

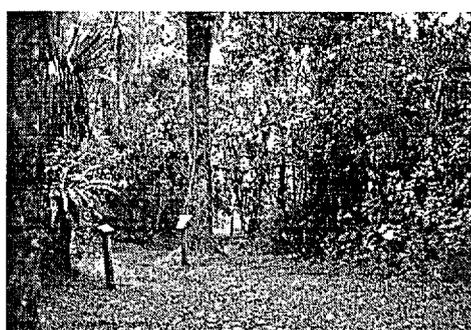
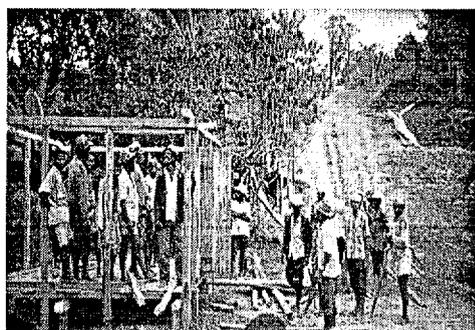
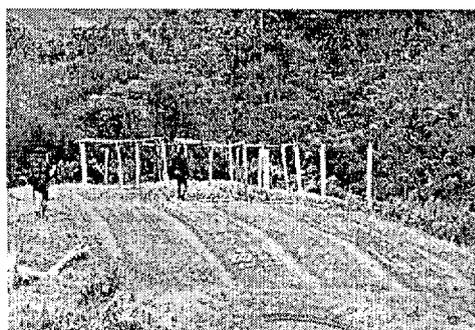
Madagascar's

Integrated Conservation & Development Projects:

Lessons Learned by Participants

Project Employees, Related Authorities

& Community Beneficiaries



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Preface

In 1996, a Steering Committee composed of representatives from ANGAP, USAID, CARE, CI, WWF, SBU, VITA, PACT and TR&D undertook an assessment of lessons learned from SAVEM ICDP's. The Committee sought to facilitate an internal discussion by gathering feedback from those individuals who had direct participation with the projects to uncover how individuals felt about the program and what they had learned during phase 1.

As facilitators our task was to gather and present data in such a manner that the informants "speak for themselves" providing an honest account with little or no interpretation of or interference with those spoken words. The following report documents the attitudes and perceptions of those who know the ICDP's the best - the employees and the individuals in local communities.

"SAVEM means new ways to think to change mentalities, to work in synergy, flexibility, having the right to make mistakes, but not to repeat them."

- Study Respondent

"The project is about help, helping our community develop and helping the environment."

- ICDP community participant

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Glossary

- ANGAP:** National Association for the Management of Protected Areas.
- CARE:** International NGO responsible for managing the Masoala Peninsula Project.
- CI:** Conservation International, International NGO responsible for managing the Zahamena Reserve.
- CT:** Technical Consultants.
- CTP:** Principle Technical Consultants.
- DEAP:** ANGAP program for returning a percentage of park entry fees to communities for development needs.
- DEF:** Department of Water and Forests.
- E.E.:** Environmental Education.
- EP1:** Environmental Program - Phase 1.
- EP2:** Environmental Program - Phase 2.
- ICDP:** Integrated Conservation and Development Projects.
- ICTE:** Institute for the Conservation of Tropical Environments / Stony Brook & Cornell Universities, responsible for managing Ranomafana National Park.
- NGO:** Non-Governmental Organization.
- Pact:** NGO serving as the Grant Management Unit for the ICDP's.
- PAT:** Annual Work Plan.
- SAVEM:** Sustainable Approaches to Viable Environmental Management.
- Tavy:** Slash and burn agriculture.
- TR&D:** Tropical Research and Development - Consultants to ANGAP.
- USAID:** United States Agency for International Development.
- VITA:** Volunteers in Technical Assistance International NGO responsible for managing the Andasibe - Mantadia Complex.
- WWF:** World Wide Fund for Nature (WWF) International NGO responsible for managing the Amber Mountain Complex and the Andohahela Reserve.

Introduction

Background.

Madagascar is renowned for being one of the most important biological resources on earth: more than eighty-five percent (85%) of Madagascar's plant, reptile, and primate species are found nowhere else in the world. Unfortunately, Madagascar is also one of the poorest countries in the world (\$230 per capita income) with a rapidly increasing population. Deforestation, and other pressures caused by humans have resulted in an unparalleled loss of biological diversity and soil erosion, seriously jeopardizing the natural resource base upon which the majority of Malagasy people depend.

In response to these alarming concerns, Madagascar formulated a National Environmental Action Plan (1987-88) (the first government in the African region to do so) which advocated the establishment of protected areas as the main tool for ensuring conservation of Madagascar's natural resources. In 1990, as a principle donor to this Environmental Action Plan, the United States Agency for International Development (USAID) developed a program entitled "SAVEM" (Sustainable Approaches to Viable Environmental Management) the goal of which was to establish sustainable human and natural ecosystems in areas of Madagascar where biodiversity was being threatened.

To coordinate the protected area program (in collaboration with Madagascar's Department of Water and Forests-DEF) the National Association for the Management of Protected Areas (ANGAP) was established. Six (6) ANGAP protected area projects were identified and earmarked for SAVEM funding (*there are also other protected area projects which are not funded by SAVEM*). The projects, located across the country, were identified as areas incorporating Madagascar's unique natural resources (*see map, figure 1.*). Recognizing that these areas were being threatened, in part by local deforestation and exploitation, the projects were constructed as integrated conservation and development projects (ICDP's) and based on the concept that local populations will alter their behavior (to conservation of the environment) if they see a relationship between their economic and social well being to the protected area and if they are empowered to make the right kinds of decisions.

Daily operation of the SAVEM funded ICDP's was conferred by ANGAP and DEF (acting on behalf of the Malagasy government) to several international non-governmental organizations and financed through *Protected Area Development Grants* awarded and managed by Pact Madagascar's Grant Management Unit under a cooperative agreement with USAID. In general figures, the ICDP's received approximately eighteen and a half million dollars (\$18,500,000) through SAVEM for a period of approximately 3½ years.

Need for the Study.

In 1996, as the first phase of the environmental program (EP1) drew to a close, a Steering Committee for Lessons Learned was established to help augment the learning objectives fundamental to the EP1 program (composed of members from ANGAP, Pact, USAID, TR&D, WWF, CI, VITA, ICTE and CARE). The Committee determined that there was a need to document the strategies designed and applied within each ICDP and sought to facilitate an internal discussion of the program by gathering feedback from individuals who had direct participation with the projects.

The discussion topics for the study (originating from suggestions made by ICDP employees) identified many items that were at the heart of the ICDP program but were qualitative in nature - ideas critical to understanding the breadth of lessons learned but the type of items often left out of technical documentation -- people's feelings and perceptions about what worked, what didn't and why. The Steering Committee felt this information would be invaluable, not only for obtaining lessons from EP1 but for constructing conservation and development activities as Madagascar moves into a second phase (EP2) of the Environmental Action Plan. At the request of the Steering Committee, a bi-cultural facilitation team was contracted by Pact Madagascar to conduct a systematic participatory inquiry of the six ICDP's.

The following report presents the data collected by the facilitators from the SAVEM participants.

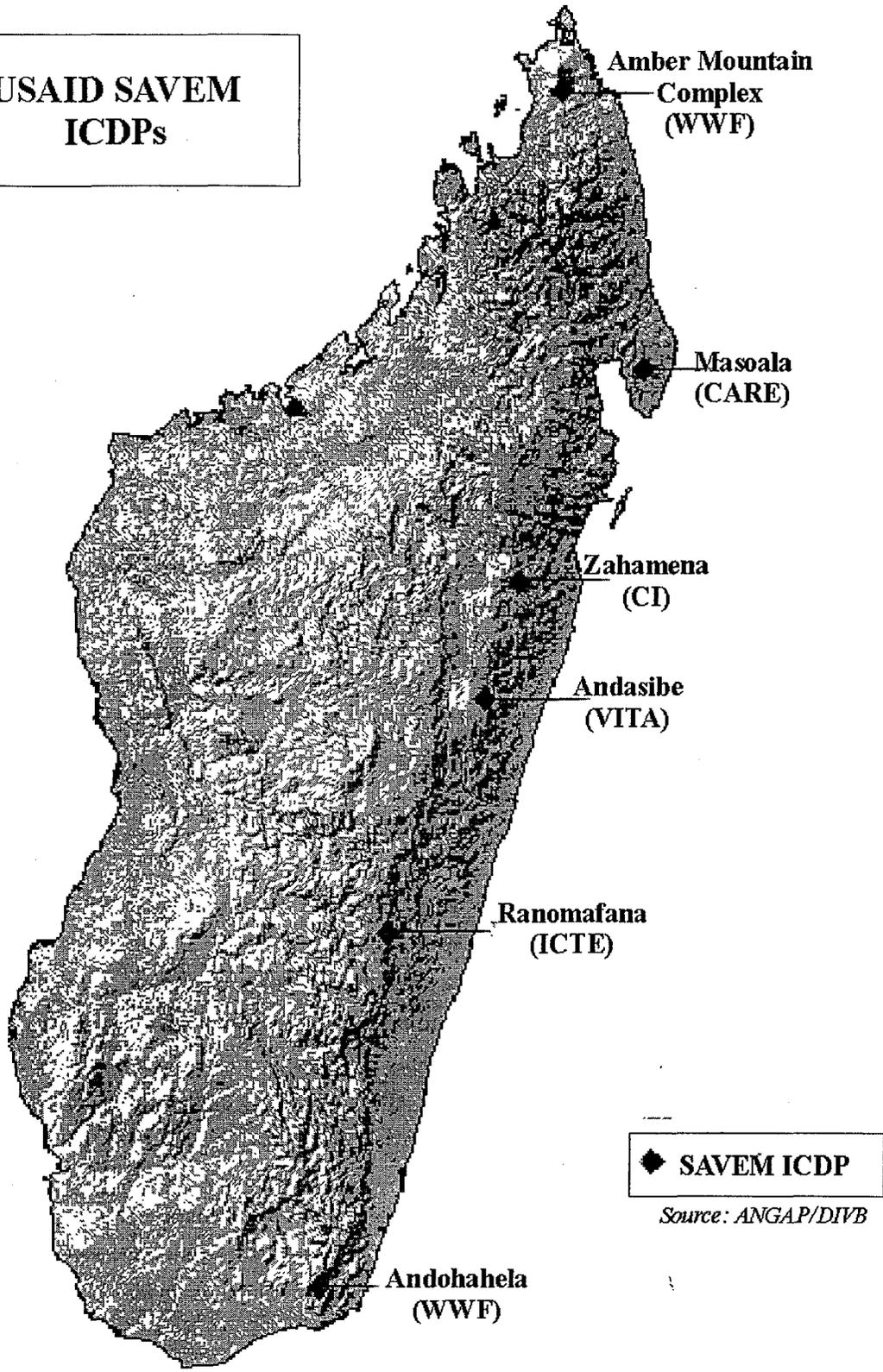
Methods

Research Objectives and Discussion Topics.

