlisted by the Project, when necessary, to assist with implementation and more needs-driven interventions.

Project Field Officers, GOU officers at a District and County level (perhaps even at a Sub-County level), and CEAs should sit together periodically (e.g , every two months or every quarter) to work out the requirements for GOU input in Project implementation.

This would enable the Project to enlist GOU support on a more discrete, demand-driven basis. It would move the Project away from the present situation in which specialized GOU officers (e.g., forestry) are overseeing DTC field staff in areas outside their specialty (e.g., agriculture). It would also support the GOU's moves towards decentralized local planning.

However, the Evaluation Team recommends this be tried on a pilot basis in, say, two of the Project's six zones to determine whether or not the concept is workable, whether or not it fits in with GOU requirements, personnel and other resource availability, and whether or not it responds to local (especially CEA) needs.

3.2.5.4 Conduct Needs Assessments

Utilizing PRA methods, Needs Assessments should be undertaken to determine community priorities. Based on the results, Project implementation should be tailored more to the specific needs (as well as agro-ecological, environmental, cultural, etc) of the communities in which DTC is operating.

One of the consequences of this more needs-oriented approach is that communities may identify needs as higher priority than those currently within the Project's mandate (eg, roads, education, health). The implications of adopting this approach may lead the Project to liaise more closely with other agencies involved in these fields, or programs which will be able to address these needs.

3.2.5.5 Field Evaluation and Feedback

Farmers should be encouraged to evaluate Project-promoted interventions and recommend how these might be improved. This type of approach will result in Project-supported activities which are more relevant to farmers, and will result in more sustainability than interventions designed for a wider, generalized audience. The Evaluation Team believes that most of the elements necessary to carry out such evaluation, monitoring and feedback are presently available within the Project. Project personnel are aware of the need for, and in most instances, capable of incorporating feedback into their extension. The Evaluation Team believes that the major task facing DTC is primarily to incorporate this within a simple, clearly-understood framework.

3.2.5.6 Central Nurseries

The Evaluation Team recommends that more central nurseries should be established. This is not, however, a recommendation for developing large-scale traditional nurseries (i.e., with large personnel and other input requirements). Rather, it is suggested that the Project develop more medium-sized nurseries, particularly with groups (in line with the recommendations for decentralized training) or individuals that will provide better demonstration of agro-forestry techniques, a wider variety of seedlings for outplanting to neighboring farmers and groups, and a wider variety of indigenous trees.

The emphasis on individual CEA nurseries should be reduced (again, without sending conflicting messages to CEAs). As with other recommendations set out in this Evaluation Report, these should be established on a pilot, trial basis. A wider variety of tree species should be available at these central nurseries than are currently found in individual nurseries, with more emphasis on promoting indigenous trees. Central nurseries can, and perhaps should, be set up during this pilot phase in conjunction with decentralized training centers.

As part of the needs assessment, wood demand should be further identified. Out-of-forest wood substitution is one of the Project's objectives. Therefore, the Project should encourage the development of group or parish nurseries in areas with wood deficits. This could be tried on a pilot basis in, say, each of the six Project zones, perhaps in line with decentralized training areas.

The Evaluation Team does not recommend the establishment of expensive, large nurseries. Rather, the Team recommends that more centralized nurseries, with wider varieties of trees to meet a wider range of demand, be encouraged in the Project area. Sites for these nurseries and their management structures should be determined in consultation with communities and groups. The Project should advise on technical details relating to site selection.

Nurseries should generally be established by group initiative, although individual larger-scale nurseries should also be encouraged. The Project should provide initial material and technical support, but it should also encourage nurseries as income-generating activities. Trees can be sold to other members of the parish (as is the case with some Church of Uganda nurseries in the Project area).

While it is accepted that some people may not be able to afford to buy trees, there are already many group nurseries selling seedlings (again, some Church of Uganda-supported groups). Free distribution from Project nurseries would undermine these existing activities. Therefore, Project-supported nurseries should take these features into account and not undercut other forestry activities.

3.2.5.7 Study of Traditional Soil Conservation Methods

More careful study should be undertaken of traditional soil conservation and soil fertility improvement methods. Many farmers and communities in the Project area have practiced soil conservation for decades, and many farmers who are not currently participating actively in the DTC Project continue to practice soil conservation. The Evaluation Team and other observers believe that lessons could be learned regarding such issues as what motivates farmers to practice particular soil conservation techniques, what advantages they see in practicing such techniques, among others, that could be usefully incorporated into the Project's extension approaches to improve soil conservation and fertility.

3.2.5.8 Adaptive Interventions

The Evaluation Team believes that several interventions show promise and should be promoted on the basis of the participatory, needs-driven approach set out in this report. These should include:

- Improving production of major agricultural crops
- Improving soil fertility
- Improving vegetable production
- Promoting indigenous trees on-farm
- Promoting bamboo on-farm
- Promoting improved household energy management

3.2.6 Specific Recommendations: Monitoring and Evaluation

3.2.6.1 Strengthen and Enhance Monitoring and Evaluation

The Project should strengthen its monitoring and evaluation program. Monitoring and evaluation has begun

on the Project's extension activities and a useful start has been made in this area. The same needs to begin with training and conservation education. Likewise, monitoring and evaluation will be of critical importance for any multiple use of park resources.

The Evaluation Team believes that monitoring and evaluation should provide Project management with crucial indicators regarding the effectiveness of its approaches. It should provide continual feedback which will help the Project to adapt its approaches and strengthen them. It should provide the Project with indications of acceptance and of impact. Moreover, it should provide farmers and communities with indicators on the effectiveness of various approaches.

3.2.6.2 Incorporate M&E in CARE PIRs

CARE Project Implementation Reports (PIRs) should incorporate the monitoring and evaluation information developed for each Project component. This should provide CARE Management, USAID and the Government of Uganda with key information, within each report, which will enable them to gauge progress towards meeting objectives.

3.2.6.3 Follow USAID Guidelines on M&E

The Grant Management Unit (GMU) of USAID's Action Plan for the Environment (APE) Project will be developing Monitoring and Evaluation guidelines for all GMU grantees (including DTC). The Project should take a proactive role to assist the GMU to establish these guidelines, and then, DTC should follow the M&E guidelines. In addition, DTC should engage in dialogue with USAID regarding the USAID expectations in M&E and Assessment of Program Impact (API) reporting.

3.2.6.4 Review Soil Conservation Approaches

There should be a detailed review of the soil conservation approaches which are promoted through the Education Center and extended through CEAs and the Extension Division.

3.2.6.5 Gender

Future reporting of project activities and accomplishments should include disaggregation of the data by gender where appropriate, in accordance with USAID expectations.

4.0 The Project Context

4.1 Problem Statement and Environment

The CARE/DTC Project operates around the two protected areas of Mgahinga Gorilla National Park (MGNP) and Bwindi Impenetrable National Park (BINP) in southwestern Uganda. The Project focuses primarily along the perimeter of the parks with an outside catchment area variously set as 5-7 kilometers, or one to two parishes along the border. The Project is active in the three districts of Kisoro (to the south), Kabale (to the southeast and east) and Rukungiri (to the northeast and north). Approximately 100,000 inhabitants reside in the Project area.

The "problem statement" set out in the Project Paper and Grant Agreement is "how to meet the needs of local people while protecting and sustainably managing the forests [parks]".[3] "The premise of the Development Through Conservation Project is that forests and farmers can exist side by side if the causes of declining farm productivity are addressed and forests are brought under sustainable management."[4]

4.2 An Abbreviated History of the DTC Project

The Development Through Conservation (DTC) Project has its origins in the conservation activities of the Impenetrable Forest Conservation Project (IFCP) initiated by the World Wildlife Fund (WWF-US) in the mid-1980s. The IFCP's primary purpose was to halt encroachment into the Bwindi Impenetrable Forest, with a major objective of conserving the habitat of the mountain gorilla (*gorilla gorilla berengei*).

The IFCP commenced community extension activities with Community Extension Agents (CEAs) in 1986 in an effort to provide conservation education to surrounding communities and to halt illegal activities within the forest. CARE/Uganda was implementing two projects at that time in Kabale District (which later became Kabale and Kisoro Districts). CARE and WWF entered into negotiations which resulted in WWF sub-contracting the extension, out-of-forest activities in 1988 when the DTC Project was formally initiated. The major funding source during these first years of Bwindi Impenetrable Forest activities was the US Agency for International Development (AID/Washington). CARE/Uganda obtained a direct grant for the second phase of DTC from USAID/Kampala in 1991.

The Project has continually evolved since WWF began its community extension activities in 1986. The original intent of WWF's extension efforts was to win over community support as a complement to WWF's increasing (in-forest) conservation efforts. WWF believed CARE was better positioned to carry out a community development project, so, WWF sub-contracted CARE to implement this component. In essence, the primary purpose of the DTC was to enlist community goodwill in order to conserve the biodiversity of Bwindi Impenetrable Forest.

CARE brought different perspectives and expertise to these out-of-forest activities than those under WWF.

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[3]. "Grant Agreement", Attachment 2, page 2.

[4]. op cit., p. 14.

CARE's experience with community development, particularly with agriculture and agro-forestry moved the Project's agenda in this direction. Furthermore, CARE's essentially developmental objectives moved the activity away from direct conservation education and support, although a strong attempt was made between 1988 and 1990 to emphasize conservation education.

Field staff were chosen from school teachers at the onset because of their teaching skills. It was believed that school teachers would provide the best media for conservation education. Moreover, selecting teachers to be the primary conservation extension agents made sense because they were often the only government officials in the remote areas around the BINP area. Additionally, IFCP and later DTC staff selected teachers because teachers were generally the most educated (and often the most respected) members of the public.

As the Project evolved in a more developmental direction, it was assumed that school teachers could be trained in such fields as agro-forestry, soil conservation, and animal husbandry, among others. While Project staff recognized, at various stages of implementation, that this approach had certain weaknesses (primarily the assumption that school teachers could become effective rural development agents), it was also recognized that this cadre of teachers represented the best personnel available at the time for achieving the Project's primarily conservation education objectives.

It is important to recognize the broader context in which the DTC Project evolved. Uganda emerged in 1986 from a traumatic period of civil turmoil when the IFCP first began its operations. As first IFCP, and later DTC, began to work with communities they were faced with a situation in which Government of Uganda (GOU) authority and capacity had been severely eroded, particularly in the area of field extension in agriculture, education and virtually all services.

The IFCP and DTC Projects met real development needs in an isolated area of the country. The projects filled gaps in the Government of Uganda's development services in the area, while at the same time, strengthening the conservation framework in the region. Current DTC extension approaches reflect this evolutionary pattern.

5.0 Conservation Component

Forest Utilization and Park-People Relations

The major problem DTC has addressed since the Project's inception has been how to meet the basic needs of local people while protecting and sustainably managing the forests (Bwindi and Mgahinga). The Project's initial efforts towards solving issues/conflicts between parks and people were carried out using classic conservation education messages within buffer zone areas. Educational messages were disseminated to surrounding communities indicating the importance of the forest to the nation (eg, biodiversity, tourism) and to the local communities (water catchment, employment, anti-erosion).

As the Project matured (and as the protected areas went from "forest" to "national park" status, thus excluding any form of extractive utilization), the Project confronted head-on the conflict between people's forest resource [illegible] to develop pilot utilization schemes in such areas as beekeeping and medicinal plant extraction. However,

park management systems are not in place to ensure that even such limited forms of extraction will not be subject to abuse. Park management capabilities for monitoring and controlling access need to be developed before such utilization can proceed further.

5.1 Status of Forest Utilization, and Park-People Relations

DTC has made commendable progress towards identifying conflicts, and possible solutions, between the Bwindi Impenetrable National Park and its surrounding communities (see Section 5.1.2 for a discussion of the Mgahinga case). The approach of the Project is directed towards promoting and actively soliciting community input into park-people and developmental issues. Most of the Project's achievements have been made through this active solicitation of community input into Project activities.

5.1.1 Changing Attitudes

In many areas, specifically pilot multiple-use zones, local resource users' (LRUs) attitudes towards Bwindi have changed from total frustration and anger to hope that access to the forest, albeit limited, may be renewed.

Much less progress has been made in Mgahinga Gorilla National Park because the Project only started active work in the area over the past year. The reasons for this delay center primarily on the insecurity of the area due to civil strife in Rwanda (which borders the Park). Park-people conflicts identified in the Mgahinga area include the recent relocation of people from the park and recent limitations on access to essential water resources. "Community participation" in park management has not progressed as far in Mgahinga as it has in Bwindi.

Park-people relations are of critical importance in ecologically sensitive areas such as BINP and MGNP. DTC has had considerable success in changing negative attitudes in BINP. When people were asked who DTC works for they unanimously said "for the community". When queried about the Project's relationship with parks interviewees responded: "Yes, DTC is associated with the parks." Thus, people realize that DTC plays some form of intermediary, bridging function between the two parks and the communities.

This is both a strength and weakness for the Project and creates challenges for implementing DTC's integrated conservation and development mandate. On the one hand, DTC realizes that people should associate park benefits with the status of the parks, not with DTC. That is, people should view benefits as accruing from their (the people's) conservation of the park, not through the intervention of an externally-funded project (e.g., DTC), as is currently the case. This calls for more concerted conservation education, more active community participation in park management, and, above all, strong, effective, sensitive park management.

On the other hand, DTC faces a very real risk by serving as intermediary between park management and the communities unless park management capabilities increase. The risk lies with the fact that <u>if</u> park management changes the rules (e.g., excludes people once again from any form of extractive use of the parks), people will associate DTC with their exclusion. This would reduce DTC's credibility and weaken its developmental programs. Thus, DTC needs to serve as both a people/community advocate <u>and</u> a supporter

of park management. This can only be achieved by assisting the UNP to develop its community conservation package with as much determination as DTC has worked to help people gain benefits from the parks.

5.1.2 The Mgahinga Case

At present, this park-people approach is difficult around Mgahinga under MGNP's current management for a variety of reasons. In addition, Mgahinga provides DTC, CARE, USAID and the GOU with an important corollary to BINP management and provides a background to many of the recommendations made by the Evaluation Team with regard to DTC's playing a stronger role in assisting UNP with park management.

Park-people relations at MGNP are at a low because of the recent relocation of over 200 families from within the park boundaries to outside. A further 800 families lost assets when farming, grazing and other activities within the original gazetted boundary were halted. Park management at MGNP has been difficult given the area's isolation, the civil strife in Rwanda (which has periodically spilled over into the park and surrounding areas) and the fact that the forest was heavily encroached prior to gazettement in 1991. Attempts to restore the ecological balance in MGNP have been far more difficult than in BINP given these factors. Park-people conflicts and antagonisms have arisen out of these circumstances. MGNP has a distinct public relations problem which DTC can and should help resolve through its good UNP and community relations.

One area where MGNP relations could improve regards the park's boundaries. These are currently being demarcated with both cement bourns and trees planted every five meters. MGNP authorities requested and received permission to take an additional 3 meter band along the outside of the park boundary to enable rangers to patrol the edge of the park. Thus, park authorities are planting boundary trees exactly on the edge of the park and patrolling on people's land beyond the trees (outside the Park). This has eaten into people's limited land resources. MGNP could improve its community relations by reviewing this policy.

The original park boundary was planted with Grevillea robusta. Today erythrina is being planted to mark the boundary. Members of the Evaluation Team and the two DTC external reviewers noted distinct hostility towards agro-forestry messages, particularly any involving boundary plantings. People stated repeatedly that they would not plant trees because this would "provide an excuse for the park to expand its boundaries once again."

Because of these problems, DTC Park Extension Rangers have been harassed by local community members to the extent that they no longer wear UNP uniforms, and they try to disassociate themselves from the park. This attitude is having a negative impact on DTC through association of the Project with the park.

5.1.3 Need for DTC Assistance to UNP

Mgahinga provides a vivid illustration of the "risk of association" as set out above, specifically when DTC is not in a position actively to work with park authorities when developing and implementing their community program. This demonstrates that DTC faces a very real risk that its BINP in-forest activities (i.e., multiple-use) will be unsustainable, or fail, if DTC does not become more involved with overall park management.

DTC is placed in a delicate position when it has staff working in the parks without, at the same time, a strong

role in guiding park management to ensure friendly community relations, and a positive park-people interface. Unless this is achieved, DTC could become associated with the law enforcement aspects of the parks, and could lose the goodwill it has generated as liaison between communities and the parks.

This is particularly relevant to BINP. At present, Bwindi is in a state of flux in which no major donor, and no major NGO is working with the UNP to develop an overall unified park management approach. The Evaluation Team feels strongly that, unless DTC becomes involved with direct assistance to UNP in Bwindi to develop a unified approach to community relations (participation, management, use, benefit-sharing, etc.), DTC runs the risk of having Bwindi managed in conflict with its development objectives.

5.2 Batwa

Another issue that provides a challenge to DTC is the Batwa population in Rutugunda Parish (on the edge of Bwindi). The forest has always represented an important source of food, medicines and income for the nomadic Batwa. However, the Batwa, as a community, are not well understood. Little anthropological or sociological work has been conducted on the Batwa throughout the Central African region. As a result, it is difficult to assess the impact of forest protection on the population, or the impact of the Batwa on the forest.

What is apparent, however, is that the status of the Batwa has deteriorated dramatically over the past several decades. Traditionally, the Batwa would stay on farmers' (non-Batwa) land for short periods of time (usually no more than several months), and then would move into the forest to hunt, and collect and gather forest products. This system had relatively little impact on either the forest or surrounding people as the Batwa were constantly moving from place to place.

However, the Batwa in the BINP and MGNP are now totally excluded from the parks and forest resources. They openly fear entering the parks because of increased enforcement. To make matters worse, their alienation from the forests has made them a distinct liability to surrounding farmers. Farmers fear, because the Batwa have been forced into a sedentary existence, that allowing the Batwa to reside on their land will result in permanent settlement. Hence, most farmers no longer allow the Batwa to stay on their land.

The Evaluation Team visited Rutugunda, along Bwindi. The conditions viewed by the Team (and set out by the sociologist during the recent GEF Trust Appraisal Mission) are bad. Two issues of direct relevance to DTC present themselves. The first is humanitarian. The Evaluation Team believes that efforts should be made by the international community to determine if the Batwa population need food relief in the immediate term.

The second involves a long-term solution regarding the Batwa's needs for access to forest resources and alternatives to forest use. This will probably not be resolved completely until the Batwa have a permanent land base upon which to reside. DTC needs to take an active role in solving these issues because the Batwas' problems are having negative impacts on overall relations between communities and the BINP, thus reducing the effectiveness of Project activities.

5.3 Ethnobotanical Studies

Ethnobotanical work has been undertaken in Bwindi to develop an understanding of, and to document

traditional and current utilization of, forest resources.

Forest utilization in the Bwindi area was first studied by P. Scott (1992) and later by a DTC consultant (Cunningham, 1992). Field work on forest utilization was conducted in MGNP with a draft report (of limited circulation) produced by Cunningham (1993).

The study conducted by Scott (1992) laid the groundwork for identifying multiple-use zones along the periphery of the forest. The zones were approved and adopted by the local community and Bwindi Impenetrable National Park management during the development of the BINP "Management Plan".

Scott's work was followed by Cunningham who concentrated on developing a process that would first, identify species or activities that could be exploited by local people, and, second, by setting out a framework in which the local population could extract forest resources with no or little negative impact on the forest. While Scott's work identified possible buffer areas within the park, Cunningham laid the groundwork for implementing buffer area activities within the park.

Both pieces of work were well-done and have had a significant positive impact on the Project. This work carried out under DTC has set the stage for multiple-use activities.

5.4 Multiple-Use Zones and Management

Multiple-use concept notes have been developed and a potential mechanism for the joint management of forest resources has been set out for BINP. Participatory work with the community to introduce and commence multiple-use has been initiated.

DTC has made great strides in developing a multiple-use management system. This is a unique program for national parks in Uganda and most of Africa (although extractive utilization from protected areas, such as forest reserves, has been underway for many years). Through the work of Scott (1992) and Cunningham (1992, 1993), and the follow up of their recommendations by Project staff, a system for identifying multiple-use zones and allowable uses of resources has been established. Scott identified multiple-use zones that were later accepted during the development of the draft BINP "Management Plan", and later approved by the Board of Trustees of Uganda National Parks.

Surveys in pilot multiple-use zones were conducted by Cunningham that:

- identified species used;
- determined what species were of generalized (commercial) and specialized (limited) use; and,
- set up a process in which specialized users could gain access to specific species in the forest.

General uses (i.e. timber, firewood) were disallowed, because the impact on the forest would be too great.

General use species were promoted on the Project's on-farm activities (i.e., agro-forestry). The Project's current approach in BINP is to allow non-commercial use of specific forest resources (e.g., honey, herbs, medicines), and to promote on-farm resources that the park could not allow to be extracted (e.g., bamboo, indigenous woodlots, agro-forestry).

Multiple-use in national park buffer areas is a sound approach for park management to ease the conflict between park protection and community needs. However, it is in many people's view untested and, therefore, dangerous. DTC is at the forefront of promoting multiple-use around national parks to demonstrate that it is a viable management tool for conservation.

DTC must address all concerns surrounding multiple-use adequately to test and prove its usefulness as a management tool. The greatest concern is that multiple-use activities in Bwindi are not integrated into the UNP park management structure. Moreover, DTC is currently not an active participant in overall park management. Therefore, the Project presently lacks a means to build up UNP's capabilities to implement, monitor and control multiple-use zones.

Some issues on multiple-use still need to be addressed. First, most control mechanisms rely on communities to police themselves. LRU groups are organized into use-specific societies (Ruhija) or in parish-level councils for all types of resource users (all other pilot parishes). LRU groups are instructed that, if illegal activities occur, their privileges will be revoked. It is then hoped that user groups will prevent people from conducting illegal activities.

The operative phrase of park management during this pilot process should be "trust but verify". Park management currently lacks the means to adequately control or monitor these activities. Hence, they are not able to determine whether or not people are engaged in extra-legal activities (eg, poaching, fires, timber). Improving this situation would require increasing their enforcement capabilities (i.e., adding yet more enforcement rangers). Lacking this, indicators need to be developed and integrated into the park management process to assure information is collected in a timely manner. Then, when that information is collected, action can be taken. Active monitoring will also discourage the small percentage of people who will take advantage of the situation to conduct illegal activities in the forest.

Second, the current system does not ensure control on the amount of use of any particular product (or products). For example, there are currently some 500 registered beekeepers in Kitojo, Nyamabale, Kashasha and Mushanje Parishes around Bwindi. Each beekeeper goes into the forest once every three months to check on the hives. If the number of beekeepers increases, or if new forest product utilization is allowed, the number of people going into the forest will increase significantly. Although it is generally agreed that beekeeping should not have a negative impact on the forest, monitoring is necessary to ensure against wildfires or other potentially harmful affects. Currently, no limit to the amount of hives in the forest have been set.

Increased forest usage may eventually have repercussions both on forest ecology and on park relations with the communities. Limits to use must be clearly stated at the onset of the exercise in such a way that people understand their rights, responsibilities and limits. Reciprocity, the key to "give and take", the key to mutually understandable behavior (including exclusion if rules are not obeyed, or if contracts are broken), must be

clearly-articulated, established and understood from the very beginning before any multiple use can be allowed. For example, local beekeepers need to understand the negative impact on the forest from too many hives. That is, too many hives will lead directly to an unacceptable increase in the number of people in the forest. It will also lead to a corresponding increased chance of negative impact on the forest (eg, poaching, wildfire).

Third, the study conducted by Cunningham should be backed up by more systematic vegetation analysis. This will form a baseline for identifying future changes in forest species composition. It will also allow management to make more concise decisions on using multiple-use to manage the forest. Absence of use may lead to forest succession that favors specific species. Increased use of the forest by local people may enhance habitats for several key species in Bwindi. Vegetation analysis will also have other uses for park management as discussed in Annex 5. Thus, it is critical that multiple-use be founded upon a strong system of monitoring, and of evaluating the consequences of all use.

5.5 Ethnobotanical Gardens: Forest Tree Nurseries

Two ethnobotanical gardens were established by DTC in Ruhija and Buhoma. The Project has plans to build three more. The gardens were established as an educational tool for farmers and for use in the conservation education program. Unfortunately, no records are kept on the number of visitors or organized groups that have visited the gardens.

Forest Plant nurseries were also established at Ruhija and Buhoma. The nurseries have the dual role of conducting nursery trials of indigenous species and distributing them to farmers. Species chosen for the nurseries are ones that are used commercially by a large proportion of the population. The Project has to date distributed over 4000 seedlings to farmers free of charge. Species that have been distributed include, inter alia, Prunus africana, Podocarpus milinjianus, Fagara sp. and Faurea saligna . Trials currently underway in the nursery include Smilax krausiana (baskets), Rhytiginia kigeziensis (medicinal) and Alchornia hirtella (bean stakes).

The ethnobotanical gardens are an innovative idea but lack clear objectives. No clear target audiences are addressed by the gardens. The main use is for the local population, but to what extent it is educational remains in doubt. However, Project personnel indicated that local farmers were enthusiastic about the gardens. At the least it may provide a realization to the local resource users that their uses and needs for forest products are recognized by the Project and park.

The location of the gardens are important. They should be located next to the forest tree nurseries so farmers can make the link between a known species and how to grow it themselves. This may help in encouraging farmers to plant their preferred forest species on the farm. Moreover, as in all DTC activities, the link between the nursery and the park is essential to make.

Both the ethnobotanical gardens and forest tree nurseries should be continued and seed collecting and trials should be augmented to encourage more indigenous tree use on-farm.

5.6 Project Support to Uganda National Parks

The change in status of Bwindi from Forest Reserve to National Park has led to some change in direction for DTC, especially in terms of community relations with the forest. With the upgrade to park status, more work had to be done with UNP to solicit their approval for multiple-use zones. On the community side, DTC's job of improving the image of the forest became more difficult when the forest became a park, and its use was more restricted.

The main problem DTC addresses, as stated in the current Project document, is how to meet the basic needs of local people while protecting and sustainably managing the forests. Primary attention has been focused on activities outside the forest, with the assumption that IGCP and ITFC would take up more of the in-forest management issues. With the exception of multiple-use zones, DTC's in-forest activities have not fully addressed the priority needs of park management.