The primary objective of this investigation was to document the strategies designed and applied within the six SAVEM Integrated Conservation and Development Projects and to gain a practical understanding of the lessons learned by participants. Participants were defined as: employees on the ICDP's, related authorities (USAID, ANGAP, DEF, TR&D, Pact and the NGO "operators" in Antananarivo), and local communities.

Topics for inclusion in the study were initially submitted to the Steering Committee by the ICDP's. Individuals associated with the ICDP's were then contacted to review a draft list of topics and to help brainstorm further ideas. Simultaneously, the facilitators reviewed existing documentation, including USAID SAVEM documentation, ICDP proposals, annual work plans, and annual work reports, to develop an initial analysis of institutional goals and objectives for the ICDP's. By September of 1996, the side boards of the study had been defined, data collection instruments and activities had been drafted, and a pretest had been conducted at

**USAID SAVEM
ICDPs**



Source: ANGAP/DIVB

Figure 1. Map - SAVEM ICDP's

Zahamena ICDP (all discussion topics, questionnaires and methods were finalized by the Steering Committee).

Data Collection Activities.

The differing populations were asked to provide insight on a series of seventy seven topics formulated around 4 central discussion themes: 1) Maintaining and conserving Madagascar's biological diversity, 2) Creating integrated conservation and development programs and implementing activities, 3) Increasing public awareness and participation, and 4) Enhancing managerial and technical capacities to sustain protected areas. Questionnaires and interview instruments were customized for those discussion topics relevant to the specific population. Interviews were conducted in English, French and Malagasy, as appropriate. Information was collected by the facilitators utilizing the following methods:

Data collection activities / ICDP Employees:

- 1) In-depth interviews with the National Directors, Principal Technical Consultants, Department Heads (Conservation, Development, Communication, and Monitoring and Evaluation Divisions) and Technical Assistants on each ICDP.
- 2) Small group discussion and short written surveys from field agent supervisors.
- 3) Small group discussion with general project staff (those not participating in interviews).
- 4) Short written survey of project and DEF field agents.

Data collection activities / Local Communities:

Three communities per project were selected by the facilitators from a purposive sample based primarily on the level of project activities within a community:

- 1) Individuals within a community where the project had a lot of activities.
- 2) Individuals within a community that had some activities but was not a major site.
- 3) Individuals within a community with no project activities.

Communities were also selected based on their ethnic structure and location (to incorporate a variety of geographic regions and peoples). Interviews were conducted with representatives from the fokotany (local authorities and village elders), members of project working groups (referred to as *associations*), pilot farmers or other involved individuals, non-involved individuals, and individuals in communities with no activities. Individuals were randomly selected from these sub-populations. All interviews were conducted with *adults* (individuals living within their own households).

Data collection activities / Related Authorities:

Additionally, data was also collected from related authorities through;

- 1) In-depth interviews with selected individuals from ANGAP, DEF, TR&D, Pact, USAID and Antananarivo (Tana) offices of the NGO operators.

Data Analysis and Reporting Procedures.

Because of the nature of discussion topics identified, the majority of data collected were qualitative in nature and based on in-depth interviewing of subjects. Qualitative data was considered ideal for pursuing the selected subjects in-depth and creating interaction with participants and allowed the facilitators the opportunity to probe and follow-up on essential ideas fundamental to providing a contextual background. Respondents' answers were recorded directly on an interview form at the time of survey by the facilitators. Data was later entered into an electronic data base. Because of the qualitative nature of results statistical tests of significance were not appropriate. Data was analyzed utilizing an open coding process, whereby results were examined and broken down into discrete parts, closely examined, compared for similarities and differences and categorized by phenomena. Then data were "put back together" by making connections between categories comparing conditions, and searching for themes and patterns (axial coding).

To limit the chances that study findings are simply an artifact of a single method, two primary methods of triangulation were employed; data was collected from multiple sources, including differing populations and documentation sources (data triangulation), and two researchers were employed to collect and analyze data to reduce opportunity for bias and to help ensure that methodologies and techniques used were culturally appropriate (investigator triangulation).

This report presents data in such a manner that the informants "speak for themselves" providing an honest account with little or no interpretation of, or interference with their spoken words. Quotations cited are literal translations of responses provided (to the extent permitted through translation).

Study Limitations.

Because each project is unique and dynamic, the results can be generalized to other integrated conservation and development efforts only to the degree to which they are similar to the study population and context. This report presents a factual analysis of conditions existing in late 1996, the projects are continuing to evolve at a rapid pace and the status of the strategies and activities included within may significantly change over time. The study is also limited by the respondents ability to articulate their attitudes and perceptions. Analyses relating one project to the next must be carefully considered, the SAVEM program provided an inherently flexible methodology that was meant to be modified as necessary to fit unique planning circumstances. Simply because an activity was successful in one project does not mean that it would have been (or will be) successful if implemented in the same manner on another project. Each project is unique and should be considered in relation to its own circumstances.

Results & Discussion

Data collection began in August of 1996 (with the pretest) and was completed by January, 1997. Approximately two weeks were spent at each project site, the first week was spent collecting interview and background information from project and DEF employees. The second week was spent collecting information from individuals in local communities.

Six SAVEM integrated conservation and development projects were visited:

The Amber Mountain Protected Area Complex, located in northern Madagascar, includes three protected areas (Amber Mt., Ankarana, Analarmera). Covering approximately 73,000 hectares the site includes highland rainforest as well as dry lowland tropical forest. Amber Mountain is the sole permanent water source for northern Madagascar. The site is managed under a grant to the World Wide Fund for Nature (WWF).

Andasibe-Mantadia Protected Area Complex, located in central eastern Madagascar, includes two protected areas, the Special Reserve of Andasibe and the National Park of Mantadia. Covering approximately 10,800 hectares of highland rainforest the area is home to Madagascar's largest lemur species (*Indri indri*) and receives the highest tourism visitation of any protected area in the country (aprox. 12,000 visitors in 1995). The site is managed under a grant to the Volunteers in Technical Assistance (VITA).

Andohahela Integral Natural Reserve, located in south eastern Madagascar, incorporates 76,000 hectares of land. It is the only region where the two most disparate types of vegetation in Madagascar are still in contact: the highland rainforest of the eastern region and the spiny sub-arid bush of the west. The site is managed under a grant to WWF.

Masoala Peninsula located in north eastern Madagascar comprises one of the largest blocks of primary forest and includes a coastal marine zone incorporating coral reefs and mangroves. While considered a top priority in Madagascar's Environmental Action Plan the area awaits official designation. 212,000 hectares of land on the peninsula have been proposed for National Park status, 10,000 hectares as a marine national park, and a small island of 520 hectares composes the Nosy Mange Be Special Reserve. The project is managed under a grant to CARE International.

Ranomafana National Park, located in south east Madagascar incorporates 41,500 hectares of highland rainforest and is home to the golden bamboo lemur (*Haplemur Aureus*) one of Madagascar's most threatened species. The site is managed under a grant to Stony Brook and Cornell Universities through the Institute for the Conservation of Tropical Environments (ICTE).

Zahamena Integral Natural Reserve is located in eastern Madagascar, and occupies 63,000 hectares of lowland and highland rainforest. This isolated Reserve is considered to be among the richest forests in the world in terms of primate diversity (14 species). The project is managed under a grant to Conservation International (CI).

Institutional Goals

The inquiry began with a review of the institutional goals and objectives laid out in the beginning of SAVEM and subsequently interpreted and implemented by the ICDP's themselves. The purpose of SAVEM was to identify and initiate systems (including institutions, methods, and behaviors) for the management of protected areas of Madagascar and their peripheral zones. The SAVEM project had two basic strategies. The first was to help develop the country's institutional, managerial, technical, and human resources (in part through support to ANGAP to coordinate and manage protected areas and the peripheral zones) and the second strategy concerned testing a hypothesis linking conservation behavior to the development and empowerment of local populations. The following tables are presented simply as a reminder of the starting point for SAVEM and to illustrate important aspects of the projects which must be understood in light of their history, institutional architecture and the place and people for which the programs were intended.

SAVEM GOAL	"To establish sustainable human & natural ecosystems in areas of Madagascar where biodiversity is threatened."					
	Amber	Andasibe	Andohahela	Masoala	Ranomafana	Zahamena
Operator	WWF	VITA	WWF	CARE	ICTE	CI
Operator Mission Statement	The ultimate goal of WWF is to stop and finally reverse the growing deterioration of nature on our planet and to help construct a future where humanity lives in harmony with nature.	Volunteers in Technical Assistance was formed for the purpose of making available to individuals and groups in developing countries a variety of information and technical resources aimed at fostering self-sufficiency.	The ultimate goal of WWF is to stop and finally reverse the growing deterioration of nature on our planet and to help construct a future where humanity lives in harmony with nature.	CARE gives priority to the long term development goal of improving the material and social well being of the population. CARE also focuses on emergency help, refugees needs and displaced persons. CARE International concentrates its efforts on logistics, management, health sanitary conditions and food, water and shelter supply.	ICTE is dedicated to nature conservation in tropical regions through the study of biological diversity, and the promotion of community based social and economic development, conservation education, technical training, and field research.	CI's mission is to conserve ecosystems and biological diversity and the ecological processes that support life on earth, with special emphasis on local capacity building.
ICDP Goal	Maintain the biodiversity of natural ecosystems in northern Madagascar and specifically in the Amber Mountain Complex.	Conserve the health, quality, and population levels of biodiversity resident in the Andasibe Mantadia Protected Areas Complex as of 1994/95	Maintain and protect the biodiversity within the Andohahela Reserve and adjacent classified forests and to promote the sustainable use of resources around these sites.	To ensure the long term health of the natural ecosystems of the Masoala Peninsula and of the Nosy Mange Be Special Reserve, as well as to conserve both biodiversity and the natural resources which are vital to the livelihood of the local population.	The conservation of biological diversity and ecosystems of Ranomafana National Park.	To provide a model for participatory long term conservation of Madagascar's biological diversity in concert with the economic development of local communities.

Table 1. Project Summary - Mission.

Project Summary - Description						
	Amber	Andasibe	Andohahela	Masoala	Ranomafana	Zahamena
Size	73,000 hectares	10,800 hectares	76,000 hectares	222,520 hectares	41,500 hectares	63,000 hectares
Primary Vegetation Type	Highland & lowland rainforest	Highland rainforest	Highland rainforest, spiny sub arid bush	High & lowland rainforest, marine resources	Highland rainforest	High & lowland rainforest.
Peripheral Zone Population	31,760	10,500	17,760	82,000	25,000	20,000
Ethnicity	Antakarana	Betsimisaraka	Antanosy	Betsimisaraka	Tanala / Betsileo	Betsimisaraka / Sihanaka
Top Pressures	Forest exploitation, brush burning, mining.	Tavy, forest exploitation, poaching.	Clearing, brush burning, cattle grazing.	Tavy, illegal harvest of timber, cash crop farming.	Tavy, exploitation of forest products.	Tavy, cutting for timberwood, uncontrolled fires.