UNP's activities in BINP and MGNP are limited to the activities of "projects". In Bwindi, activities are restricted mainly to tourism (IGCP), research (ITFC) and community issues (DTC). In Mgahinga, UNP activities are currently limited to the MGNP Project (DT3).

To date, support to UNP has been limited to technical assistance. Little financial support has been provided to UNP except in the form of Park Extension Rangers/Wardens seconded to the Project at MGNP. It was originally envisaged that DTC would provide support to the Forest Department, and later through the UNP, provide support for participatory development of management plans for Bwindi, Mgahinga, and Echuya Forest Reserve. Inventories were to be conducted to document the biodiversity in the two national parks. An herbarium was to be developed to make specimens available to researchers. A threatened species report was to be developed to indicate key species that need monitoring. Lastly, park rangers were to receive training.

Limiting or excluding access to traditional forest resources posed a major problem to DTC's outreach and extension program. People felt alienated and were antagonized by their exclusion from the forests. DTC staff sought to improve local community relations by mobilizing and organizing local resource users (LRUs). DTC has embarked upon a pioneering effort in which local resource users can gain and use national park resources on a controlled and sustainable basis. The basis for such use rests with DTC's good community relations and its excellent park relations (in Bwindi). This is supported by forest utilization activities which include ethnobotanical studies, indigenous tree nurseries and ethnobotanical gardens.

Most of DTC's in-forest activities have concentrated on BINP. DTC has recently started work in MGNP (delays in working with MGNP were the result of the civil war in neighboring Rwanda). DTC plans to transfer its experiences in BINP to MGNP. DTC has MGNP personnel seconded to the Project to enhance the links between the Project and the UNP, its host GOU agency. These "Park Extension Rangers" are also DTC's primary link between MGNP and the communities on the periphery of the park.

Park-people relations were in a state of conflict when the forests were changed from "forest reserves" to "national parks" in 1991. Conflicts were caused essentially by:

- people being completely, and abruptly, cut off from traditional forest resources and sources of income; and,

- the aggressive methods used by the parks to create a strict, impenetrable boundary between the local communities and the newly established parks.

While conditions around BINP have improved dramatically since that time, current park-community relations around MGNP continue to be tense. The Evaluation Team recommend strongly that the GOU and USAID/Kampala examine the Mgahinga situation very closely.

DTC set out to develop a buffer zone along the periphery of BINP to improve people's perception of the park, thereby assuring its protection. This represents the core philosophy of DTC; people will work to protect a resource if they view protection as being to their advantage. The "buffer zone" includes an area outside the park (one parish in depth) and a "multiple-use zone" inside the park. The multiple-use zone is intended to allow, in a controlled fashion, local use of specific forest products (e.g., herbs, bees, medicinal plants, etc.). Planning for multiple use, and organizing communities to participate in multiple use, commenced in BINP in 1992 and is just beginning in MGNP.

The creation of these multiple-use zones was significant both for the direction of the Project and for UNP. It is the first time that UNP has allowed multiple-use to be tried, on a pilot basis, as a management tool in its national parks. DTC has been at the forefront of negotiations with national authorities to allow multiple use. In this regard, DTC has served as an advocate for the community in the area of extractive use within national parks.

For the Project, multiple-use implies that the Project must put increasing emphasis on implementing an in-park activity that aggressively confronts the most pressing park management problems; creating better relations with the local population to reduce pressure on the forest. This has its advantages and disadvantages. The primary advantage is that DTC is viewed as a community advocate vis-a-vis the parks. It is potentially disadvantageous insofar as DTC does not control the parks' agenda.

Therefore, if the parks change direction and return to total community exclusion and alienation, then DTC will be viewed as either ineffective with regard to government, unprepared to anticipate changes in policy (therefore misleading the public), or worse, in collusion with the parks. The latter is of major concern so long as UNP management in the two parks remains weak. It is further heightened by an overwhelming (and some would argue, increasing) perception by local people that the two parks were created by and for "outsiders" (i.e., whites).

Within the multiple-use zones, the Project aimed to assist both the GOU and farmers to increase the sustainable production of goods and services from the forests. Conditions set by the Project and UNP for multiple-use included that:

- the use of forest resources are limited to "small" forest products in a sustainable manner;

- limited forest product use must be effectively controlled by the UNP (FD); and,

- zones of utilization are drawn up and agreed upon between UNP and the local communities.

To achieve these conditions, DTC proposed to assist the Forest Department, and later the UNP, to develop means to permit local communities rationally to use forest resources on a sustainable level.

In this context, DTC focussed on ethnobotanical studies leading to development of multiple-use areas, baseline information on forest use by local people, implementing multiple-use activities by organizing LRUs to use specific species identified during the baseline study, forest plant nurseries to bring on farm species lost through the protection of the forest, and, additionally, ethnobotanical gardens to show people traditional uses of the forest.

5.7 Linkages with the Forest Department and UNP

Linkages between DTC and the UNP are unclear. While DTC is working under the UNP, it is not fully involved in overall park management nor has it fully involved park management in the daily running of Project activities. There is currently no institutional home for many of DTC's activities. Without one, there is no guarantee that Project activities will continue once the Project is completed.

DTC's efforts have almost exclusively been directed towards conserving the forest by concentrating on solving problems at the interface of the park and the community. In-forest activities have been limited to the development of multiple-use zones, inventories and assistance in promoting the development of a park management plan. Project activities in the context of park management have been sectoral and do not adequately address all park management needs.

While fulfilling the letter of the Project Paper, these activities do not, of themselves, address coordinated resource planning. Coordinated resource planning that includes both in-forest and out-forest activities should attempt to address <u>all</u> issues confronting the park in both these areas. Without coordinated resource planning within UNP park management structure, in-forest activities will continue to be Project-driven and the longer-term sustainability of Project activities will remain in question.

Due to many constraints (limited resources, training, etc.) UNP's daily management activities are essentially limited to the ones promoted by DTC, IGCP and the Institute of Tropical Forest Conservation. There is a lack of central management at Bwindi to pull these disparate activities into one coordinated package.

Moreover, park management activities will be limited to those supported by projects. This will mean all other park management activities may be omitted, as they currently are. Until UNP has the capacity to develop a unified management structure, all Project activities will need continued support from the international community.

To assure that DTC's efforts on-farm and in-forest are continually supported by BINP, DTC needs to provide more technical assistance for overall park management. DTC must become fully, and actively, involved in overall park management on a daily basis. Currently, DTC has the mandate from UNP to conduct multiple-use in the buffer zones. Unless the concept of community participation is within the overall park management

framework, there is a real risk that community activities will be neglected. In this context, DTC's activities must be fully incorporated into the park system if the park is to eventually take over Project activities.

Furthermore, the concept of "benefit-sharing" needs to be more fully understood and developed within a management framework by UNP than at present. Revenues from tourism, and funds for community development (and research and park management) from the GEF Trust, will be as important, if not more important, management tools for sharing benefits to communities as multiple-use. DTC have been working closely with all parties concerned to develop the framework for revenue-sharing and the GEF Trust, but park staff are painfully weak in these areas. UNP needs considerable assistance in both parks if both the GEF Trust and tourism revenues are to be used effectively as park management and conservation tools.

5.7.1 Management Plans

The "Management Plan" for BINP is close to completion. It was developed in concert with UNP, local groups, other projects and local communities. The Project has made commendable efforts in soliciting community input in the "Management Plan".

A reference for management for Mgahinga Gorilla National Park has been produced, and ethnobotanical studies have recently been carried out. A program is being developed by the Project to produce a management plan in Mgahinga based on community participation. The Project plans to include more community consultation before the plan is written. This is based upon the lessons learned during the development of the BINP Management Plan. It will also further develop the decision-making processes by undertaking a series of management plan workshops using management by objectives (MBO) techniques.

No work on a management plan for Echuya Forest Reserve has been conducted, mostly due to insecurity in the area. The Project does not envisage developing a plan for Echuya Forest as it feels that the Forest Department's capacity for management planning has increased and it can be done without assistance from the Project. The European Community has been working with the Forest Department in this regard.

The Evaluation Team supports DTC's position with regard to Echuya (and other forest areas in the three districts in which DTC operates). The Team suggests that, whenever possible, without diverting major resources from the Project, DTC should assist relevant authorities in these protected areas. The operative mode recommended by the Evaluation Team is that DTC has enough on its hands with the two national parks without diverting significant resources to other protected areas.

The BINP "Management Plan" reflects the prime movers behind its development, that is, DTC, IGCP and ITFC. Therefore, it covers in detail community issues, research and tourism. However, a clear framework for park management is missing that includes comprehensive park management programs such as administration, finance, maintenance, monitoring and control. DTC should assist UNP to develop and plan for these park programs. The Evaluation Team recommends that a technical advisor be brought on board to help UNP in Bwindi to develop such an integrated plan. Additionally, park staff need to be trained (see 5.7.5) in such areas as community relations, data collection, and other fields relevant to integrated park management. Other key issues which BINP and MGNP will need to address in their management concern tourism revenues and the GEF Trust.

5.7.2 Biological Inventories

Biological inventories were conducted on several of the major species groups to document the level of biodiversity in Bwindi. Trees, ferns, ground flora, birds, amphibians and reptiles were inventoried by Project personnel and outside consultants.

Inventories were conducted within 13 randomized inventory blocks distributed across the forest. Since the start of the second phase of the Project, six blocks have been surveyed for most of the groups.

Inventory work has not progressed as quickly as the Project planned. Reasons cited include:

- the activity does not fit well into the overall range of activities carried out by DTC, especially as it has little direct connection with local communities;
- the need to focus on more management-related issues, such as management planning and multiple-use has been a priority;
- the need for inventory data to justify increased protection has diminished;
- changes in personnel have reduced the Project's capacity in certain inventory activities; and,
- DTC personnel have doubts about the appropriateness of the methodology for identifying rare habitats and species.

The Evaluation Team concurs with these issues. However, considerable information has already been gathered. Inventories have been conducted for the bird, reptile, amphibian tree, fern and ground flora. Biological inventory data continue to be collected, but are concentrating on issues related to community use of plant and other forest resources.

While inventory of the parks' biodiversity is important, and often essential in arguing for continued international financial support, species lists do not answer the priority questions that management needs to have answered to manage the parks better. It is essential to know what management is working with, but it is doubtful that information gathered in inventories addresses the most pressing questions facing park management. As both BINP and MGNP lack comprehensive research plans that address management issues, research to date has been mostly opportunistic and does not reflect management needs.

The exception to this is the research conducted to determine uses in multiple-use zones. Here, park management had a clear hypothesis to be tested. Results from the study enabled management to make decisions on how to set up multiple-use zones and what species to allow use of.

5.7.3 Herbarium Development

An herbarium of over 1,100 specimens has been developed by DTC and is located in Ruhija. This was developed mostly in conjunction with the inventory work cited above. The approach of the Project to

developing the herbarium was more utilitarian than research-oriented, which the Evaluation Team views as an extremely useful approach for park management. The herbarium is more then just a collection, as it indicates uses of plants, identifies species for further research interest, and provides a tool for the identification of plants. It also has considerable value as an educational tool for university students and park personnel. These factors demonstrate that this type of activity should continue.

5.7.4 Threatened Species Report

DTC was to develop a report on threatened species of BINP. It has reported on the threatened birds of BINP (Slade, 1992) and is currently supporting a student from Makerere to research elephant foraging habits and crop raiding.

No additional work has been carried out on this report. Project personnel feel that they lack both the expertise and the time to go further with the report. Furthermore, they believe that this type of research is more appropriate to ITFC.

Although a study of this nature may fit less into what DTC is currently involved in, an indication of what threatened species exist in the park is of importance to future management activities and the monitoring program, particularly if any multiple-use program is initiated. A knowledge of threatened species is a prerequisite for a park monitoring program.

DTC originally planned a report stating not only the threatened species but plans for their rehabilitation. Efforts in this area should be continued through collaboration with ITFC.

5.7.5 Park Ranger Training

No park ranger training has been conducted thus far by the Project. However, the Project has plans to conduct workshops during the current year in such fields as communication skills, community issues, other roles of the Project, and multiple-use.

UNP's park management approach at Bwindi Impenetrable National Park, and to an even greater extent at MGNP, is a classic park management approach. It essentially uses enforcement to prevent people from exploiting the park rather than relying on other management tools to ensure park conservation. In actual fact, rangers are law enforcers with little training in other fields (eg, monitoring, community relations, etc.).

Rangers need to be trained to conduct other activities within the park (e.g., monitoring, data collection). Community relations is an urgent training need, particularly as Bwindi moves in the direction of multiple-use. However, park rangers are not aware of the implications of this new approach and lack the basic skills with which to implement a more community-oriented approach. In essence, the park is putting on a friendly face along the border, and using the "strong arm" elsewhere.

To balance these conflicting roles, law enforcement rangers must be thoroughly trained in community issues. There must be a continuous process of arbitration and dialogue between park and people. Arbitrariness in enforcement must be reduced to a minimum, and park personnel, especially rangers, should view people as

partners, not as enemies. While enforcement will never cease to be a function of park management, it should merely be one (and increasingly minor) facet of management.

Additionally, rangers should become the core of the parks' information and data collection, and monitoring process. Rangers should not merely collect information, but should understand to what ends information is being used. This is particularly important when monitoring the impact of people in any multiple-use program. Their information/data collection responsibilities should include monitoring key species, illegal activities, multiple-use zones and crop raiding (on peoples' farms by animals from the parks), among others. Their work, and more importantly how they conduct themselves, are of great importance to DTC's community activities.

5.7.6 Park Wardens

Park rangers need to be under the supervision of park wardens. At present, there is no middle level park management in either park. Hence, wardens-in-charge are concerned with all day-to-day matters as well as managing and administering large numbers of rangers. In BINP, there is immediate need for at least two more wardens, one for community conservation, and one for tourism/interpretation. Given the looming importance of tourism revenues, and revenue-sharing, and the GEF Trust, there may be need for another warden to work specifically on the issues of community grants, projects, and development using these funds. There is certainly need for a warden to work directly with DTC and communities on multiple-use.

UNP presently lacks the ability to fund and place these positions. Moreover, UNP does not have the resources to provide technical backstopping for these activities. Nonetheless, the positions need to be filled, and technical assistance needs to be provided. Therefore, the Evaluation Team recommend that DTC assist UNP in Bwindi to advertise and fill these positions, and to provide the technical support to help them become operational. Park management issues are further discussed in Annex 5.

6.0 Development Component

Community development is an essential component of the DTC project. The following describes the main elements of DTC Development activities, and lists major findings and recommendations in Sections 6.9 and 6.10 respectively.

6.1 Extension

The Development through Conservation Project originated to promote conservation of the Bwindi Forest (and subsequently the Mgahinga Forest), while simultaneously improving the natural resource-based economic security of families adjacent to the two protected areas.

When the Project was initiated, farm families in the area adjacent to the Project used the protected zones to extract timber, fibre and game. The forest zones were also used for grazing livestock. With the increase in population this exploitation was deemed to be unsustainable. DTC was designed, in part, to relieve this pressure on the protected forests to:

produce, particularly sorghum and beans, provide some farm income for many families. Climbing beans are a cash crop with over 30% of Uganda's bean production being supplied from Kabale District.

In the area adjacent to the Mgahinga Gorilla National Park, where the elevation is also above 1800m, the major crops are beans, sorghum, maize, Irish potatoes, millet wheat and peas. Around Kisoro town (between BINP and MGNP), bananas are also frequently found.

Tea is a major cash crop in the northern part of the Project area. Coffee, pyrethrum and tobacco are currently of minor importance in the Project area, although 2,320 outgrowers have been commissioned to grow pyrethrum in Kabale District over the past year. A factory to process the pyrethrum will be constructed in 1994. This could provide an income generating opportunity for Project farmers in the Rubanda zone.

The Kayonza tea factory handles all the tea produced in the area and deliveries from as far as 50 km are undertaken from both the Kanungu Subcounty and the Ruhiga zone. The number of farmers producing tea has increased as extension services and factory capacity have both increased. Markets for other crops are mostly in local markets where food crops are sold for cash. The lack of infrastructure (particularly roads) precludes large-scale agricultural trade. There are few income-generating opportunities to replace income generation formerly acquired from activities undertaken in the National Parks (especially pitsawing).

Farmers highlight their problems as shortages of food, land, soil fertility and markets in addition to the more macro needs such as roads, schools and health centers. Additionally, in the Mgahinga area, shortages of water are major constraints.

6.3 Extension messages

Nine extension messages have been developed by the Project to improve the natural resource-based economic security of farm families in these areas. Of these nine, soil conservation, woodlots, fish-ponds, poultry and rabbits were established during Phase I of the Project, while banana management, vegetable growing, climbing beans and household energy management have been introduced during Phase II of the Project. Initiatives in fish-ponds, poultry and rabbits are not currently being promoted by the Project.

6.4 Soil conservation

Cultivation is generally on steep slopes in the DTC Project area. There is a very high risk of soil erosion in the Project area, particularly in newly-opened areas until bunds become established. South of Bwindi Impenetrable National Park, slopes are steeper and landslides appear to be more frequent than in other parts of the Project area. As populations have increased, farmers have opened up new land. In the opening up of land, bench terraces are constructed upon which grass is planted and allowed to grow. Distances between terraces usually do not follow formulas related to slope. However, as the steepness of the slope increases, there is generally an increase in the use of bunds.

The Project is correct to highlight soil erosion control as a priority intervention, particularly to ensure that losses due to soil erosion do not reduce productivity. Land productivity will become even more important as the population increases.

The Project encourages farmers to plant trees on bunds. It encourages the use of Sesbania and Calliandra at spacings of 0.5m apart, irrespective of the percentage slope or soil type. In some instances no bunds are developed. The CEAs are encouraged to follow a formula to determine the steepness of the slope, and consequently, the optimum distance between the anti-erosion lines. The CEAs are then encouraged to construct contours using an "A frame". Neither of these messages are fully understood by all CEAs.

Trash lines are encouraged to prevent soil erosion. However, given the slopes found in the Project area, these are often ineffective as a measure to prevent erosion.

6.5 Agro-forestry

The Project has encouraged farmers to plant woodlots, live fences, border planting, bund hedgerows and dispersed trees on their farms since the start of Phase I. The major assumption underlying this strategy has been that wood, and fuelwood would become increasingly scarce. During Phase I, tree planting was encouraged to develop alternatives to non-sustainable use in Bwindi and Mgahinga. This approach has gained added impetus as people have been excluded from wood utilization in the two newly-created national parks. The Project has encouraged the cultivation of both indigenous and exotic tree species sown in individual nurseries, although exotics are by far the most important in the Project's extension packages, in the farmers individual nurseries and in on-farm plantings.

To date, bare rooted seedlings have been grown in both individual, group and CEA-managed nurseries. Three hundred and nine farmers and 127 groups have constructed 592 nurseries with a production of 1.65 million seedlings distributed to over 2,000 farmers over the past two years. Most tree seedlings have been distributed free of charge. In addition to the individual and group nurseries, each CEA has established a nursery as both a demonstration and as a source of seedlings.

The predominant species promoted to date are Eucalyptus and Sesbania. Sesbania is a fast-growing nitrogen-fixing tree which is popular in many parts of the DTC area. It is used on farm to strengthen bunds and as a border tree. It also provides a source of poles for climbing beans. Sesbania is also grown within banana groves. Sesbania densities are usually low, and consequently, its impact on soil fertility is generally negligible.

Eucalyptus is the principal tree for woodlots. It accounts for over 90% of all trees planted through the Project. Eucalyptus is the major on-farm source of fuelwood. Seeds of both Sesbania and Eucalyptus are readily produced within the Project area. The Project has good contacts with ICRAF/ARENA. DTC has acquired Casuarina, Calliandra and other exotic lines from ARENA. However, little progress has been made to date by DTC in identifying indigenous tree species suitable for agro-forestry uses on-farm. There has also been little production of fruit tree species.

6.6 Small scale livestock

The Project initially promoted the production of rabbits, poultry and fish farming to reduce the reliance of bordering communities on the two forests on game meat. The Project provided technical assistance and inputs, including fingerlings for the fish farms. Thirty four farmers constructed 42 fish ponds during 1990 and

1991. Of these, 17 are currently operational and stocked with an estimated 3,000 Tilapia fish.

Production constraints such as the failure to provide a complete feed mix for poultry, or technical difficulties entailed in fish pond construction were identified during the 1990 Evaluation. It was recommended that poultry, fish-farming and rabbit-rearing should be dropped from the Project's technical packages. This was due to these problems and due to the concern that Project personnel (particularly CEAs) were spread too thin in their work without adding more "technologies" to their technical packages.

6.7 Current Technical Package

The Project's original five extension components have been augmented by four additional elements; banana management, vegetable production, climbing beans, and household energy management.

6.7.1 Banana management

Traditional banana production permits multiple stem production. It demonstrates a lack of weed control or mulching, and no control of weevils or nematodes. Project personnel felt that DTC's impact could be greatly improved (and its objectives better achieved) in certain areas if traditional banana management was improved.

DTC developed an extension message which promotes thinning, mulching, weeding, one-meter wide trenching for soil erosion control (which is an effective water harvesting mechanism extending the growing season). This is further reinforced by soil stabilization measures on the forward edge of plantings. Stabilization is achieved through planting Sesbania or Calliandra and splitting of the pseudostems of the banana for weevil control.

To date, 316 farmers are practicing at least one aspect of improved banana management. This intervention, particularly in the northern part of the Project area where bananas are the staple crop, has been well-received. The Evaluation Team view this type of "adaptive management" as a good example of DTC's evolution and response to on-the-ground needs.

6.7.2 Vegetables

The Project was supplied by CARE-Uganda with tomato, cabbage, carrot, cauliflower, onion, and eggplant seeds in 1992. These seeds were given to CEAs for testing on their demonstration farms. Demonstrations proved positive. Farmers were also supplied with seeds. It was felt that improved vegetable production would augment farmers' meager incomes.

However, no crop protection chemicals were supplied. Tomatoes and eggplants in the Project area are highly susceptible to blight for which regular fungicide applications are essential. Losses were extensive. Farmers prefer red onions to the white onion seeds supplied. Cabbages were small, and market prices obtained were half those received for larger cabbages. Vegetables in Mgahinga are produced without supplementary water due to the severe water shortage there.

Three hundred and thirty six (336) farmers have grown vegetables after receiving seeds and advice from the Project. There is farmer demand to purchase more seeds, particularly of large-headed cabbages and Red Creole onions. There are currently no plans to introduce pest or disease control chemicals.

6.7.3 Climbing beans

The Project started testing climbing bean varieties in 1990. This testing was expanded in 1992. All CEAs have conducted at least one trial on his/her own farm. Trials have included comparisons of broadcasting versus row planting, weeding regimes and staking regimes, and different varieties of beans. Five different varieties have been tested. To date, 89 farmers have grown Project-promoted varieties. Farmers prefer Gisenyi beans, a variety developed by CIAT in Rwanda. These should be obtained by the Project and distributed to farmers.

6.7.4 Household Energy Management

The Project, over the past three months, has started a "Stoves and Household Energy" programme. The initial activity to date is the introduction of fuel efficient stoves and the promotion of household energy management techniques. These techniques include drying wood and improved utilization of wood as well as construction of stoves.

The benefits of the stoves have been demonstrated through womens' groups. Twenty-two stoves have been constructed by women in the Project area. Initial results show fuelwood consumption to be halved, with no loss of heat. Women also feel that the levels of smoke are less. On the downside, the stoves are made with a mixture of sand and clay in quantities that need to vary, based on the consistency of both the sand and clay. This has resulted in most of the stoves developing cracks.

In addition to the stoves, the Project is also evaluating 'hay basket' cookers. Both activities are still under test and require further investigation. Project personnel emphasize that they are promoting "household energy management and conservation" rather than technologies. The Evaluation Team endorses that approach and encourages the Project to continue to promote woodfuel conservation. Woodfuel conservation directly addresses key elements of the Project's goals and objectives.

6.8 Extension Methodology

The extension plan originally focussed on:

- Training GOU, CEA and Project participants. Staff training was to cover aspects of planning, evaluation, visual aids and specialist topics. Farmer training was to be undertaken monthly using locally-based "farmer advisory groups" established at sub-county headquarters.

- Demonstrations using "contact farmers". Contact farmers were to be recruited to undertake demonstrations that could be visited every two weeks. The visits were intended to advise other farmers on interventions promoted by the Project. Contact farmers were to serve as links between the Project and other farmers.

- Linkage with GOU research sites. The Project planned to establish links with GOU agencies engaged in research in the Districts in which the Project is working.

- On-farm trials and demonstrations. These farmer-managed trials were to demonstrate interventions being promoted by the Project. They were also to provide feedback on constraints to the Project.

- Monitoring and Evaluation. This was to be supervised by a specialist unit to be established in the CARE-Uganda headquarters.

The Project currently carries out extension through a top-down approach. Project-determined interventions are promoted in the present extension method. The Project's key extension agents are the Conservation Extension Agents (CEAs), of which there are currently 36 (working in 20 parishes in 12 subcounties) around both the BINP and MGNP. The CEAs are recruited from the parish in which they work.

Most CEAs are school teachers who have been trained to at least Standard 4 ("O" level). They have no formal training in either agriculture or forestry. They are supported by Government of Uganda extension agents (GOUs) from either the Forest Department or the Ministry of Agriculture. GOUs work with up to six CEAs for 10 days each month. GOUs receive a field allowance and a fuel allocation for their services.

Each CEA is expected to select 10 "contact farmers" with whom to work. These contact farmers are currently selected on a basis of expressed interest in participating with the Project and undertaking Project-supported activities.

The Project historically worked with women's groups and schools. However, the Project has tended more recently to focus on individuals. Selected contact farmers often receive inputs supplied by either the Project or the CEA as an incentive to participate. There are no guidelines to ensure spatial separation of contact farmers (from one another) and no means of testing is undertaken. There also is no assessment undertaken to determine whether Project interventions being promoted at a contact farmer level is the most desirable option available.