Table 2. Project Summary - Description

Project Summary - Principle Field Activities						
Activity	Amber	Andasibe	Andohahela	Masoala	Ranomafana	Zahamena
Maintenance & Protection of Protected Area	Control, surveillance & maintenance of protected area	Control, surveillance & maintenance of protected area	Control, surveillance & maintenance of protected area	Control, surveillance & maintenance of protected area	Control, surveillance & maintenance of protected area	Control, surveillance & maintenance of protected area
Alternative Agricultural Techniques	*Improved rice culture	Improved rice culture Improved food production Agroforestry	Improved rice culture Agroforestry Irrigation activities	Improved rice culture Improved food production	Improved rice culture Improved food production Agroforestry Irrigation activities Seedbanks	Improved rice culture Improved food production Agroforestry Irrigation activities
Alternative Economic Activities	*Market crops Beekeeping Com. granaries (DEAP) Animal husbandry	Market crops Beekeeping Com. granaries Animal husbandry Fish farming Artisan Assoc.	Market crops Beekeeping Com. granaries Fish farming	Market crops Beekeeping Com. granaries Fish farming Artisan Assoc. Pelagic fishing	Market crops Beekeeping Com. granaries Animal husbandry Fish farming Artisan Assoc. Coffee improvement Sm. business loans	Market crops Beekeeping Com. granaries Animal husbandry Coffee improvement Rural savings/loan
Natural Resource Mgmt. Activities (in the Peripheral Zone)	Education regarding land use Reforestation Land ownership & management	Education regarding land use Reforestation Com. forestry Land ownership & management	Education regarding land use Reforestation Com. forestry Land ownership & management	Education regarding land use Reforestation Com. forestry Land ownership & management	Education regarding land use Reforestation Land ownership & management	Education regarding land use Reforestation Com. forestry Land ownership & management
Health	Health Program (DEAP)	Health program Com. pharmacy	Health program	Health program	Health program (other funding)	Health program Com. pharmacies
Education	Raising public awareness School E.E. program	Raising public awareness	Raising public awareness School E.E. program Adult literacy Com libraries Youth Assoc.	Raising public awareness	Raising public awareness School E.E. program Adult literacy Com. libraries Youth Assoc.	Raising public awareness School E.E. program
Other	* New activities were being implemented in late 1996 (still too early for analysis)	Community store				

Table 3. Project Summary - Principle Field Activities

Description of Respondent Populations

Who participated in the inquiry?

Number of respondents.

In total 405 people participated in the inquiry. Fifty two percent (52%) of the respondents were employed by the projects at the project sites. Forty percent (40%) were individuals from local communities, and eight (8%) were "related authorities" and DEF field agents (*figure 2.*).

The average age of respondents was 37. Seventy-two percent (72%) were male and twenty-eight percent (28%) were female.

Respondents

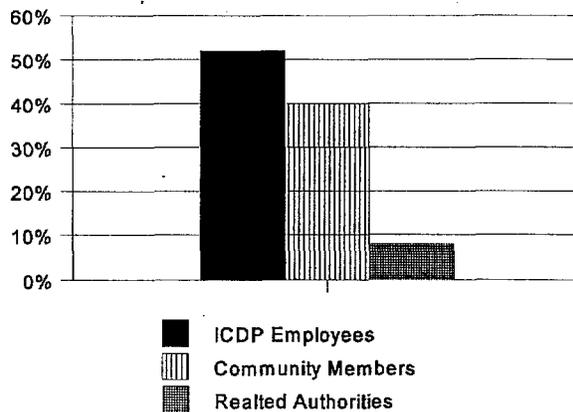
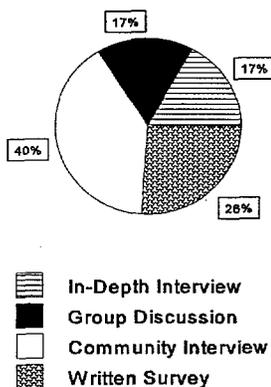


Figure 2. Respondents

Type of Instrument



Type of instrument used.

Several methods were utilized to obtain data from the differing sub-populations. Seventeen percent (17%) of the respondents participated in a face to face in-depth interview lasting approximately 2 hours, seventeen percent (17%) participated in small group discussions, forty percent (40%) participated in community (face to face) interviews, and twenty-six percent (26%) responded to a written questionnaire (*figure 3.*).

Figure 3. Type of instrument

Related Authorities

The Steering Committee identified 30 individuals who were to be contacted, ninety percent (90%) were available for interviews (27 individuals). Related authorities consisted of individuals in various organizations thirty percent (30%) worked for ANGAP, twenty-six percent (26%) worked in the Tana offices of the various NGO operators CARE, CI, ICTE, WWF, VITA). Fifteen percent (15%) of related authorities worked for Pact, eleven percent (11%) worked as consultants

Related Authorities

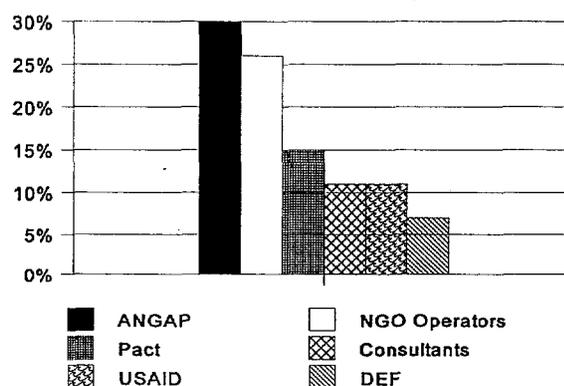


Figure 4. Related Authorities

to ANGAP, eleven percent (11%) worked for USAID, and seven percent (7%) worked for DEF (figure 4.). Related authorities ranged in age from 30 to 59 years with an average age of 43. Sixty-seven percent (67%) were male, and thirty three (33%) were female. Fifty-six percent (56%) of the related authorities were Malagasy, and forty-four percent (44%) were expatriates.

On average, related authorities had been in their current position for about 3½ years. Prior to this forty four percent (44%) had held another similar position within their current agency (or a similar position within the country) for an additional 4 years and 4 months of experience (on average). Related authorities were educated primarily in natural resource fields (63%) [of that 41% of the degrees were in forestry, 35% in agricultural related fields, and 24% in other natural resource related fields]. Thirty-seven percent (37%) have degrees in non natural resource related fields (anthropology, economics, etc...).

Project Employees.

Project employee respondents can be further categorized into three groups: Twenty percent (20%) worked in project direction (administrators, department heads, and consultants), thirty-three percent (33%) were general staff members (including program managers, field agent supervisors, and others), and forty-seven percent (47%) were field agents.

National Directors

Five National Directors were interviewed (one project had a vacancy). The average age of a National Director is 38, four were male and one was female. National Directors have been in their current positions for an average of 2 years and had an additional 1 year and 9 months experience in a similar position. Eighty percent (80%) had educational backgrounds in forestry related subjects.

Principle Technical Consultants

Six Principle Technical Consultants (CTP's) were interviewed. Five were male and 1 was female. CTP's had an average age of 39 and been on the job for an average of 2 years. Only one individual had additional experience *in* Madagascar prior to this position. All CTP's had graduate degrees (masters), 2 in natural resource management, 1 in environmental sciences, 1 in agricultural economics and 1 in adult education (with a BS in forestry).

Department Heads

Twenty three department heads were interviewed (in conservation, development, monitoring / evaluation, and communication divisions). Eighty-seven percent (87%) were male and thirteen percent (13%) were female. The average age of a department head was 35 and they had been in their current positions for an average of 1 year and 5 months with an additional 1½ years of experience in a similar position. Thirty-two percent (32%) of department heads had educational backgrounds in natural sciences, eighteen percent (18%) in agriculture related fields, eighteen percent (18%) in forestry, fourteen percent (14%) in economics and eighteen percent (18%) in other related fields (anthropology, geography, etc...).

Technical Consultants

Seven technical consultants (CT'S) were interviewed. Primarily additional technical assistance was provided for development related activities although two projects also had technical assistance in conservation (some technical consultants had finished their contracts and were no longer on site). The average age of the CT's interviewed was 41, all were male. The CT's had spent (on average) 1 year and 3 months on the project. Two people had prior experience *in* Madagascar. Fifty-seven percent (57%) had educational backgrounds in agricultural related fields, and forty three percent (43 %) in other natural resource related fields.

Project - General Staff

At each of the ICDP's a small group discussion was held with general staff members (everyone who was not participating in an in-depth interview was invited). In total forty-five people attended, seventy one percent (71%) were male and twenty-nine percent (29%) were female. The average age of participants was 33.

Field Agent Supervisors

Five of the six projects had individuals who were identified as project field agent supervisors. At these projects the supervisors were asked to participate in a small group discussion, complete a short survey and discuss (in detail) field agent activities. All 24 field agent supervisors participated. All were male and they averaged 38 years in age.

Field Agents

Sixty-four percent (64%) of all field agents (across the six projects) responded to a short written survey (123 individuals). Ninety-one percent (91%) were male and nine percent (9%) were female. The average age of field agents responding was 32.

DEF Field Agents

A short written survey was left at those projects who reported they worked routinely with DEF agents in the field. Seven responses were received from DEF agents at Andasibe, Masoala, Ranomafana and Zahamena. Respondents were male and averaged 45 years old.

Local Community Participation

Eighteen communities were included in the inquiry. One hundred and sixty one (161) individuals participated in a 30 minute face-to-face interview. Men and women were nearly equally represented (53% male and 47% female). On average, the community respondent was 39 years old, although age ranged from 18 years to 78 years. Sixty-eight percent (68%) of community respondents were from communities where the projects had activities, thirty two percent (32%) were from communities that were nearby but didn't actually have any project activities (selected as "control" communities for comparison). Within those communities with activities: sixty percent (60%) of respondents participated in project activities (thirty-eight percent (38%) were members of project associations, and twenty-two percent (22%) were involved in some other manner, such as pilot farming), forty percent (40%) were individuals who chose not to participate with the project.

How have the ICDP's progressed toward achieving the following SAVEM outputs?

The purpose of SAVEM was to identify and initiate systems for the management of protected areas of Madagascar and their peripheral zones, and representatives from the projects were asked to report on what progress had been made towards meeting the following SAVEM outputs:

Demarcation of boundaries & designation of core and buffer zones in protected areas:

All six projects have identified and mapped core and buffer zones for their protected areas. Two projects (Andasibe and Ranomafana) have finalized boundary designations and 4 projects have submitted proposals for legal classification of boundaries to the Malagasy government.

- Boundaries for Amber have been redefined (except for Joffreville) and have been marked on the ground for project purposes (awaiting official delimitation).
- Delimitation of Andasibe-Mantadia National Park is completed and maintained yearly (firebreaks maintained on perimeter), core and buffer zone are flagged.
- Boundaries at Andohahela have been defined, field coordinates mapped, and now awaiting official approval. With the change of its status to a National Park new zones (tourist, research, etc...) have been proposed.
- While Nosy Manga Be is officially designated as a Special Reserve, the Masoala peninsula forest is still considered free access forest. The project has delimited an area on the ground to be protected and mapped core and buffer zones (including a marine park area). Awaiting official approval.
- Ranomafana National Park boundaries are legalized, marked with red paint and eucalyptus, and GPS positioned. Park management zones and peripheral zones have been identified.
- Zahamena has identified, mapped and proposed park boundaries including core and buffer zones for the protected area, and community forests around the periphery (awaiting official delimitation).