The CEA is also responsible for establishing a demonstration plot in which she/he is expected to demonstrate the packages being promoted by the Project. While not all CEAs demonstrate or extend all activities, there are presently no recommendations emanating from the DTC Education Division based on geographic or ethnic preferences for specific packages.

The CEAs receive residential training for two periods of one week each year as well as monthly training during the zonal meeting (in each of the six zones). All CEAs in the zone congregate with the Field Officer, the Extension Supervisor and a member of the training department during zonal meetings. Written extension messages are not included in the training exercises. There is no examination to determine whether the CEA has understood all aspects of the messages she/he will be expected to disseminate to contact farmers and others.

6.9 Major Extension Findings

Many CEAs capably undertake their jobs and have the vision to address their clients' needs. Unfortunately this is not universal. Some CEAs fail to understand one or more messages during training. Insufficiently comprehended message cannot be well explained to others. This implies that messages not clearly understood by CEAs are incorrectly implemented by them, the impact of the intervention is lost, and information is incorrectly transmitted to other farmers.

There has been no thorough, concerted needs assessment undertaken by DTC to determine farmers' needs. Initial Project initiatives were based on a predetermined understanding that farmers undertook no soil management practices and that they required alternative sources of wood outside the gazetted forests. There was no assessment to determine whether fuelwood deficiencies actually existed to justify promoting woodlots.

The absence of baseline data precluded a quantitative understanding of the situation in each agro-ecological zone. Therefore, the Project promoted blanket messages for all zones without sufficient consideration of geographic location, target group needs or existing practices. In consequence, while farmers in the Project area identify roads, education, health, lack of food, land, markets and soil fertility as major development constraints, the Project promotes soil conservation, agro-forestry and vegetables as solutions to farmers' needs.

In short, most of the Project's extension messages are geared towards meeting subsistence needs rather than helping farmers to expand beyond subsistence to a more cash-oriented economy.

This is not necessarily a fault of the Project, but it is a recognition that promoting most of the Project's messages will not achieve much beyond improved subsistence unless farmers' "major" needs (e.g., roads, markets, schools and clinics) are part of the approach. While the Evaluation Team does not propose that DTC start building roads, schools and clinics, the Team does believe that the Project's extension approach can address those needs more than at present if extensionists are more needs-oriented, more capable of facilitating development, and better-equipped to organize (or tie into organized) groups.

CEAs presently identify participants based on the interest level of the individual contact farmer. Contact farmers are usually "progressive" farmers. They also tend to be clustered, often close to where the CEA lives. While there are some female contact farmers, contact farmers are not a representative sample of often heterogenous populations.

There is a strong need for the Project to ensure that farmers are selected from all parts of the parish. Where possible, more women farmers and farmers from different economic strata should be included as contact farmers to broaden the Project's impact. This is particularly pertinent to ensure that people do not return to illegally encroaching into the protected areas as a survival strategy.

CEAs need to be more aware of the overall socio-economic settings in their service areas. Participatory Rural Appraisal (PRA) is one technique that could be used on a pilot basis to provide this increased awareness. However, the Evaluation Team notes that the Project has made considerable progress with its existing

methodology. CEAs have been trained and a fairly effective extension network has been established.

The Evaluation Team does not recommended the wholesale adoption of PRA and radically different extension approaches. Rather, the Team believes that adaptive management techniques should be introduced to different agro-ecological zones, farming systems, site-specific conditions and farmer needs. This should be tried on a trial basis. If this approach works, then, it should be adopted on a broader basis.

There is also a need to fine tune the existing extension methodology. This involves:

- the use of needs assessments to determine community and individual household needs. It is recommended that community needs be identified since there may be too many individual needs to effectively address each one of them, while assisting communities to address group needs can be a more effective extension methodology with wider demonstration effects.
- revision of existing extension messages or development of new extension messages to meet identified needs.
- refinement of training modules for each intervention that address practical needs of farmers rather than summaries of text books on a particular subject.
- identification and acquisition of Project inputs to address needs. If costs are involved, mechanisms to donate, loan or sell the necessary inputs to the farmers should be explored.
- improved training of CEAs on how best to implement the intervention and how to communicate more effectively.
- testing CEAs (during training and during field visits) to ensure comprehension and retention of extension messages.
- increased and improved supervision of CEAs by Field Officers to ensure that messages are correctly disseminated to Project participants.
- feedback and monitoring to gauge impact and relevance.

6.10 Recommendations for Possible New Interventions

Major Agricultural Crops

While maintaining a conservation focus, there is a need to reconcile farmers' needs to increase productivity. However, most farmers have insufficient land to incorporate fallows into the farming system to maintain fertility. Therefore, if tree planting is to be encouraged, this will often be undertaken at the expense of land currently used for crops. Thus, it is likely that the Project will simultaneously need to identify improvements in basic crops such as sorghum and maize. Currently there is minimal use of available improved high-yielding composites and minimal use of inputs to increase productivity.

Improving Soil Fertility

The major thrust of the Project to address soil fertility has been the incorporation of nitrogen-fixing leguminous tree species, primarily Sesbania, into farmers fields. However, tree densities are too low to have a major impact on fertility. Moreover, there is no consideration that other elements, such as phosphorus, may limit improving soil fertility. The Project should examine soil fertility more carefully as part of its program to increase productivity.

Improved Vegetable Production

The Evaluation Team interviewed farmers who were pleased to grow vegetables from seed supplied by the Project. However, before such an intervention is repeated, the Project needs to determine whether additional inputs are required, whether the mix of inputs is acceptable to CARE, and whether their use will be cost-effective to farmers.

Indigenous Tree Species

The Project has to date promoted primarily exotic agro-forestry species. In the original Project proposal the Project anticipated utilizing indigenous species. Assuming a demand for indigenous species for agro-forestry systems, the Project will need to identify improved provenances of indigenous trees. Once these are identified, then farmers should be trained in seed collection techniques. These collection techniques should follow GOU Forestry Department guidelines.

Promotion of Bamboo

One effect of the gazetting of Mgahinga and Bwindi as national parks has been reduced access to forest resources. One resultant constraint is a current major shortage of bamboo. This shortage will intensify as bamboo is extensively used in grain storage (granaries), for baskets and for local ambulances (stretchers). The Project should facilitate obtaining bamboo, and should encourage on-farm bamboo cultivation.

Promoting Improved Household Energy Management

There are important fuel saving aspects of the modified three-stone stove and hay-basket currently being tested by the Project. Both these initiatives appear to be good candidates for long-term energy conservation. The Project needs to more clearly define the mixture of clay and sand used in the stove to avoid it cracking soon after construction. The Project also should pursue its intended plan of looking at the broader issues of rural energy conservation and household management.

7.0 DTC and Women

Women are major players in the DTC Project's catchment area. They form the backbone of the area's farming systems, and they are primarily responsible for household energy matters (eg, collecting fuelwood and cooking). Women exclusively head at least 15% of all households (1992 Baseline Survey). They head perhaps as much as 40% of the households on a periodic basis while their husbands are engaged in

employment elsewhere (e.g., in towns, pitsawing, etc.). This underscores the need to consider issues affecting women in DTC projects and activities.

7.1 Conservation Impact on Women

The Project has focussed relatively little on the needs of women thus far. Womens' needs have not figured prominently in the Project's extension packages or approaches. In fact, approaches such as individual nurseries can add to womens' already heavy workload by imposing more labor requirements on women (e.g., watering and weeding nurseries, and outplanting trees).

Evidence indicates that the discontinuation of access to BINP and MGNP, and the resulting elimination of pitsawing and other related economic activities, has resulted in at least temporary outmigration of males. This has resulted, at least temporarily, in increased workloads for women as they must take on the work that was formerly shared.

Creation of the two national parks has had an additional impact on women insofar as it cut off an important source of fuelwood. This has forced women on the periphery of these two protected areas to seek woody biomass supplies elsewhere. The Project has promoted agro-forestry as one response to this situation, and is now actively engaged in promoting household energy conservation. Agro-forestry needs to be approached on a site-specific basis in the Project area.

At MGNP, exclusion from extractive resource use has had a marked negative effect on many women for two primary reasons: i) it has denied them a historical source of fuelwood and other wood products that are not easily found elsewhere; and ii) it has denied many women access to crucial water supplies in this water-scarce region. Each of these effects has increased womens' workloads tremendously. Regarding water, the Evaluation witnessed women in some areas first walking for hours to reach the nearest water source and then queuing for hours to gain limited access to water under the supervision of Park personnel. The costs borne by surrounding communities as a result of park protection activities have resulted in negative attitudes towards conservation, thereby eroding Project effectiveness.

This situation is the result of MGNP park management policies and therefore beyond the control of DTC. However, while negative attitudes toward conservation around MGNP cannot be blamed on DTC, the Project incurs substantial detrimental effects from this conflict due to DTC's association with the Park (DTC employs park rangers as extensionists). Therefore, DTC must take steps to reduce the park-people conflict if it hopes to accomplish its conservation and development objectives in this area.

7.2 Role of Women in the Rural Economy

Land is scarce in many areas, particularly in Kisoro and Kabale Districts along the parks. Consequently, the types of trees promoted, and their uses on-farm, must conform both to the space requirements of the trees as well as the needs of individual households. Women, as the primary agricultural players in the Project area, need to be involved in identifying their agro-forestry needs, and in developing solutions to those needs such as improved fertility, soil conservation, fuelwood, among others.

Womens' rights to land, and their authority to decide on its utilization, is limited in the Project area. This is important to note because any technical package which sets out to promote a particular type of land use (e.g., soil conservation, agro-forestry), must take these factors into consideration. At a minimum, there is need to sensitize leaders, extension agents, and men in general, to the role of women in the rural economy. This needs to be coupled with some degree of mobilization of women and communities to provide women with greater control over their means of production.

Women tend to be members of groups more often than men in the Project area. There are many women's groups which serve a range of functions. These include informal credit and self-help groups as well as school and church organizations. The Project has worked relatively little in mobilizing these types of groups during its present phase (Phase II). Rather, the Project's training and extension approaches have focussed more on individuals than on groups. In order to access women and focus greater attention on supporting their activities, more work with women's groups is recommended.

7.3 Women and Household Energy Conservation

The Project recently initiated activities in the field of household energy management. This is of particular importance with regard to both women and conservation. Insofar as fuelwood shortages are of major concern in particular areas of the Project, and conservation (particularly woody biomass conservation) is an objective of the Project, this is a field that requires more attention. Women bear the primary brunt of any fuelwood shortages as they collect fuelwood and they are responsible for cooking. Therefore, improving household energy management is an important area for Project concentration.

It should be noted, however, that household energy management does not merely imply "improved cookstoves". DTC Project staff recognize this and are actively exploring various methods, including improved stoves, to improve household energy use. Household energy management should also include training and extension in such aspects as drying fuelwood prior to use, protecting fires from draughts, among others. Household energy management training in these areas is of major importance in conservation, and should be encouraged by the Project.

8.0 DTC Links with Other Projects and Activities

8.1 Conservation Activities

DTC maintains good working links with many organizations and projects. In the field of conservation, DTC works closely with the Institute of Tropical Forestry Conservation (ITFC) which is supported by the Mbarara University (see 5, above). The Project also works very closely with the International Gorilla Conservation Project (IGCP) which is supported by a consortium of international conservation NGOs and AID. DTC has provided guidance on and assistance to IGCP in the area of setting out a framework for revenue-sharing from revenues generated by tourism.

DTC has been instrumental in the establishment of the BINP Park Management Advisory Committee (PMAC). Project personnel have worked very closely with UNP, the ITFC, the IGCP and others to set up the PMAC. The Project has played a major role in drawing up the BINP Park Management Plan. It has played less of

a role in the MGNP PMAC, although the Project works closely with the PMAC and is set to play a major part in drawing up the MGNP Park Management Plan.

The Project has worked very closely with the Mgahinga and Bwindi Impenetrable Forest Conservation Trust (the GEF Trust). DTC personnel serve on the Trust Task Force and have assisted the Ministry of Tourism, Wildlife and Antiquities (MTWA) to set up the Trust's Local Community Steering Committee, a key element in Trust implementation. DTC continue to work with MTWA and Trust Task Force personnel to get the GEF Trust operational. The Evaluation Team believes that DTC will play a major role in helping the Trust get started and assisting it to mobilize communities to receive Trust benefits. CARE has been invited by the Trust Task Force to sit on the LCSC and on the national Trust Management Board (in Kampala).

8.2 Development Activities

The most important and interactive associations which DTC have are with the GOU whose technical assistants are part of the management structure within DTC. Nine GOU agents from the Ministry of Agriculture and the Forest Department work ten days each month with DTC in a backstop capacity and on a consulting basis.

Collaborative extension activities in agro-forestry, particularly with regard to genetically superior germplasm is done with the Agro-forestry Research Networks for Africa (ARENA). The relationship has been ongoing since 1990, and participating farmers in the Project area are familiar with ARENA and the services it provides.

At one time in 1991 the two organization discussed formalizing the relationship with a Memorandum of Understanding, but it was never executed. Nevertheless, an active interchange exists and ARENA regularly provides advice on the principles and practices of implementing agro-forestry in the context of agro-ecological zone specificity. But since ARENA in Uganda operates in virtually all of the same agro-ecological zones as does DTC, the more important aspect of the association is that DTC is able to access the most recent research findings and obtain tree seedings of species appropriate for the region.