Development of park management and eco-tourism plans:

Four of the six projects have drafted park management plans which include ecotourism plans but only Ranomafana National Park had an approved, finalized plan at the time of data collection

- Amber has written and received DEF and ANGAP comments on the draft park management plan which includes an ecotourism plan for the National Park, The project was finalizing the document and starting a plan for the Reserve.

- Andasibe is working on a draft park management plan including an ecotourism plan.
- Andohahela has not yet started a park management plan including or ecotourism plan.
- Masoala project is awaiting response to the peninsula draft management plan sent to ANGAP, and for the draft ecotourism plan for Nosy Manga Be (written in 1994 and submitted to DEF and ANGAP and under which the island is currently managed). A consultant is working on an ecotourism plan for the peninsula.
- Ranomafana National Park has an approved, finalized park management and ecotourism plan.
- Zahamena is working on a draft park and ecotourism management plan.

Improvement of park infrastructures:

- Major infrastructure improvements in Amber Mountain National Park were completed prior to the SAVEM phase, and over the past few years the project has worked on improving existing structures including: roads (which are used as trails), waterfall viewing sites, and a campsite.
- Andasibe-Mantadia National Park has added: a tourist shop, an entrance stand, a visitor parking and picnic area, 2 camping areas, and an overlook . The project has improved trails in the reserve and added 5 kilometers of new trail. Trail signs have been posted. Two major bridges (1 wood, 1 metal) and many small bridges have been installed as well as has an observation platform.
- Andohahela flagged 4 tourism trail-circuits and 2 campsite areas (one with a cabin) and are awaiting for delimitation approval to be finalized. The project also constructed a Visitor Interpretation Center under separate funding.
- The Masoala peninsula ecotourism circuit has been outlined on paper. A few trails for ecological monitoring have been built. For Nosy Manga Be, several tourist improvements have been made including: rehabilitation of 2 toilets and showers, 5 tent shelters built, 5 footbridges installed, and 12-15 km trails finished.
- At Ranomafana National Park, an office building has been built along with a park manager's house, visitor cabin, entrance station, and a footbridge across the river. Existing trails have been improved. An Environmental Interpretation Center has been built and will be moved to the park entrance. A snack bar and shop have been constructed with project support (owned and operated by residents). Two research cabins have also been constructed under separate funding.
- Zahamena is currently rehabilitating an Environmental Education Center (in conjunction with an English Language Center) in Fenerieve (in partnership with the local Mayor, US Peace Corps, and the US Embassy). The project has also built 3 visitor cabins in the peripheral zone.

Improvements to community infrastructures:

- Amber has made no community improvements in this phase of the project under SAVEM funds (although some improvements have been made with DEAP funds).
- Andasibe has put in a well and repaired 1 mayor's office.
- Andohahela has built 3 new schools, 2 new hospitals and repaired 2 schools and 1 hospital. Three roads (7 km, 8 km and 10 km) are still in construction. Six dams have been built.
- Masoala has constructed 9 community meeting buildings (common house), sometimes used as schools, dug 12 wells, built 1 market for the weekly bazaar, and rehabilitated 1 house for DEF.
- Ranomafana has built 12 km of roads (with local partners) with 12 bridges, 15 health posts, a community building, a mayors office, 5 schools have been built and 5 rehabilitated. Four dams and 3 drainage canals are completed, another dam is in progress. In downtown Ranomafana flush toilets have been built for local use.
- Zahamena has built 9 schools, and 6 hospitals and is currently finishing another. Twenty-five kilometers of road have been rehabilitated in collaboration with CARE and local communities, and a large agricultural product storehouse has been built (for use by a union of agricultural associations from several communities). 1 dam has been constructed.



Community association members gather to build a hospital funded through SAVEM.

Implementation of alternative agricultural and natural resource management activities:

Principle alternative agricultural activities:*

All of the projects undertook activities to provide alternative agricultural techniques to local farmers. Principally, improved rice culture, improved food culture, agroforestry, seedbanks and irrigation activities. Production of rice is the primary agricultural activity of local farmers and the projects responded with intensive rice culture and improved rice seed programs. Projects stated that if lowland production of rice could be improved then the need for farmers to do tavy on highland areas might be reduced (*see page 135 for details*). Improved food culture was provided as another alternative agricultural technique to increase yield and diversify field crops. Specifically, the projects introduced subsistence gardening methods and field crops (primarily beans, corn, peanuts and ginger) and taught in line culture, crop rotation, and composting (*see page 136*). Agroforestry activities were also commonly taught as an alternative agricultural technique to improve soil fertility, reduce erosion, lessen burning and encourage increased yields. Projects taught farmers the essentials of ally cropping, contour line planting, and improved fallow (*see page 137*). Seedbanks were occasionally established by projects to control and improve the quality and quantity of seeds available and to encourage the planting of two crops per year (*see page 138*). Lastly, irrigation activities were occasionally undertaken with local communities to improve lowland culture through the construction of dams and canals (*see page 139*).

Principle natural resource management activities (in the peripheral zone)

All of the projects undertook natural resource management activities within the peripheral zone. Primarily, projects took a strong lead in the education of local populations on land management policies including land use procedures for clearing, burning, cattle grazing and wood collection (*see page 134*). Additionally, projects implemented reforestation activities and community forest management programs (*see pages 149 & 150*), and forwarded efforts in land ownership and land management (*see page 151*).

	Amber	Andasibe	Andohahela	Masoala	Ranomafana	Zahamena
Alternative Agricultural Techniques	Improved rice culture	Improved rice culture Improved food culture Agroforestry	Improved rice culture Agroforestry Irrigation activities	Improved rice culture Improved food culture	Improved rice culture Improved food culture Agroforestry Irrigation activities Seedbanks	Improved rice culture Improved food culture Agroforestry Irrigation activities
Natural Resource Mgmt. Activities (in the peripheral zone)	Education regarding land use Reforestation Land ownership & mgmt	Education regarding land use Reforestation Community forestry Land ownership & mgmt	Education regarding land use Reforestation Community forestry Land ownership & mgmt	Education regarding land use Reforestation Community forestry Land ownership & mgmt	Education regarding land use Reforestation Land ownership & mgmt	Education regarding land use Reforestation Community forestry Land ownership & mgmt

Table 4. Agricultural Techniques and Natural Resource Management Activities

*NOTE: All of the projects undertook agricultural development activities. Many activities provided participants both the opportunity to learn a new agricultural technique and an opportunity to improve their economic base--market gardening, is an example of such an activity. It is therefore, very difficult to split agricultural development activities into two separate groups (agricultural and economic) and many activities can arguably be listed under both classifications. However, for the purpose of this report, project activities have been separated into the two groups based on the principle reason the project cited for undertaking the activity. For instance, if the project reported that an activity was undertaken to diversify food sources, improve nutrition, improve quality of product or product yield, the activity was classified as an agricultural technique. If, however, the project reported that the reason for undertaking an activity was to diversify income sources or increase household revenue the activity was listed as an economic alternative.

Implementation of activities that introduce new techniques for people to raise their standard of living:

All of the projects undertook activities designed to help people raise their standard of living. Predominately, the projects encouraged farmers to initiate new agricultural development activities, including market gardening, community granaries, animal husbandry, fish farming and coffee improvement. Additionally, some of the projects established local craft associations and rural credit programs.

Most local farmers grow and sell rice as their principal source of revenue so the projects sought to diversify the economic alternatives available to people in the peripheral zone. Introducing market gardening concepts and techniques was a common practice among the projects who viewed it as an additional source of revenue for participants, as well as an opportunity to improve nutrition levels within the local communities (*see page 140*). Improved beekeeping was another common economic alternative offered to local communities, projects noted that beyond being an additional revenue source this activity directly alleviated a potential threat to the resource (traditional methods of honey collection involve entering the protected area and burning down the tree with the hive, (*see page 141*). Community granaries were commonly established so communities could stock rice to sell during the off season, increasing both their income and the availability of rice during hardship periods (*see page 142*). Animal husbandry and fish farming practices were taught as methods to diversify income and nutrition sources (*see pages 144 & 145*). Coffee improvement practices were taught where appropriate, in an effort to switch farmers to permaculture, increase the number of people planting trees and to generate another source of income for the farmer (*see page 147*).

Additionally, some of the projects sponsored local artisan associations so participants (primarily women) could diversify household income sources, these crafts were often sold at park entrance stations and through ANGAP (*see page 146*).

Lastly, two projects initiated rural credit programs, one was established as an economic initiative to support small scale enterprise and the other to assist local people with their personal financing needs (*see page 148*).

	Amber	Andasibe	Andohahela	Masoala	Ranomafana	Zahamena
Alternative Economic Activities	Market crops Beekeeping Com. granaries Animal husbandry	Market crops Beekeeping Com. granaries Animal husbandry Fish farming Artisan Assoc.	Market crops Beekeeping Com. granaries Fish farming	Market crops Beekeeping Com. granaries Fish farming Pelagic fishing Artisan Assoc.	Market crops Beekeeping Com. granaries Animal husbandry Fish farming Coffee improvement Artisan Assoc. Sm. Business loans	Market crops Beekeeping Com. granaries Animal husbandry Coffee improvement Rural savings & loan

Table 5. Alternative Economic Activities

Local population participation in conservation and development planning:

All of the projects undertook activities designed to include local communities in conservation and development planning but the methods for including communities varied among the projects (*also see page 92.*):

- Amber reported that individuals in local communities helped in park planning efforts by assisting with delimitation planning (discussing and identifying boundary locations). Community representatives also participated in a planning meeting for the national park management plan and communities are involved in the management of visitor entrance fee returns through a community management committee composed of representatives from 33 fokotany.
- Andasibe reported that communities were involved in conservation and development planning through numerous avenues beginning with their involvement in the participatory rural appraisals at the onset of the project. Village Development Committees have been established in 13 community groups, members serve as contact group for the projects and help plan and oversee development activities undertaken in the community. Additionally, representatives from these committees sit on a central Community Management Committee which meets twice a year to evaluate current activities and plan for the future. The project also reported community participation in land management planning through community forestry programs and "zoc's" (zone of occupation control agreements).
- Andohahela reported that individuals in local communities helped in park planning efforts by assisting with delimitation planning. Representatives from 40 communities also participate in an annual workshop where they discuss and evaluate project activities and plan for the following year. The project reported community participation in land management planning through community forestry programs and "dina's" (local negotiated agreements regarding land management).
- Masoala reported that communities were involved in conservation and development planning beginning with their involvement in the participatory rural appraisals at the onset of the project. Local communities also helped in park planning efforts by assisting with delimitation planning. Village Reflection Committees have been established in 17 community sectors, members serve as a contact group for the project and help plan and oversee project activities undertaken in the community. The project reported community participation in land management planning through dina's and community forestry programs.
- Ranomafana reported that individuals in local communities helped in national park planning efforts by assisting with delimitation planning (discussing and identifying boundary locations). Several dinas have been prepared and 4 communities have a conservation plan (an agreement outlining land use practices).
- Zahamena reported that individuals in local communities helped in park planning efforts by assisting with delimitation planning. Additionally, 15 traditional forest protection committees (vaomieran'ny ala) have been re-initiated who collaborate with DEF and project agents in land use planning and management. The project is currently working with a pilot community to develop a participatory land management plan which includes agricultural, community forest management, and health and education improvement plans which are developed by the local communities (with the help of the project). The project plans to replicate this process throughout communities in the surrounding protected area. Community meetings have also been held for the creation of the park management plan, utilizing small planning groups as well as random interviews of individuals and targeted groups.

Activities undertaken to improve public awareness (other than working with local communities).

In addition to their work with the local communities surrounding the protected area projects undertook a variety of activities to improve environmental awareness of the general public:

- Amber reported that they sponsor two 10 minute radio shows each month discussing conservation and development issues. They hold an annual project exposition (poster session) in two separate locations to increase understanding of the projects mission. During 1995, the project published a periodic bulletin informing related partner agencies on project activities. The project also sponsors a school environmental education program and an annual world environment day celebration in local communities which includes a competition between school children on topics relating to the environment.
- Andasibe built and sponsors the *Moramanga Information Center* which serves as a regional information center providing information about the Andasibe Mantadia National Park, as well as other parks in the ANGAP system. The Center provides communication services including phone, fax and email, and provides a reservation service for hotels in Tana, Moramanga and Andasibe. The project helped create the *Association for the Restaurants and Hotels of Moramanga*. The Center offers a meeting room to business and social groups and serves as a center for women's economic interest groups. Additionally, the Center houses a small library including materials on environmental education and agricultural development practices. Books are rotated through 4 centers in the region and the project sponsors a reading club. The project also sponsors a local video club, who regularly watch environmental videos at the Center.

At the park entrance (in Andasibe) the project offers at boardwalk information center and has created a video tape about the protected area which can be viewed at park headquarters. The project also sponsors several local events and expositions including women's day, environmental day and project expositions designed to increase understanding about the projects mission. Representatives from the project also routinely speak to school groups.

- Project Andohahela which offers visitors information about the environment, the protected area and the cultural practices of local peoples through an exposition and guided talks at the Visitor Interpretation Center. The Center also includes a meeting / class room with audio visual capabilities. A botanical garden has been planted outside the center featuring native medicinal plants. The project also sponsors a school environmental education program.
- Masoala reported that they have produced 2 films about the region (in the local dialect) and have been showing these in local communities. The project has met with private tourism operators to discuss the creation of the park and ecotourism opportunities and the project also sponsored a tour of the protected area for local officials.

- Ranomafana has built an *Environmental Interpretation Center* which includes a museum and collection room. The Centers' staff offers guided talks through the exposition which highlights information about the environment, the protected area and the cultural practices of local peoples. The collection room displays include historical village artifacts as well as botanical and fauna collections. Oral histories and traditional music have been recorded from local communities and are available on video and cassette tapes. The Center sponsors a local community group who perform traditional stories, songs, and dance. The Center also offers slide and video programs and sponsors a local environmental youth group who visit the center three times a week to watch videos about environmental issues. The project reports that local residents view the Center as a community gathering place. The project plans to move the Center, which is currently located in Ranomafana, to the park entrance (although community activities will continue in Ranomafana).

The *Ranomafana National Park Biological Research Station* has been established at the park and ICTE coordinates and catalogs the work of 150 social and natural scientists and technical advisors and sponsors a consortium of two Malagasy Universities and three US Universities who routinely support student research efforts at Ranomafana National Park. A periodic newsletter describing project activities including research efforts is produced and distributed to local communities, officials and partner organizations. The project also sponsors a school environmental education program.

- Zahamena has created and display a project exposition to increase understanding of the projects mission. The project and the University of Tamatave co-sponsor the annual "Marche Verte," a week long program focusing on conservation and development issues attended by university students, local authorities, partner agencies and tourism representatives. An environmental education center is currently being rehabilitated in Fenerieve (in partnership with the mayor and US Peace Corps.). The project also sponsors a school environmental education program and an annual world environment day celebration in local communities which includes a competition between school children on topics relating to the environment.



Nature trail at Amber Mountain.

The Concept of Integration

Respondents were asked to discuss the concept of integration considering the lessons they had learned in the course of their work.

How do respondents define "integrated" conservation and development?

One of the initial questions asked of participants was how they defined "integrated" conservation and development because understanding how respondents defined the concept was a critical link to understanding the methods and activities with which they chose to implement the projects. It is perhaps then, a salient point to report that respondents had a very difficult time in providing a clear definition of "integrated" conservation and development and many respondents provided ambiguous answers. However, among the answers provided, three patterns of thought emerged:

Most respondents reported that integration was a **harmonic blending of dual goals that were equally important:**

Integrated conservation and development is:

"Conservation and development activities working together in a uniform fashion towards a common goal."

"Development activities that are managed in an environmentally friendly manner and conservation activities that have an impact on the well being of people's lives."

A second definition favored by a large group of respondents was that integration meant including **development activities to arrive at a conservation goal:**

"[When] all activities of development have a final goal in terms of contributing to the goal of maintenance of biodiversity."

Finally, a third philosophy offered (although mentioned less often) was that integration meant focusing on **development within sustainable parameters:**

"Development which is not only focused on the economics of local people but on economic development within sustainable environmental parameters."

A few people defined the concept in terms of local people:

"... getting local people to take a more active role in conservation, working with local communities to provide them with alternatives (and economic incentives) to using the natural resource within the protected area."

"Understanding the people around the park, and having the people understand the benefits of having a park around them; understanding the economical and ecological value from that natural resource."

Should conservation and development be integrated?

Once the concept was defined the question then becomes-- based on the lessons learned do respondent's feel that conservation and development *should* be integrated?

Overwhelmingly, respondents reported that **YES**, conservation and development should be integrated. Respondents explained that conservation and development were interdependent concepts tied to the same goal (sustaining the environment for the benefit of mankind):

"Conservation & development are like right and left feet - they must go together if you want to achieve either of them."

- ICDP Employee

Should conservation and development be integrated?

"Yes, to achieve sustainability of the natural resources and those who depend on it."

"Yes, conservation must be integrated with development activities because they both are dependent on sustaining the environment for long term benefits."

Respondents also reported that they felt it was important to promote an understanding of the interdependent link between human development and conservation of their environment and noted that undertaking conservation efforts without dealing with underlying causes for destruction of the environment does not work and had been tried before in Madagascar with unsatisfactory results:

"Formerly conservation activities were undertaken without care to development, biodiversity was not conserved because problems of destruction of biodiversity had not been solved."

Several respondents reported that they disliked the word "integrated" and felt the concept would have been better understood if terms such as "*inter-active*", "*inter-related*", "*associated*" or "*sustainable*" conservation and development, had been utilized.

Many respondents also felt that it was important to mention that successful integration relied not only upon providing activities but also on ensuring adequate enforcement of laws and regulations. Respondents noted that even with development alternatives in place people may not feel a sense of immediacy (that their resource is limited) and may not want to undertake conservation behavior, thus law enforcement is also required.

Other respondents felt conservation and development should be integrated but not necessarily under one operator, reporting that they felt that the problems were too complex, and that it was unrealistic to think that one operator could provide professional advice on such a wide breadth of issues. Respondents were also careful to point out that for each new project one must determine whether integration makes sense for that particular area, and that there are settings where an integrated approach does not make sense.

A small group of respondents reported that they believed that conservation and development should **not** be integrated citing that they felt: that local community priorities were not the same priorities as those of the park, and therefore not all development activities should have to be linked to conservation; that integration doesn't work in Madagascar because the direct benefits from ecotourism to a local community are so small that a link between protection of the resource and benefit to the community can't be made, and that conservation and development issues are so different that the two can not be equally balanced (at least not under one operator).

What approach did the projects take to integration?

In analyzing the steps undertaken by the projects in defining their course of action one finds that basically the projects followed similar procedures: They identified specific threats to the conservation of the protected area (through pressure analysis) and then implemented a package of actions (predominately agricultural development activities) which were focused on alleviating those threats. For instance, to alleviate the pressure on the protected areas caused by *uncontrolled fire* a project may have responded by establishing community fire committees, maintaining firebreaks, increasing surveillance, encouraging ally cropping and reforestation, and by conducting education activities.

The fact that all of the projects followed this procedure (and therefore selected very similar field activities) is indicative of the involvement at the National level by ANGAP, TR&D, Pact and USAID who promoted a pressure analysis approach. It is possible to hypothesize that the approach to integration may have been much more diversified if not for this coordinating influence because when discussing philosophical approaches to integration the projects differed:

One philosophy forwarded was that any action that resulted in the economic development of local people in the peripheral zone, was an action that forwarded conservation of the protected area. Integration occurred as a result of the outcomes of development activities.

Another philosophy forwarded was that only certain types of focused development efforts would result in long term protection of the park. Thus in an area where tavy is the prime threat, the project should focus on the installation of integrated agricultural systems (those actions which focus on soil protection, regeneration, and diversified production).

Another philosophy forwarded was that integration was a result of multi-disciplinary programming, having one set of project field personnel to undertake both "conservation" and "development" activities.

Several projects reported that they believed it was critical to link conservation and development "*in people's minds*" by showing connections between project activities and protection of the park.

Finally, one project reported that although the project conducted pressure analysis and identified appropriate actions, they felt that staff members did not really believe in integration, and that in reality, there was no integration on their project, because departments didn't talk, plan or conduct activities together.

The Concept of Biodiversity Conservation

Biodiversity conservation was a primary force motivating the creation of the SAVEM program and the projects themselves, and thus respondents were asked to discuss the concept based on their experiences.

How do respondents define biodiversity conservation?

Respondents were first asked how they defined the concept. Two central philosophies of thought emerged. Respondents either tended to define biodiversity conservation primarily in terms of **species/ecosystem preservation** or they defined it primarily in terms of **management systems focused on sustainable use**.

Biodiversity Conservation is:

"Protection of Madagascar's flora fauna and natural habitats."
or

"Sustainable use of natural resources."

It is interesting to see that a difference exists in how individuals define the concept. The two themes (while not necessarily being mutually exclusive) do seem to illustrate a potential difference in philosophy that may have had an impact on management--about half of the respondents tended to focus on preservation of resources while the other half tended to focus on the use of those resources (in a sustainable manner).

While most definitions can be categorized into two major themes, a full range of concepts were forwarded by respondents from strict preservationist attitudes to economic based philosophies:

"Biodiversity conservation is conservation of protected areas as they are now without any changes--total protection."

to:

"Biodiversity conservation is maintaining the natural resources of a country to ensure their regeneration and the survival of economic activities linked to the use of natural resources, independent from the objectives of endemic species conservation."

Perhaps the definition that seems to best sum up the differing approaches is to define biodiversity conservation as the:

Sustainable management of species to maintain or achieve species richness, the relative proportion of those species, and their spatial distribution, for the benefit of mankind.

Biodiversity Conservation is ...

"Protecting the environment in general, trying to make it better, trying to preserve those plants and animals which are unique."