Improved varieties of bean seed are provided to DTC extension workers through CIAT, the international center for bean research. At least five varieties of beans have been incorporated into the farming systems of participating farmers in the DTC project area. In particular, climbing beans can be seen far and wide; and their distribution is pervasively facilitated through the joint collaboration of CIAT and DTC.

Another regional commodity which is an important subsistence and cash crop in the area is Irish potato. The improvement and promotion of potato is the main responsibility of the International Center for Research in Potato (CIP), and with which DTC has a working relationship. But due to the fact that some participating farmers did not have good results with CIP cultivars in the past, the linkage with CIP is not very active in some areas within the Project.

8.3 Other Linkages

USAID is the principal donor in the area covered by DTC. USAID is the major funding agent to DTC (with

CARE providing the remainder). USAID also provides support for the Institute for Tropical Forest Conservation (ITFC) which has its headquarters at Ruhija on the eastern boundary of Bwindi. DTC currently rents space from the facility and operates the ITFC conservation center as one of its two resident education centers. The ITFC center itself has been host to groups of students from Makerere University who have been cooperating with DTC by conducting public opinion surveys concerned with park use, in the vicinity of Bwindi.

USAID support for UNP takes the form of targeted funds under the Action Plan for the Environment (APE). In addition, sometime in the near future the southern part of Uganda in which Bwindi is located will be the focus of the National Environmental Action Plan (NEAP), partially supported by USAID.

9.0 Project Management and Administration

The DTC Project has undergone four changes of project management over the past three years. This has resulted in a lack of continuity in Project implementation and changes in the Project's focus, particularly with regard to technical packages, extension and training.

The Evaluation Team is impressed by current Project Management. The DTC Project Manager has a very good grasp of management techniques and a solid grasp of the context in which the Project operates. The Evaluation Team recommend that CARE and USAID continue to provide the resources (personnel, managerial, fiscal) necessary to enable Project management to improve on its field activities. At a minimum, the Evaluation Team recommend that this Evaluation Report be reviewed critically by all relevant parties and, then, Project management be provided with a clear mandate to implement the Project as agreed upon.

This will require a careful examination of the goal and objectives of the Project, with critical consideration of the anticipated outputs over the life of the Project. The inputs necessary to achieve those outputs need to be carefully articulated and then made available to Project management for implementing the remainder of Phase II of the Project.

The Evaluation Team has confidence that the present DTC management team have the skills, ability and vision to implement any changes resulting from this review. Moreover, the Evaluation Team believes that Project management possesses the ability to plan not just for the remainder of Phase II, but to set the stage for the next phase of the Project.

Finally, the Evaluation Team considers the administrative structure of the Project, with the suggested revisions set out in this Evaluation, to be sound and an improvement on earlier administration. That is, the links between CARE/Uganda and the field have been strengthened, the mechanisms for supporting field activities (and management) have been improved, and that reporting and monitoring have also improved. These are all positive steps towards ensuring successful implementation of the Project.

The Project Manager has the confidence of CARE/Uganda senior management, and CARE/Uganda senior management has confidence in the field. This is very important in a project as complex as DTC, and is an essential ingredient in the adaptive management approach strongly endorsed by this Evaluation. This is particularly important in such areas as realigning the budget to reflect new realities and directions, in the area

of staffing to adapt to new changes, and in field management in the area of administration.

10.0 Monitoring and Evaluation

10.1 Background

Monitoring and Evaluation (M&E) activities of DTC started out relatively late in the Project. There are three principal lines of project activities. Each has resulted in a management structure with different perspectives. Therefore, messages on what and how to monitor progress and performance has not been uniform. The Forest Utilization and Education divisions within DTC have either had no monitoring and evaluation plan or the organization of their records does not lend itself to ready comprehension from an M&E standpoint.
The Extension Division represents an exception. In this Division DTC has compiled a good record of the progress of the Project, in terms of the activities and outputs of its CEAs. The monitoring period is from March, 1988 to May, 1993. However, some of the information obtained from an earlier period probably underestimates some of the accomplishments because the records of some CEAs were incomplete or improperly reported.

The Monitoring and Evaluation Officer currently charged with M&E reporting was originally appointed as the Project Agronomist in 1992. Tracking the categories of activities, inputs, numbers of farmers participating, by region, etc. has only been carried out over the past few months. Cumulative results are available in tabular and chart form. A more standardized method of reporting is currently being refined. Gender disaggregated data should be incorporated into the progress reports emanating from all DTC divisions.

A number of DTC extension activities were started and later abandoned. This has corresponded to changes in DTC Project Management. This has led to the fact that there has never been an assessment made of the efficacy of such sub-projects as poultry raising, fish farming and rabbit raising. During the recent past it would appear that the CARE Management By Objective (MBO) principles have been abandoned. The Project needs to review and stick to its MBO principles vis-à-vis DTC operations. Otherwise, future changes in management will fail to address the activities and objectives as described in the Project Paper and the Grant Agreement. These are ultimately the primary guiding documents by which the effectiveness of projects are evaluated by USAID.

In-house evaluation by DTC is not conducted concurrently with data collection, but there are many opportunities to analyze the data to answer specific questions which might be posed and to manipulate the data in various ways, as a means of conducting analyses for different purposes. As far as the M&E function in project design and implementation is concerned, DTC has made the commitment to the process, but it should also include the Forest Utilization and Education Division components of the Project.

The interim evaluation of DTC in 1991, the 1992 Baseline Survey and the current mid-term evaluation serve as principal mechanisms of evaluation, as well as evaluations/reviews conducted by independent observers. External evaluation of DTC, therefore, is well-covered with respect to the means and the process. In addition, CARE/International in Uganda and USAID/Kampala have access to all the interim reports and are able to intercede, as needed, in terms of addressing the questions of procedure and/or content in the M&E components of DTC.

An attempt to measure impact, as part of the evaluation process, is a much more difficult proposition. Some parties may perceive that the M&E process should feed into the USAID mandate to transmit annual Assessment of Program Impact (API) reports. There is no clear USAID guideline as regards NGO participation in the process. Hence the nature and types of records collected by DTC may not adequately serve the need. At a minimum, USAID should be asked to comment on what DTC reportage contributes or does not contribute to the API procedures.

10.2 Next Steps

The Project should strengthen its monitoring and evaluation program. Monitoring and evaluation has begun on the Project's extension activities. A useful start has been made in this area. The same needs to begin with training and conservation education. Likewise, monitoring and evaluation will be of critical importance for any multiple use of park resources.

The Evaluation Team believes that monitoring and evaluation should provide Project management with key indicators regarding the effectiveness of its approaches. It should provide continual feedback which will help the Project to adapt its approaches and strengthen them. It should provide the Project with indications of acceptance and of impact. Moreover, it should provide farmers and communities with indicators on the effectiveness of various approaches.

Key indicators should be developed which indicate progress towards achievement of objectives. This requires clearly-articulated, and -understood objectives. This implies that certain hypotheses need to be posed and tested. Examples of hypotheses which are relevant to monitoring and evaluation include:

- Project activities result in improved soil conservation;
- Project activities result in a clearer understanding of the benefits of the parks;
- Project activities enhance the economic well-being of farmers;
- Periodic training of CEAs results in better job performance;

among others. Each hypothesis should have a set of corollaries, of indicators by which to measure, monitor and evaluate. Examples of such indicators for soil conservation might include not only the number of bunds constructed or distance covered, but also attitudinal observations of farmers themselves as to the effectiveness of bunds.

The 1992 Baseline Survey provides a good basis from which to build a sound, but simple, Monitoring and Evaluation system. It sets the background for testing a number of hypotheses relevant to the Project. It also provides a framework by which the Project can monitor progress over a period of time (i.e., longitudinal surveying). The large sample size should enable Project personnel to go back to particular groups (e.g., people who live directly adjacent the parks, women head of households, families with more than five plots of land, people who used to engage in pitsawing in Bwindi, etc.) to determine changes over time, particularly changes which can be attributed to Project interventions.

It is critical that the heads of each department (extension, conservation education, etc.) set out clearly the objectives of their departments. They should then set out the critical assumptions regarding their activities and a list of indicators. The list should not be long. It should conform to a set of information which can be easily collected, easily entered and tabulated, and, most especially, easily analyzed to determine progress towards achieving objectives.

CEAs, rangers and other field staff should be charged with the periodic and regular collection of these data. This implies that they should clearly understand why they are collecting the data, and to what uses it will (or could) be put. This also implies that they should be informed of results and have some understanding of what those results mean. Data collection should be as straightforward and simple as possible. Data collection sheets should be set out with as few open-ended questions as possible. The bulk of the sheets should set out questions or observations in such a manner as can be completed with "yes" or "no", "good"-"fair"-"poor", and the like. This not only makes data collection easy (and reduces somewhat the individual bias), but it also makes data entry and analyses much easier than longer, more complicated questionnaires.

The CEAs', rangers' and others' field data need to be passed on to the department heads who, in turn, should provide this information on a regular basis to the Monitoring and Evaluation Officer. At present, DTC's Agronomist is also responsible for Monitoring and Evaluation. She could be provided a data collection and entry assistant.

The most difficult part of monitoring and evaluation is setting the system in place. This will require the department heads to work closely with Project Management and with the officer in charge of Monitoring and Evaluation to set out the framework and the key data to be collected.

Thereafter, data collection, entry and analyses should be routine, and should not require a full-time position. Again, the purpose of such data collection, indeed of monitoring and evaluation itself, is to provide Project Management with clear information on the direction the Project is taking and how to adapt Project approaches, on a basis of such information, to achieve objectives better.

Having CEAs, rangers and other field staff collecting information, and participating in its review, is a subjective exercise. An element of objectivity needs to be applied periodically, as has just occurred with DTC's recent external "focus groups" review. That exercise provides an excellent framework for future, on-going evaluation work. Bringing in outsiders to ask specific questions to test the Project's hypotheses provides a good background for verifying the effectiveness of Project approaches. Such verification should be random and should be as unbiased as possible in order to maintain objectivity.

There is a particular need to put in place a monitoring and evaluation program for the multiple use program. This should provide the Project with information on location, level of conflict between people and parks, whether or not products from the parks are used by the producers themselves (own-use) or marketed, and if marketed, where (and does this change over time).

One implication of this recommended approach is that CARE's PIRs will have to be adapted to include a monitoring and evaluation reporting component.

Annex 1
Terms of Reference
Development Through Conservation (DTC) Project
Mid-Term Review

1. Background to the Project

The Development Through Conservation Project (DTC) is an Integrated Conservation and Development Project (ICDP). ICDP's are a new generation of conservation initiative attempting to reconcile the needs of conserving biological diversity with the subsistence and development needs of the communities surrounding protected areas. DTC is CARE Uganda's first ICDP and as such is experimental in nature.

DTC is now mid-way through its second phase. The first phase was from September 1988 to September 1990 and received bridging funds until March 1991. During the first phase CARE was a sub-contractor to a larger USAID-funded World Wildlife Fund (WWF) Project that was working in the Bwindi Impenetrable and Mgahinga Forests. CARE's role as the subcontractor was to work with communities living around the forest and to carry out biological inventory within the forests. The community work consisted of providing conservation education through a network of Conservation Extension Agents (CEAs), as well as technical advice on tree planting, small animal husbandry and soils. Following an evaluation in July 1990, CARE was requested to develop a larger, five year project to be funded directly by USAID. The proposal development and approval process took several months and was finally completed in December 1991, though start date and funding were backdated to April 1991.

The first phase of the project experienced difficulties. In particular the first agreement with the Government of Uganda was delayed, and the project found it difficult to recruit senior national staff. There was an eight month gap between project managers, and the project was on minimal funding from April to November 1991. Furthermore, war in Rwanda meant that Mgahinga Forest became impossible to work in.

Even while the project approval process was moving forward, changes were being made to the details of project implementation. Bwindi became a national park, giving it greater protection, and reducing the urgency to document its biodiversity through the program of inventory outlined in the project document. On the other hand, during the change to national park status, communities living around the edge of the forest became even more hostile to conservation efforts than previously, since they were now completely excluded from the forest. In the light of the greater undertaking of the project area and the growing information on ICDP's, the project began to examine some of the earlier assumptions regarding project interventions, particularly those related to small animal husbandry. The project changed from using many poorly supervised, part time extension staff, to fewer full time extensionists. It also began to review its extension methods.

The project invested in studying the interaction of people with park resources to understand better what resources existed in the park that people wanted continued access to. UNP has now agreed that communities may have access to one fifth of the total park area for controlled harvesting of certain forest resources. DTC has began a participatory forest management exercise with communities to implement this. On farm substitution activities, such as woodlots and agro-forestry, which have long been main project activities, are now becoming more comprehensive. The project has also been heavily involved in supporting UNP staff in

the production of a management plan for Bwindi National Park. Plan production has been a participatory process involving community leaders.

In an effort to educe the hostility of the communities, and to meet some of their immediate felt needs, the DTC staff have engaged in a number of agricultural development activities to help improve farm resource conservation and agricultural production. These include the introduction of climbing beans, improved banana plantation management, and vegetable growing. With farmers seeing the project offering tangible benefits, attitudes to the project have improved. While some hostility to the park and UNP remains, DTC staff are now seen as working for the people while at the same time protecting the park.