"Managing natural resources in a sustainable fashion for present and future populations."

- ICDP Employees

Was maintaining and conserving biological diversity an appropriate focus for the SAVEM project?

Overwhelmingly, respondents felt that **YES**, conserving biological diversity was an appropriate focus for the SAVEM project. People felt that species loss was a genuine concern for the country and that the sustainability of resources relied on achieving biodiversity conservation. Other reasons mentioned included Madagascar's contribution to conservation at an international level and Madagascar's status as an area possessing exceptional biological resources.

"Because of Madagascar's endemism, biodiversity has to be maintained here. More than any other place in the world it can help with the scientific understanding of life."

-ICDP Related Authority

A subset of respondents noted that they thought conservation of biodiversity was an appropriate focus but that it should not have been seen as the only focus of the project and a few people felt that conserving biological diversity was not an appropriate focus because they felt that economic and development issues would have been more relevant for local populations. *"No, [it's] definitely not the appropriate approach for local populations and politicians. Biodiversity doesn't mean anything to locals, its a luxury concept for developed countries to talk about, economic potential that's what locals are interested in"* reported one respondent.

What are the prime threats to conserving biological diversity?

Respondents reported that there were still significant threats to the conservation of biodiversity citing five major categories of threats:

- Respondents felt that **vegetation loss caused by human destruction** was a prime threat. Primarily tavy, illegal exploitation of products (primarily wood products), and burning.
- **Poverty** was listed as a prime threat (most commonly by related authorities).
- An **increasing population** base was seen as a prime threat.
- **Lack of understanding and knowledge** from both an agency perspective and a local population perspective was seen as a prime threat to conserving biological diversity. Respondents were concerned that there was a lack of knowledge about the underlying context of the protected areas (about communities, biology, history, socio-economics, etc...) and that without more information on historical trends, appropriate responses could not be constructed. Lack of public knowledge and education concerning environmental issues and the importance of biodiversity was also listed as a prime threat.
- **Lack of coherent policy, legislation, and government coordination** was seen as a prime threat. Respondents reported that a lack of coherent forest policy led to an incapacity for

long term planning within the region and the country. Ineffectual or in-existent regulation and legislation was also seen as a prime threat, as was the lack of application of regulation. Lack of engagement by government technical services was seen as a prime threat by respondents who felt that these services were *"left out of the process"*. Lack of an empowered agricultural extension service was also listed as a prime threat.

Have the ICDP's enhanced the conservation of biodiversity?

Overwhelmingly the respondents reported that **YES**, the ICDP's have enhanced the conservation of biodiversity.

When asked why they felt that conservation of biodiversity had been enhanced, respondents provided differing opinions. Project employees most commonly reported that they believed that the rate of forest destruction had diminished since the project began work and pressure had been reduced, almost no one in the related authority category cited this as a reason. Conversely only related authorities reported that ICDP's enhanced conservation of biodiversity because they had engaged community participation (no one from the projects cited this as a reason). Related authorities also reported that they felt biodiversity conservation had been enhanced because the issue had been raised at a regional and national level (only one person from the projects echoed this sentiment).

Both groups agreed that an increase in local population awareness (knowledge level) of environmental issues was one of the reasons the projects had succeeded in enhancing biodiversity conservation. However, related authorities tended only to mention an increase in knowledge, while project employees tended to report an increase in knowledge that resulted in changed behavior: *"Since the projects have started people are conscious of the need for conservation, undertake conservation activities and they no longer go into the protected area"* reported one respondent.

Common reasons given for why the ICDP's have enhanced the conservation of biodiversity.

- The rate of forest destruction has diminished.
- The issue of biodiversity conservation has been raised at a regional and national level.
- National Parks are being created, managed and protected.
- There has been an increase in knowledge of the status of biodiversity.
- There has been an increase in local population awareness of (and engagement in) environmental issues.
- Alternatives to reduce pressure have been provided to local populations.

Both groups also reported that biodiversity conservation was enhanced due to research efforts that led to an increase in knowledge of the status of biodiversity. The act of creating a park, managing a park and bringing activities to the ground were reported as indicators of success.

Some respondents reported that a reduction in the number of illegal infractions reflected the projects success in biodiversity conservation as did the fact that the projects have provided alternatives to local populations so that they could reduce pressures.

A small subset of respondents reported that they felt the ICDP's had not enhanced the conservation of biodiversity. They reported that wrong populations had been targeted (not those making the pressure) or cited management incompetence as a reason why biodiversity conservation had not been achieved.

There was also a group of respondents who tended to answer the question with "yes but..." These individuals felt that biodiversity conservation issues had been forwarded but they were uneasy with the results. Some individuals felt the time frame was too short:

"Biodiversity conservation has been enhanced in the short term, but in the long term the jury is still out, over the next 10-20 years, as forest resources outside the park are exhausted we will see if people undertake the land management techniques we have been trying to get across to them."

While other respondents cited a lack of a reference base and long term trend data as a concern:

"I believe biodiversity conservation has been enhanced but it is difficult to say for sure because we don't have an original data base and don't know the impact the project has had... we have no reference point."

Perhaps one respondent summed it up best when he stated:

"Biodiversity conservation had been enhanced in a minor way. It was a beginning, for learning about biodiversity and about peoples behavior, but what follows - what will be done in the future is more important than what we have done [in the past]."

"Biodiversity conservation has been enhanced because the parks exist & because large tracts of land are being maintained for this purpose."

-ICDP Employee

What data has been collected to identify the status of biodiversity and what tools have the ICDP's utilized?

Project employees reported that they had to start at the beginning when it came to collecting information on the status of biodiversity conservation, very little information had been collected prior to the existence of the projects. Thus they began with the basics--flora and fauna inventories. Amber and Andohahela relied heavily on outside researchers to conduct inventory work and both were still awaiting initial baseline data results in 1996. Ranomafana and Masoala relied on University students to collect a variety of information and felt pleased with the results.

Masoala, Zahamena and Amber (to a lesser extent) selected and monitored indicator species, while Andasibe and Ranomafana identified and monitored threatened species. All of the projects were working to collect data on vegetation cover (i.e. rate of loss) primarily through photo interpretation and GIS mapping. Respondents reported, however that they did not have access to a good data base primarily because too little information was available about vegetation cover prior to 1994 and that data that had been collected by the projects were at differing scales and from different sources (i.e. FTM maps, satellite images, and aerial photos) making it difficult to compare from year to year. Only Masoala had image data (satellite) at the same scale for consecutive years of the project (94, 95, 96). Andasibe relied heavily on field observations to map vegetation loss (94, 95, 96) and reported it to be a reliable approach that was easy to update. As additional indicators of vegetation loss Amber and Andohahela collected information on the amount of surface area burnt in 1995 and 1996. Amber, Andasibe, Masoala and Zahamena, collected information on the number of infractions for clearing recorded in 1995 and 1996 (see *Table 6*).

It is also interesting to note that the two projects with the highest visitation rates (Andasibe and Ranomafana) had both completed studies on the impacts that tourists (or researchers) had on biodiversity. Two projects were collecting information on climate (Amber and Andohahela).

All six projects were collecting some type of local population data regarding knowledge level and behaviors related to the conservation of biodiversity (primarily through household surveys). A variety of information was being collected from local communities, for instance, at Masoala the distance villagers had to travel to collect indicator species (and the amount taken) was collected (in 94, 95).

All six projects used very similar tools and technologies when collecting biodiversity data--from traditional approaches like laying out permanent monitoring plots and collecting field agent observations, to more recent inventions such as photo interpretation and digitized mapping. Videography was added as a new tool in the last year on four of the projects (Amber, Masoala, Ranomafana, and Zahamena) but little data was available from this source as of yet. Respondents reported that all of the techniques utilized worked well and that in general none stood out more than others.

What evidence exists (if any) that suggests the projects have maintained or conserved biodiversity?

Very little "hard" evidence exists that proves the projects have maintained or conserved biodiversity although respondents felt strongly that biodiversity had been enhanced.

When citing examples of "hard evidence" respondents commonly reported they had data reflecting a(n):

- Increase in local population knowledge level of conservation issues.
- Change in population behavior--based on field agent observation, a decrease in numbers of illegal activities reported (individual and commercial exploitation) and an increase in the number of people participating in activities.
- Decrease in the rate of vegetation loss, utilizing field agent observation, photo interpretation and GIS mapping.

Respondents were quick to point out however that their data were not conclusive because they lacked long term trend data for comparison and realized that change in population behavior could not be conclusively determined over such a short time period.

"Overall compared to the period before [the park] pressure has diminished but comparing data from within year to year, results fluctuate, its hard to evaluate the trend."

Another common sentiment echoed among the projects was that while information is being collected there has been a lack of technical knowledge on how to interpret the results:

"Information is collected but not properly analyzed. We have results but what does it mean to management--we still need to make connections."

Some respondents strongly felt that it was unfair even to raise the question at this point in the process:

"The ICDP's have really just started, we have just gotten our activities pilot tested, field agents trained and an environmental education message honed, what rightfully more can be expected in the SAVEM time frame?"

* denotes data collected in sequential years-- trend data

Data Source	Amber	Andasibe	Andohahela	Masoala	Ranomafana	Zahamena
Flora Inventories	Undertaken: MBG completed inventories but have not submitted data as of Oct. 1996 Compiled list of endemic species - regional plants and invading species (not exhaustive)	Undertaken: Includes inventory on medicinal plants *flora inventory plot evolution (95,96)	Undertaken: Most of data on biodiversity was collected by outside researchers in 41 differing studies but almost no data has been submitted back to project	Undertaken:	Undertaken: Includes inventory on medicinal plants, aquatic biology, and botanical chemistry of plants undertaken <i>Research institute located at park</i>	Undertaken: Includes specific floral inventories
Fauna Inventories	Undertaken: Includes WWF inventory of mammals and micro mammals in 3 sites Reptile and amphibian inventory Compiled list of endemic species - regional plants and invading species (not exhaustive)	Undertaken: Includes behavior and social relation of Indri	Undertaken: Most of data on biodiversity was collected by outside researchers in 41 differing studies but almost no data has been submitted back to project	Undertaken: Includes additional studies on marine mammals (whales & dugong) peregrine falcons, reptiles and amphibians butterflies, lemurs and birds	Undertaken: Includes additional studies on insects, amphibians, study of biology and ecology of birds, numerous lemur studies aquatic fauna. <i>Research institute located at park.</i>	Undertaken: Includes insects mammals, reptiles, amphibians, primates, birds, and aquatic fauna.
Vegetation Cover	Undertaken: *Primarily through digitized mapping (55), photo interpretation (91) and videography (96). All at different scale. Amt. of surface area burnt (95, 96) # of infractions for clearing (95, 96)	Undertaken: *Primarily through spatial monitoring - topographic maps (57,91,94) and in field observations (94,95,96) # of infractions for clearing (95, 96)	Undertaken: *Primarily through digitized maps (56) and photo interp (91, 94) but all at a different scale. Amt. of surface area burnt (95, 96)	Undertaken: *Primarily through air photo analysis and rectification, vegetation mapping and procurement of satellite imagery (94, 95, 96) # of infractions for clearing (95, 96).	Undertaken: *Primarily through field plots, photo interpretation, vegetation mapping and videography (95, 96)	Undertaken: *Primarily through transects, digitized mapping (55) and aerial photography (92,95) but all at different scales Videography data (95,96) # of infractions for clearing (95, 96).
Indicator Species Selection	*Investigating distribution of bats potentially as an indicator species for ecotourism (95, 96).	NA	NA	Undertaken	NA	Undertaken
Threatened Species Monitoring	NA	Undertaken	NA	NA	Undertaken	NA
Local Population Knowledge Level and Behaviors	Undertaken: Includes household survey	Undertaken: Includes personal notebooks (diaries) kept by individuals working with the project.	Undertaken: Includes: Survey on villagers use of flora and fauna *Level of targeted population participating in beekeeping (94,95,96).	Undertaken: Includes *Distance villagers have to travel to take indicator species and amount taken (94, 95) # of lemur traps seen on tours (93, 94, 95, 96)	Undertaken: Includes household survey	Undertaken: Includes household survey
Climate	Undertaken	NA	Undertaken	NA	NA	NA
MISC.		Ecotourism impacts on biodiversity			Researcher impacts on biodiversity Relationship between animal species and plants eaten Impacts from Zebu grazing	

Table 6. Primary activities undertaken to obtain information on the status of biodiversity

ICDP Program Design

Respondents were asked how they felt about the overall design and pace of implementation of the ICDP's. Many people noted that they wished the ICDP program had begun 10 to 20 years ago when more primary forest remained and when there was more consistent governmental control of forests. That being said, respondents also remarked on the timely nature of the ICDP program in relation to national and international interest in conservation. Respondents noted that the role the ICDP's played in empowering local communities to conserve and manage had fit within the national process of decentralization, and that the program had dovetailed nicely with international conservation priorities such as those outlined in the Rio Charter from the Earth Summit.

Recommendations for changes to the ICDP design:

Respondents also identified **changes to the design of the ICDP program** that they would make now if they could do it over again. These suggestions highlight many of the points further discussed within this text:

1) Lengthen project time line.

Respondents reported that they felt the duration of the project had been too short particularly when considering the conservation and human improvement goals of SAVEM, which are long term in nature. A short time frame (and a significant budget) forced projects to be "*activity driven versus objective driven*" reported a wide variety of respondents, who stated that they would have preferred to spend the same amount of money over a longer period (usually suggesting a 10-15 year time span). Respondents felt that the short time frame didn't allow for the significant amount of time required to change behavior. Many respondents feared that the short time line of EP1 could have negative impacts on activities in EP2 because of the potential for loss of continuity and trust with community members: "*Communities are just stating but the project is supposedly finishing.*" (For further discussion see pages 35, 66, 79, 80).

2) Significantly increase partner collaboration.

Many respondents felt the ICDP program should have been a multi-donor program and should have been designed to build stronger relationships with existing partners while focusing on establishing new relationships with others. Respondents specifically reported they needed better relationships and collaboration with DEF and other government technical services, local officials, traditional authorities and local NGO's. Relatedly, respondents reported that more effort should have been put into increasing the capacity of technical services and local NGO's.

(See pages 32, 39, 40, 41, 46, 54-57, 91, 102, 107).

3) Clarify roles and relationships of partners, streamline hierarchy.

Respondents stated that they would have liked to have seen the roles and responsibilities of various partners clarified at the beginning of the program. They reported that problems arose

from a lack of clear understanding or acceptance of authority and that the design allowed for "too many bosses." (See pages 38, 40, 44).

4) Build a global vision and consensus on how to operate at the beginning of the process.

Respondents commonly reported that the various organizations held different perceptions of what was the goal of the ICDP program, what activities they should be undertaking, for what reasons and what results should be expected. Respondents reported that differing philosophies inspired "turf battles" and a lack of communication. Respondents stated that they felt the program design: "Should have had a preliminary phase to prepare organizations and operators and to build a common vision before activities started." (See pages 39, 40).

5) Improve baseline knowledge.

Respondents were concerned that there was a lack of knowledge about the underlying context of the protected areas and that without more information appropriate responses could not be implemented. Respondents stated they would have liked the program design to include more opportunities for gathering information. (See pages 24, 28, 45, 63-65, 68, 81).

6) Broaden analysis when determining intervention zone.

Respondents reported that while pressure analysis was a useful tool they felt the intervention zone had been too narrowly defined, and that the analysis was too anecdotal in nature and didn't sufficiently consider causes of the pressures or community needs. Respondents recommended broadening the analysis to incorporate a regional context and more diverse sources of information. (See pages 34, 63-65, 107).

7) Streamline financial administrative procedures.

Many respondents recommended streamlining the financial structure of the approach stating they felt it was overly complicated, created extra work and that there were too many intermediaries between the operator and the donor. (See pages 77-80).

8) Streamline technical assistance and increase collaboration among organizations.

Respondents reported that they felt the structure for technical assistance had been over designed, was too complicated, expensive, and too many organizations were involved. Respondents felt the design encouraged organizations to undertake activities beyond "their profession." Respondents recommended that the structure be streamlined, responsibilities clarified and more emphasis be placed on empowering Malagasy staff. (See 35, 41, 47-53).

9) Decrease amount of time spent in annual planning.

Respondents reported that while annual planning was important, the structure designed required an inordinate amount of time to complete and impacted on the time actually spent in implementation of activities. Respondents recommended that documents be streamlined and the process accelerated. (See pages 58-60).

10) Increase community involvement and ownership.

Respondents commonly reported that local community members should be more involved in all phases of the project including design and evaluation phases. Respondents noted that it was essential to instill community ownership in activities to ensure long term sustainability.

(See pages 34, 65, 92-107).

11) Limit field activities to those you can teach and monitor well - encourage demonstration.

Respondents remarked that the projects tried to take on too much (in too little time) had trouble staying focused and took a "shotgun" approach to field activities. Respondents recommended that the program be designed in such a manner to limit activities to those that could be easily taught and closely monitored. Respondents also stressed the importance of demonstrating activities. *(See pages 87, 90, 91, 98-99, 103, 104, and Appendix 1-130).*

12) Increase opportunities for creativity and learning.

Many respondents reported that they felt the system was too rigid and did not allow for "creativity or new ideas." Respondents reported that there was a lot of pressure on the projects to "produce results fast" which resulted in a design focus on short term goals rather than long term goals. Respondents recommended patience and an organizational design focusing on a longer time frame with more opportunities for learning and accumulating knowledge.

(See pages 39 and points 1 and 5 above).

If respondents could change one thing about the ICDP's what would it be?

In a related question respondents were asked if they could change one thing about the ICDP's what would it be? A wide variety of answers were given but some interesting patterns appeared:

Project Employees and Related Authorities:

- **Closer Relationship with Partners.**

Project employees and related authorities reported that they would have liked the ICDP's to have increased involvement, collaboration and communication efforts with other partners from the beginning of the project: *"Be more open to other actors"* suggested one respondent; *"Change the way in which we operate with others"; "Improve exchange between the ICDP and other organizations"* suggested others.

Some respondents were concerned about improving existing relationships and recommended improving upon relationships with local officials and technical services, while others were particularly interested in identifying and building relationships with those partners who could undertake some of the field activities: *"Identify professional entities to whom certain activities will be given or subcontracted to instead of doing all activities [ourselves]"*; suggested one respondent; *"Have a key focus in the beginning to identify local institutions and implementing agencies"*; *"Have a competent NGO undertake development activities and the project mainly undertake conservation activities"* suggested others.

If you could change one thing about the ICDP's, what would it be?						
Field Agents	Field Supervisors	General Staff	Project Direction	Related Authorities	DEF	Local Communities
Increase salary	Increase salary	Increase partner collaboration	Increase partner collaboration	Increase partner collaboration	Increase cooperation between project agents in conservation/development	Increase agricultural support (training & materials)
Improve team work /spirit	Increase training	Increase training	Improve team work /spirit	Extend intervention zone		Eliminate restrictions on land use
Increase agent responsibilities	Increase community involvement	Increase staff responsibilities	Increase staff responsibilities	Decrease technical assistance	Increase training for project agents	Don't make promises that wont be kept
Increase training		Improve discipline and fairly apply internal regs	Increase community involvement	Extend duration of project	Extend intervention zone	Increase infrastructure support
		Improve team work /spirit	Increase benefits	More focus on development activities	Get bosses in field	Have project hire a teacher for the school
			Extend intervention zone		Give law enforcement authority to project agents	Change procedures for giving and refunding loans
			Improve discipline and fairly apply internal regs			
			Extend duration of project			
			More focus on development activities			

Table 7. Change One Thing.

- **Improve Salary and Benefits.**

Project employees would like a better salary and benefits package. Field agents and their supervisors most commonly reported they would like an increase in pay while project department heads said they would like a variety of additional benefits such as increased per diem, health assistance, and credit facilities.

- **Improve Team Work - Team Spirit.**

Project employees commonly reported that if they could change one thing on the projects it would be to improve the sense of team work and team spirit.

- **Increased Responsibility.**

Project employees said that they would like to have more responsibilities, that they wanted their bosses to have more confidence in them (and delegate more responsibility to them) and that they wanted to make an effort to be more independent from expatriate assistance: *"Give more responsibilities to department heads, strengthen direction"* suggested one respondent; *"For overall management make an effort to be independent from expats, don't rely on them all the time"* suggested another.

Project department heads commonly reported that they wanted stronger leadership from their National Directors, that they wanted the Director to have more confidence in the staff, and they also wanted the Director to spend more time in the field. Several National Directors reported that they wanted the projects to be more autonomous and less encumbered by outside pressures from USAID, ANGAP and the NGO Operator: *"Be completely independent to manage as a private enterprise, don't want outside pressures (USAID, ANGAP, NGO)."*

- **Increase Community Participation.**

Project employees (and a few related authorities) reported that they would like to increase the level of participation of local communities in the design and execution of project activities: *"Involve villagers in implementing sustainable structures concerning development & conservation"*; *"Effectively involve communities in design and execution of project activities"*; *"Go back and make friends with your community, focus more on participative relationships and gaining acceptance as true partners"* reported respondents.