2. Background to the Mid-Term Evaluation

Since the start of the current five-year phase of the project in April 1991, there have been several shifts in emphasis. In a number of key areas, project activities no longer reflect the original objectives and strategies that are outlines in the project document. With hindsight, these objectives and strategies were poorly defined. This simply reflects that reality that DTC, as a pioneer of the integrated conservation/development concept, is essentially a pilot project.

Thus, in addition to evaluating project performance to date, a major aim of the current evaluation is to revise the project document, redefining objectives and targets in the light of DTC's (and other ICDP's) recent experience. Current strategies must be critically examined so that CARE, government counterparts, and the donor all agree on the direction in which the project is now going, and project staff have the firma mandate they need to proceed.

A fundamental problem that the project has faced over the last two years, and a priority issue for the review team to address, is the confusion in the current project document over the aim of the rural development activities. In the DTC context, is development a means to an end (conservation) or an end in its own right? A recent review of 23 notable ICDP's highlighted this issue as being a fundamental problem with almost all such projects (Wells and Brandon, 1992). The authors concluded "several project reviewed have been successful in rural development terms but the critical development/conservation linkage is still generally missing or unclear".

Clarifying whether the purpose of DTC's development activities is a) to improve UNP's public relations, b) substitute now available forest products, c) generally compensate for lost resources, or d) a genuine attempt to alleviate poverty, which is the ultimate threat to the forest in the longer term. Codifying DTC's principal purpose is an essential output of this evaluation, in order that CARE, DTC staff, and GOU counterparts agree on this, and focus priorities and activities accordingly.

Whether population pressure is a real threat to the forest in the longer term is a key consideration. If we believe that it is, then clearly the dominant issues that must be considered are land productivity (i.e. soil erosion) and population growth rates. A recent review of DTC activities concluded "unless someone does address the huge problem of soil erosion in the area...all of the work DTC will eventually prove futile" (Gerrard, 1992). The dismal record of soil conservation programs in Africa is well known. While DTC is promoting soil conservation with some success, it is clear that to achieve a sustainable impact on the scale

required will need far more effort and a very different approach from that currently being pursued.

In redefining and prioritizing project objectives and activities, a recent development that has important implications is the start-up of tourist revenue sharing and the Bwindi Trust. To maximize the conservation value of all the various development activities in the project area, the conservation message presented to communities must be clear and uniform, and the development linkages explicit. This means that DTC would have a central role in the operation of the two schemes at community level.

The institutional sustainability of DTC's activities has been another area of growing concern. As far as DTC's community conservation activities are concerned (forest product utilization, conservation education promotion and facilitation, revenue sharing, and Bwindi Trust, and multiple forest product use should be improved once the recent proposal to establish a corps of community conservation rangers within UNP is implemented. However, the sustainability of the arrangement still depends on UNP salaries being substantially increased over the next few years to remove the need for salary "top-ups" which are essential at present if suitable staff are to be recruited and maintained.

On the extension side, in addition to similar concerns over the large gap between GOU and DTC salaries, there may be a need for radical staff restructuring before the end of the project. At present, the vast majority of extension staff are DTC project employees. Although there are 10 GOU extension staff attached to the extension team, their roles and responsibilities are not clearly defined in relation to the duties of the DTC project staff.

Finally, the review team should bear in mind that CARE is already considering a third five year phase of the DTC project to start in 1996. Another aim of the current evaluation should be to consider a broad outline for this third phase.

3. Key Issues/Activities

3.1 Review the project context:

- in-forest ecology
- park/community relationship
- out-forest environmental situation
- community attitudes to DTC
- community development priorities
- current project proposal
- expectations of CARE/donor/GOU

3.2 Evaluate project impact to date: how effective, gender impacts, sustainability, and relevance to existing objectives.

- inventory
- park management plans
- forest product utilization

- extension/interventions (both "message" and "medium")
- education program

3.3 Critically review DTC's current approach with reference to redefined objectives, relating to the experience of other ICDP's. Some key issues:

- expand project target area for some activities
- should DTC continue with inventory work?
- recommendations for future research topics
- forest utilization: monitoring if usage of particular forest products is sustainable ecologically
- rural development
  * target group
  * diversify and intensify of activities (additional activities interventions)
  * emphasis on capacity building (process) rather than interventions (outputs)
  * extension through contact farmers or through groups
- education/training
  * residential workshops versus work in the villages
  * need for more training centers (size and location)
- gender
  * relevance to group objectives
  * need for explicit gender bias?
- how to better integrate project activities at community level to increase overall conservation impact.

3.4 Review institutional linkages (UNP, RC's, GOU extension service, Forestry Department, Bwindi Trust/Revenue sharing, other NGOs)

- is the project making maximum use of resources available in other organizations?
- is collaboration effective?
- institutional sustainability

3.5 Conduct a participatory planning exercise to revise the project logframe.

- Redefine project objectives
- develop new indicators and realistic targets
- impact evaluation: what criteria, how and who will do it?

3.6 Review project resources and staffing

- the need for expatriate staff
- staffing gaps
- organizational structure and its suitability

4. <u>Evaluation Outputs</u>

The evaluation report should include the following:

- a review of project technical interventions and recommendations.
- a review of processes used to date and recommendations
- recommendations for revising project document
- recommendations for staffing configuration
- recommendations for CARE's role vis-a-vis GOU institutions
- recommendations on the issues of how Bwindi Trust, Tourist Revenue sharing etc. should be factored into project objectives and activities
- recommendations for third phase project objectives.

Annex 2
List of Contacts

Name	Position/Title	Project/Agency	Address
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Bagandi, F.	Contact Farmer		Ntungamo
Bagoora, Festus.	Project Officer	MEP	
Bagorogoza, C.	CEA	DTC Rubugiru	
Bakasiagaki, Aloizio.	LCSC Representative	GEF Trust	
Bandebaho P. (Ms)	Rural Energy Contact		Masaya
Bandusya	Herbalist/Basket Weaver	Kitahurira	Mpungu Parish
Baranga, Jonathan.	Director	ITFC	
Barangura, Y.	Contact farmer		Kifunjo
Barise, F.	Ranger	BINP/UNP	Kitahuriyra
Baryowaabo, C.	Contact Farmer		Masaya
Batama, P.	Rural Energy Contact		Kanungu
Batuma	Entrepreneur		Kabale
Bayer, Gary.	Chief, ANR	USAID	
Bazakabona S.	Forestry Officer	FD, Kayonzo	
Beinempaka	Training Officer	DTC	
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Bujara, Simon.	CEA	CARE	Kabale-Ikuba
Bukenya, M.	DVPO	Kisoro District HQ	Kisoro
Byamah, J.B.	Forest Officer	Forest Dept.	
Byanigaba, A.	Conservation Education Agent	DTC	Muramba

Byarugaba, A.	CEA	DTC Mpungu	
Byaruhanga, G.	CEA Kifunjo	DTC, Kanungu	
Byasmukama, E. (Ms)	CEA	DTC Nyamabale	
Byibesho, J.	RC3 Chairman		Nyarusiza
Carlson, Cindy.	Program Officer	CARE/Uganda	
Clausen, Robert.	Project Officer	USAID	
Deo, Nsaba.	Exension Ranger	UNDP/DTC	Gitenderi Parish, Kisoro
Dunn, Stanley.	Director	CARE/Uganda	CARE/Kampala.
Dutki, Geo Z.	Project Manager	CARE	
Edreda, Tusiime.	Farmer		Kashasha
Franks, Phillip.	Project Manager	CARE	Kabale
Friday, E.	School Teacher	Karuhinda PS	
Gaijurenda C. (Ms)	Widow		Masaya
Gilbert, V.	Rural Energy Coordinator	DTC	
Hakabaya Women's Group	Farmer		Ntugamo Rubuguni
Hanyuruva, S.	CEA	DTC Gisozi	
Hategа, N.	Acting Factory Mgr	Kayonza Tea Factory	Kanungu
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Kabyetsiza, Ms Redemptor.	Rep. for P.C.	SWARP	
Kagumaho, E.	Field Officer	DTC	
Kajoka	Herbalist/Basket Weaver	Kitahurira	Mpungu Parish
Kakankata, J.	Tea Farmer		Kitahuriya
Kamukama, Willy.	Dep. DAO	Kisoro	
Kanongo, Maahe.	Ed.	CARE	Kabale-Ikuba
Kashasha Women's Group	Farmer		Kashasha
Katabazi, A.	CEA	DTC Kitojo	
Katochi, V.	Forest Officer	BINP/UNP	Kitahuriya
Kataratambe, R.	RC5 Chairman		
Katenangwa, S.	DES		Kabale
Katunji, J.	CEA	DTC Ntungamo	

Kavuma Ms.	Principle Env. Officer	Ministry of Natural Resources	Kampala
Kikabeinrika, S. (Ms)			Nyaruhanga
Kiruungi, Tonny.	Park Warden	MGNP	
Kisakye, Jane.	Agronomist	CARE	Kabale
Kiwanuka, L.	Commissioner for Forestry	Forest Dept.	
Komayombi, B.	DAO	Kabale	
Kunungo, M.	Forest Conservation Off.	DTC	
Kuribuuza, D.	DAO	Rukungiri	
Kyampire, O.	Focus Group Evaluator	Makerere University	Forestry
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Mangheni, Dickson.	DFO	Rukungiri	
Masya Women Group	Farmers		Masya
Matabazi, Mr.	Headman	Water Development Department	Kabiranyuma Pipeline. Kisoro Distri
Mbarinba, A.D.	DFO	Kabale	
Mihanda, A.	CEA	CARE/DTC	Nteko
Mbonye, A.	Extension Officer	DTC	
Monica	Farmer		Masya
Mpabanzi,D.	Agricultural Officer	MOA, Kanungu	
Musinguzi, J.	Agric. Asst.	MOA (GOU/DTC)	Nteko
Mugaye K. (Ms)	Contact Farmer		Ntungamo
Mutebi, Jackson.	Forestry Utilisation	CARE/DTC	
Muterehe, J.	Farmer		Kitahuriyra
Muwanuke, Abdul M..	Economist	MTWA	
Ndwogo	Pit Sawer		Ntugamo Rubuguni
Ngime, Ngoma.	District Administrator	Kabale	P 0 Box 5, Kabale

Niragore, P.	Sub County Chief		Nyarusiza
Nkuriyingoma, D.	RC2 Chairman		Rukongi
Ntege, A.	Extensionist	Forest Dept.	Nteko-Rubugum
Ntegyereize, J.	Arch Deacon	Nyaratare Archdeaconry	c/o Kitariro Parish
Ntegyeveize, Rev.	Clergy	Church of Uganda	Kitalilo
Nteziyaremye, Callist.	Extension Ranger	UNP/DTC	Rukongi Parish Kisoro
Nyakakyekyi	Farmer		Gisozi
Nyamagum, Mary.	Farmer		
Nyamaguru, Virginia.		CARE	Kabale-Ikuba
Nyamaguru, V. (Ms)	Training Centre Manager	DTC	
Okorio, J.	Team Leader	ICFAF/AFRENA	
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Peace, Agnes and Felagiyana	Farmer		Nteko-Rubugum
Resti	Farmer		Masya
Ruyoka, C.	Senior Leaf Manager	Kayonza Tea Factory	Kanungu
Rwakatungu, C.	Outgrower Manager	Agro Management	
Rwego, F.	Extensionist	MOA	Nteko-Rubugum
Rwankatogoro, B.	DES Kabale		
Sabiti, E.	Contact Farmer		Kifunjo
Sebugwawo, P (Ms)			Nyaruhanga
Serugo, Joseph.	Senior Warden-in-Charge	BNIP	
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Sherper, Keith.	Mission Director	USAID-Kampala	
Sophia	Farmer		Ntugamo Rubuguni
Sucker, J. Klaus.	Park Warden	Project Leader MGNP Project	
Tekata, J.		UNP	
Tibirrikwata, E.	Basket Weaver	Rukungwe	Mpungu Parish
Tindiwegi, John.	LCSC Representative	GEF Trust	Kanungu

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Tumwesimire, C.	Conservation Education Agent	DTC	Buremba
Tumwesimire, K.	CEA	DTC Mpungu	
Tunukunde, Z.B.	Chairman	UNFA	
Turinawe, Liver. Rev.	Nyaratare Archdeaconry		c/o Kitarino Parish
Turyagenda, M. (Ms)	Farmer		Kifunjo
Turyahabwe, J.	CEA	DTC Kitojo	
Turyatunga, Frank.	Officer	NIC Ministry of Natural Resources	Kampala
Tusiime, Frank.	DFO	Kisoro	
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Women Group	Farmer		Gisozi
Zinkankura, S.	Herbalist	Kanyashagye	Mpungu Parish

Annex 3
List of Readings and Bibliography

Author	Title	Place and date published and publisher
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Annex 4
Evaluation Team Itinerary

	BESS	HUGHES/KAMUGISHA	TUKAHIRWA	TRENCHARD
MON 19	KAMPALA: INITIAL MEETINGS WITH CARE/USAID/MWT/FD/MOA/UNP			
	KAMPALA	KAMPALA	KAMPALA	KAMPALA
TUES 20	TRAVEL TO KABALE			
	KABALE: INTRODUCTIONS, VISIT RC5, DA, DES, PRELIMINARY DISCUSSION OF PROJECT OBJECTIVES			
	KABALE WH	KABALE WH	KABALE WH	KABALE WH
WED 21	RUBUGURI: VISIT GOUS WITH DAD & DFO KISORO	KANUNGU: EXTENSION WITH DTC STAFF	MGAHINGA: INTERVIEWS AND GROUP DISCUSSIONS	MGAHINGA: FOREST UTL AND MGT PLAN
	RUBUGURI: VISIT GOUS WITH DAO * DFO KISORO	KAYONZA: EXTENSION WITH DTC STAFF	MGAHINGA: INTERVIEWS AND GROUP DISCUSSIONS	MGAHINGA: GROUP DISCUSSION (WOMEN)
	KABALE	KANUNGU	KISORO	IKUMBA
THUR 22	RUBANDA & RUHIJA: CEAs, UNP STAFF, DTC EXTENSION, UTIL, & CON. ED.	KAYONZA: EXTENSION WITH DTC STAFF	RUBUGURI: INTERVIEWS AND GROUP DISCUSSIONS	RUHIJA: MEET ITFC STAFF.
		RUHIJA: EXTENSION WITH DTC STAFF	RUBUGURI: INTERVIEWS AND GROUP DISCUSSIONS	RUHIJA: VISIT KITOJO BEEKEEPERS
	RUHIJA	RUHIJA	KISORO	RUHIJA
FRI 23	MPUNGU: FOREST UTILISATION WITH RW & PT	RUBANDA: EXTENSION WITH DTC STAFF	RUBANDA: INTERVIEWS AND GROUP DISCUSSIONS	MPUNGU: PARTICIPATORY FOREST SURVEY WITH JOSEPH SERUGO??
	KAYONZA TEA FACTORY, BUHOMA: MEET LIZ McFIE, BINP STAFF	RUBUGURI: EXTENSION WITH DTC STAFF	RUBANDA: INTERVIEWS AND GROUP DISCUSSIONS	
	BUHOMA	KISORO	KABALE WH	BUHOMA

SAT 24	KANUNGU: FOREST UTILISATION WITH RW & PT	MGAHINGA: EXTENSION WITH DTC/UNP STAFF	KANUNGU: INTERVIEWS AND GROUP DISCUSSION	KANUNGU: VISIT BATWA DISCUSS MGT PLAN
	KANUNGU: GROUP DISCUSSION (MEN)	RETURN TO KABALE	KANUNGU: INTERVIEWS AND GROUP DISCUSSIONS	KANUNGU: GROUP DISCUSSION WITH MEN
	KABALE WH	KABALE WH	KABALE WH	KABALE WH
SUN 25	WRITING	WRITING	WRITING	WRITING
	EVALUATION REVIEW SESSION I: STATEMENT OF INITIAL FINDINGS:			
	EVALUATION REVIEW SESSION II: RECOMMENDATIONS & NEXT STEPS.			
	KABALE WH	KABALE WH	KABALE WH	KABALE WH
MON 26	EVALUATION REVIEW SESSION III AND WRITING			
	GROUP MEETING AND DEBRIEFING ON FIELD FINDINGS WITH DTC MANAGEMENT, EXTENSION, CON. ED. AND UTILIZATION STAFF. CONTINUE WRITING.			
	KABALE WH	KABALE WH	KABALE WH	KABALE WH
TUES 27	DISTRICT HEADS MEETING INVOLVING DAOS, DFOS, PARK WARDENS, ICRAF, ITFC. WRITING.			
	KABALE WH	KABALE WH	KAMPALA	KAMPALA
WED 28	IKUMBA: VISIT RCS/CHIEFS TRAINING WORKSHOP. EVALUATION TEAM RETURNS TO KAMPALA.			
	KABALE WH	KABALE WH	KAMPALA	KAMPALA
THUR 29	MEETINGS WITH GOU (MFEP, ENVIRONMENT, FOREST DEPT., MTWA)			
FRI 30	DEBRIEFING WITH USAID,	CARE/DTC,	GOU OFFICIALS	
	KAMPALA	KAMPALA	KAMPALA	KAMPALA

Annex 5
Proposals for Future Management Initiatives in BINP

This annex provides some suggestions for UNP and DTC to consider regarding future park management initiatives in BINP. It begins by giving a brief background on the current management situation in Bwindi. Following this, it sets out the concept of adaptive management and the role of the park ranger in managing national parks. Finally, an illustrative terms of reference for a Park Management Technical Advisor is provided as for discussion.

Background:

The UNP has been given the mandate to conserve, as a national park, the Bwindi Impenetrable natural forest. Over the years it has received assistance from three main players, the Institute for Tropical Forest Conservation (ITFC), the International Gorilla Conservation Project (IGCP) and the CARE Development through Conservation Project (DTC). The mandate given to UNP is to manage the park for the conservation of biodiversity and for all the other resources it provides the nation (income generation, watch catchment, anti-erosion, etc.). To conduct its task, UNP has to assure overall management of the park.

To date, park management in Bwindi is essentially limited to activities supported by the two projects (DTC and IGCP) and the ITFC. The park tourism programme is supported by IGCP, research by ITFC and community issues/local development by DTC. DTC has also provided support to the park research program by conducting baseline flora/fauna inventories, development of an herbarium, management plan, and significantly for future management initiatives, the development of multiple use zones around the park.

Other areas of park management in BINP are neglected due to lack of resources (financial and material), human resources, and adequate training of park staff. The following sets out some park management activities that are not adequately addressed in BINP at present, and which need to be enhanced before BINP can assure full protection of the park.

1. <u>Planning.</u> Management planning must be re-enforced so it becomes part of normal park operations and conducted on a continual basis. The existence of a management plan will not assure the management of a park. A system for management planning needs to be installed that functions on a <u>daily</u> basis. Daily activities of personnel need to be ordered according to a planned programme. This process is what will eventually give UNP the capabilities to coordinate all its park programmes.

2. <u>Monitoring.</u> A monitoring system must be established to determine what is occurring in the park at all times. Currently, park management will not be aware if there are major vegetation changes occurring in the park, or if illegal activities (or an animal population) are on the increase or decrease. The monitoring system should provide timely information on what is occurring in the forest.

3. <u>Research.</u> A comprehensive research plan that supports management needs must be developed. The research plan should address priority questions that management must answer to properly protect the park. A list of problems facing the park should be developed. Unanswered questions on why these problems are occurring would be prime candidates to include in a research program. ITFC should liaise closely with park management to determine these research priorities.

4. Administration. Proper administrative procedures for personnel, information an financial management must be established. This will assure that information fl among park personnel is continuous, timely and acted upon. Tasks must be identified and be product-oriented. Job descriptions and responsibilities have to be clarified for all park personnel.

5. Training. Training is currently conducted in an opportunistic, sectoral fashio depending on the source of financing. A training program needs to be developed that is based on a task analysis and the current skill level of all park personnel.

6. Career Development. The training program should also be integrated with a care development plan for park personnel. Chances of promotion, recognition for goo work and continual targeted training are all incentives for good work.

7. Infrastructure. Planning for park infrastructure and maintenance must be conducted in the context of maintaining the integrity of the park and accordin to management programs. A maintenance program should be developed to assure th all road, buildings, offices and lodgings are maintained in workable order.

Finally, and most important, there is a need for a **unified management structure** at Bwindi to pull all these programs into one coordinated package, and to be implemente in the context of adaptive management.

Adaptive Management

As stated before, most management programs in BINP are those supported by projects. Programs outside the realm of existing projects are essentially managed by crisis control. One of the goals of good management is to try to foresee problems before they occur. To accomplish this, sufficient baseline information must be available a a monitoring system must be establish to determine trends.

Once management is able to gather pertinent information on what is happening in the forest, it must decide on what actions are the most appropriate. No one person, or organization, can state the best way to manage a park. Park management is a dynamic process that must change according to new information, evolving priorities of government and the local communities, and better understanding of the forest's ecology. Moreover, a park is not a static ecological system but is constantly evolving.

In this context, park management must be continually adapted to new circumstances. Park managers need to assess the changing environment (both physical and political) to determine if old management actions are still feasible, desirable or having the anticipated effect.

More important, park management must not be hesitant to try new, innovative approaches to solve problems. Hypotheses must be formulated by park managers to be tested in the field. If a management hypothesis works, it must be continually monitored over time to determine its effectiveness at a later date. If it doesn't work, management should swiftly arrest the activity and be prepared to test a new hypothesis.

By constantly testing new methods of management, Bwindi National Park will not only be able to address problems as they arise, but it will better situated to assure the protection of the forest for the long-term.

Park Ranger System

The park ranger system forms the backbone of park management. Rangers comprise the majority of park personnel. They are within the forest on a daily basis and as a group, have the most contact with the local communities. Unfortunately, they are usually only used for law enforcement. Not only does the park lose manpower by having them limited to this one activity, it loses a chance of establishing better relations with the local communities.

Rangers have to play many roles: law enforcement, community relations and monitorin (including data and information collection). It is a difficult situation to balance Management should strive to have rangers become respected, and active, members of t community - instead of serving as symbols of a park unresponsive to local needs. Training in community relations, conflict resolution and basic conservation are a priority before rangers can fulfill these roles.

Rangers are also an important source of information that is being overlooked. By training rangers in data collection the park will be able to have new information coming in on a daily basis. Data collected by the rangers should include, at the minimum:

- the recording of patrols by location and period of time;
- the recording of activities/observations within categories set by management (key species and types of illegal activities); and
- the analysis of data, within a set index, for determining the level of activities/observations (number of activities/observations per time peri or per kilometer).

This minimum baseline information will allow park managers to determine:

1) the relative amount of an activity in different areas of the park or for the whole park;

2) seasonal differences of forest use;

3) changes in the level of activities (e.g., are there more cases of poaching this year than last year, or the previous five years?); and

4) The efficacy of the ranger patrols in discovering forest uses/illegal activities.

An analysis of ranger patrols, over time, will permit the park manager to concentrate patrols in areas of high activity according to seasons or throughout the year. This will also indicate if the number of guards must be augmented, lowered or simply oriented towards different places. This information can also be transferred to out-park activities to ease pressure on certain areas of the forest.

If the rangers receive sufficient training and supervision, their reports can becom an important source of information on a variety of subjects. These other subjects could include monitoring multiple-use zones, animal population dynamics, food habit important species habitats, reproductive seasons, etc. If park management requests rangers to make observations of a key species, they will be able to provide the following information:

1) relative densities of the species throughout different areas of the park;

2) territorial information on a group of species;

3) movements of the species throughout the forest; and

4) information on the behavior, feeding habits, reproductive cycles, etc. accordi to indicators specified by managers.

It will, of course, be particularly critical that ranger supervisors occasionally accompany the rangers on patrols to reinforce training and report writing. Without precise data, all conclusions taken from these reports will also be inexact.

Eventually after the present system is running smoothly and guards are functioning to their capabilities, the number of guards needed to adequately patrol each sector can be evaluated. At present, this is impossible to determine because guards are functioning at well below their potential.

ILLUSTRATIVE TERMS OF REFERENCE
BINP PARK MANAGEMENT TECHNICAL ADVISOR

BACKGROUND

The UNP has had the responsibility to conserve Bwindi Impenetrable National Park (BINP) since 1991. Over the years it has received assistance from three main player the Institute for Tropical Forest Conservation (ITFC), International Gorilla Conservation Project (IGCP) and the CARE Development through Conservation Project (DTC). The DTC project has the mandate to assist local resource users around BINP to meet their basic needs while protecting and sustainable managing the forest. UNP manages the park for the conservation of biodiversity and for all the other resources it provides the nation (income generation, watch catchment, anti-erosi etc.). To conduct its task, UNP has to assure overall management of the park.

However, UNP lacks a unified park management structure in BINP and the capabilities to coordinate its park programmes. The management of Bwindi is essentially limited to activities supported by the two projects and the ITFC. Park tourism programmes are supported by IGCP, research by ITFC, community issues/development and some in-forest activities by DTC.

To assure the sustainability of DTC's and UNP's long-term objectives, park management must have the capability to address all the different programmes of park management. In this context, DTC aims to assist UNP by increasing its management capabilities to conserve the national park.

OBJECTIVES:

The overall objectives of the Park Management Technical Advisor will be to:

1. assist UNP to develop a unified park management structure in BINP; and

2. improve UNP's capacity to plan, implement and coordinate all park programmes in BINP.

SCOPE OF WORK:

1. Train counterpart and all other park personnel in adaptive park management techniques.

2. Establish reporting procedures for all park personnel up to the Warden-in Charge including, inter alia, reporting on ranger patrols, tourism and tourist profiles, research, community initiatives, education and administration.

3. Develop a monitoring/control system, based on the park ranger system, to determine movements and relative densities of key species, amounts and location of forest use and to determine impact of management initiatives.

4. Assist the Warden-in-Charge in coordinating and implementing the BINP Management Plan.

5. Assist the BINP to coordinate the development of comprehensive plans for all park programmes.

COUNTERPART: BINP Warden-in-Charge

RESPONSIBLE TO: Director, UNP

DURATION: 2 - 4 years