- **Extend Intervention Zone.**

Related authorities, project employees, and DEF field agents stated that they would like to increase the size of the project's intervention zone, many preferring a regional approach: *"Extend activities outside peripheral zone [take a] regional approach"*; *"Work on a wider zone reach all areas where pressures have impacts, extend activities area"*; *"Don't fall in the trap of distance as a criteria for defining the protected area."*

- **Extend Duration of Project.**

Related authorities and project administrators (National Directors, and CTP's) reported that they felt the 3 year time frame was too short. They would like to have the duration of the project extended spreading the budget over a longer period: *"Actual duration of the project is not adequate (to short to achieve SAVEM objectives)."; "Extend time frame 15 years (on reduced funding)"; "Change project duration, have stable funding (\$400,000-\$500,000 per year) over 20 years"; "More time, less money"*

- **Less Technical Assistance.**

Related authorities (particularly ANGAP staff) reported that they would like to see a reduction in technical assistance including those at the coordination level: *"Lighten technical assistance, instead of 3-4 TA's per ICDP hire 1"; "Have staff trained by short term TA's"; "Don't hire external consultants when staff can do it."*

- **Improve Discipline and Fairly Apply Internal Rules and Regulations.**

Project employees reported that internal rules and regulations needed to be more fully and fairly applied within the projects: *"Implement project regulation, improve discipline."*

- **Increase Focus on Development Activities.**

A group of respondents (department heads and related authorities) reported that they would like to see a stronger emphasis on development activities: *"Focus more on development, or at least give it the same importance as conservation"; "More financing for development activities."*

- **Increase Training.**

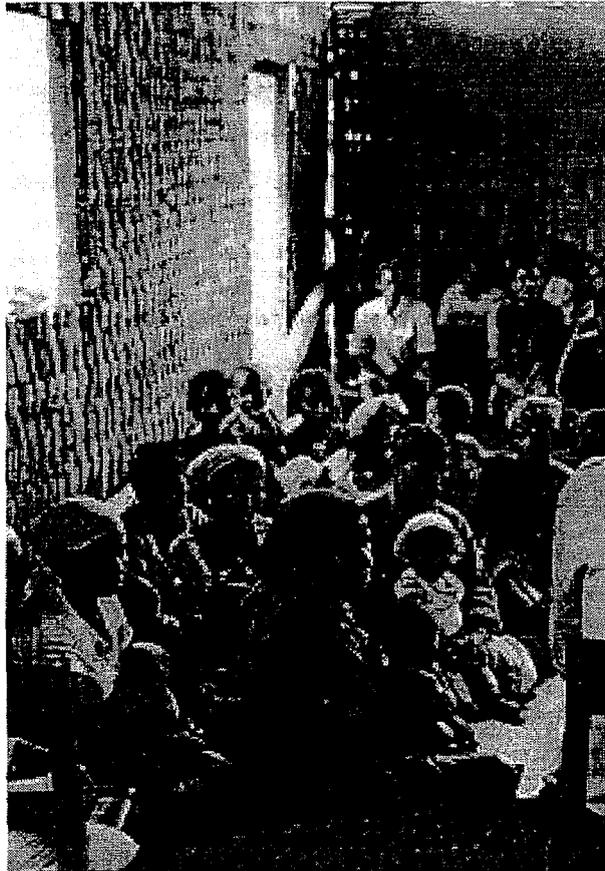
Project employees primarily field agents, their supervisors, and general staff members reported that they would like to receive more training.

What would DEF Field Agents like to change about the ICDP's?

Responses were received from DEF agents working with four of the ICDP's. When asked what they would like to change respondents stated that they would like to see more cooperation between project conservation and development field agents even to the point of combining these two departments into one. DEF field agents thought that project field agents should be receiving more training, and that their bosses should get out in the field more to monitor activities. DEF agents also reported that they would like to see the projects intervention zone widened (beyond the peripheral zone) and that they would like to see the project agents given law enforcement authority.

What would local communities like to change about the ICDP's?

Community respondents were asked if they could change one thing about the project what would it be? In general (*see page 119 for a complete discussion*), community respondents reported that they would like the projects to increase their agricultural support by providing community participants with further training or supplies. Second, respondents reported if they could change one thing about the project it would be to eliminate the restrictions on land use, particularly those about tavy, burning, cattle grazing and wood collection. Third, community respondents wished that project staff would not make promises they didn't intend to keep and reported delays in receiving bees, chicks, fish and seeds. Fourth, respondents reported they would like the projects to provide further infrastructure development within the community, Lastly, respondents reported they would like the projects to hire teachers for schools and that they would like to change the methods for obtaining and refunding loans, particularly they would like to be able to receive loans without interest and would like to be able to take larger loans.



Local community members gather to discuss project activities.

ICDP Organizational Responsibilities & Relationships

There are a variety of organizations involved with the integrated conservation and development projects within Madagascar. How these organizations envision their roles, communicate with one another, and form partnerships has a direct bearing on the ICDP's.

How do respondents define the responsibilities of the various organizations?

Respondents were asked to define the responsibilities of five key organizations involved in the ICDP's: USAID, Pact, DEF, ANGAP, and the projects themselves.

USAID (US Agency for International Development)

Overwhelmingly, respondents identified USAID as being a donor agency providing a funding source for the ICDP's, additionally respondents reported that USAID serves as an advisor and facilitator to the program, establishes rules for the use of money, and monitors and evaluates partners and activities to ensure the best use of funds.

Pact

Three fourths of the respondents identified Pact as the manager of the grants allocated to the ICDP's and stated they are responsible for ensuring good financial management of funds and ensuring that activities conform to the SAVEM objectives. Additionally, some respondents reported that Pact provides support, advice and training to the ICDP's and serves as an intermediary between the projects and other partners. Most of the remaining respondents identified Pact as the donor agency responsible for financing activities, while a few reported that they were responsible for the institutional reinforcement of ANGAP, for improving capacity of local NGO's, or reported that they did not know what were the responsibilities of Pact.

DEF (Department of Water and Forests)

Respondents provided a variety of responses regarding DEF's responsibilities (as it pertained to the ICDP's). The most common response (made by about a fourth of respondents) was that DEF's responsibility is one of law enforcement, applying state regulation and policy, and controlling use and access to forest and protected areas and that in this manner DEF agents are essential actors in defining relations between communities and authorities. Interestingly, about equal numbers of respondents reported that DEF either had or did not have management authority of the protected areas themselves. A small group of respondents reported that DEF served as a co-manager of the protected area program. Another group of respondents reported that DEF's responsibility was to represent the government in conjunction with the ICDP program. Another group reported that DEF's responsibility was to elaborate and define natural resource policy within the country, while others reported that they were responsible for the

protection and conservation of the environment in general, and a few people reported that DEF's responsibility to the ICDP program was to reinforce field activities and programs.

ANGAP (National Association for the Management of Protected Areas)

Many respondents noted that the responsibilities of ANGAP had been evolving and most noted that the organization originally served as the coordinating body of the ICDP program, but evolved towards managing a national park system through the development of a network of protected areas with a uniform system of management. Respondents commonly referred to ANGAP as the managers of the protected areas, responsible for establishing a global vision for the system and helping to elaborate and define policy concerning protected areas and biodiversity. Some respondents also remarked that ANGAP served as a coordinator of field activities on the ICDP's and were responsible for ecotourism and education activities regarding natural resources.

ICDP's (Integrated Conservation & Development Projects)

Respondents identified the ICDP's as being the operators on the ground responsible for implementing conservation and development field activities. Additionally, respondents reported that the ICDP's were responsible for working with local communities, were responsible for helping to ensure the conservation of biodiversity and were responsible for testing the SAVEM hypothesis. A small group of respondents (primarily related authorities) reported that the ICDP's responsibility was to manage the protected area.

Were the roles and responsibilities of various organizations clearly delineated, why or why not?

Overwhelmingly, respondents stated that at the onset of the program roles and responsibilities of the various organizations were not clearly delineated nor understood, for the following reasons:

- **Hierarchy and supervisory roles not clear or not accepted as defined.**

Respondents commonly reported problems relating to a lack of clear understanding (or acceptance of) supervisory authority and questioned who had authority between DEF and ANGAP, DEF field agents and ICDP field agents, National Directors and Chief Technical Consultants, ANGAP and PACT, and ANGAP and the NGO's. Respondents remarked that this lack of a clear hierarchy either resulted in over involvement with the projects - **"too many bosses micro managing"** or conversely in times of crisis resulted in a **"leadership vacuum"** with no one taking responsibility and each blaming the other.

- **Organizations held different visions for the ICDP program.**

Respondents commonly reported that the various organizations held different perceptions of what was the goal of the ICDP program, what activities they should be undertaking, for what reasons, and what results should be expected. Respondents stated that they believed organizations held a different understanding of underlying concepts, some concerned about long term goals, others about short term goals and others simply focusing on meeting their own interests through the program. Not all respondents found differing visions to be a problem however, and reported that they felt that through the process of focusing the ICDP program creativity was often hindered and the opportunities for learning about differing approaches lessened.

- **Lack of collaboration / Reluctance to accept one another as partners.**

Respondents reported that organizations seemed reluctant to accept one another, did not always support one another or failed to validate the needs of the other. This led to a lack of partner collaboration resulting in an "island" approach to management where each organization acted as a self contained unit, limiting partnership opportunities. Relatedly, respondents also noted that there was a lack of communication among organizations and projects, and there was a lack of quality participation among the players, each preferring to tell the other what to do rather than developing a true dialog among all actors. It is important to note however, that respondents also stated that collaboration efforts had steadily improved and that now partners seemed more willing to work with one another than in the past.

- **Responsibilities and activities often overlapped.**

Overlapping responsibilities and activities between actors was another reason cited by respondents as to why they felt organizational roles were unclear. Duplication in roles were reported as a source of conflict between ANGAP and DEF, Pact and ANGAP, Pact and USAID, National Directors and Chief Technical Consultants, and DEF field agents and project field agents. Projects reported that this became burdensome to their work as they were often required to repeat activities for one partner or another, or were given separate instructions for the same activity by different organizations.

- **Lack of capacity of organizations to undertake their roles.**

Respondents noted that clarification of responsibilities was made more difficult given the lack of capacity of some organizations to undertake their role as defined. Respondents reported problems because organizations were either new and needed to build internal capacity through training and professionalizing staff members, or reported that organizations and agencies had financial problems, lacking the resources to undertake activities.

- **Responsibilities were constantly evolving.**

Respondents also remarked that (not surprisingly) roles and responsibilities were not static and were constantly evolving throughout the creation and implementation of the ICDP program. Respondents stated they considered this to be a normal progression but that it sometimes

added to the difficulties in understanding one another and determining the best methods for working together.

It is important to note, however, respondents also reported that organizational roles have become clearer over time and most respondents felt there was a concerted effort underway between organizations to clarify their roles and to define how best to work together.

What could be done to improve relationships and communication between these organizations?

- **Clarify hierarchy for decision making and refine responsibilities.**

Respondents recommended that the hierarchy for decision making be clarified (particularly between ANGAP and DEF) and that a flow chart illustrating the role of partners in the decision process be developed and disseminated. Respondents wanted to clarify the limits of authority, reduce the number of "bosses", strengthen ANGAP's mandate (*see page 44*), and increase responsibility at the field level (rather than Tana). Respondents stated that when programing, responsibilities and activities needed to be clearly operationalized by identifying the who, what, where and when. Respondents also recommended that the lines of communication be clarified among organizations, by identifying when each organization should involve the others.

- **Build a common vision.**

Respondents reported that partners had come a long way on building a common vision and many supported ANGAP's evolution into a National Park Service and manager of protected areas (*see following section*). Respondents stated that partners needed to continually focus on "*where we are going*" they stressed site visits as a way to increase (and equalize) the level of knowledge and understanding between partner organizations. In a side note, several respondents recommended that partners stay focused on the common vision during the transition period (EP1-EP2) and work to amicably determine the distribution of human and material resources.

- **Support one another as partners / Increase communication and collaboration.**

- **Improve interpersonal communication skills.**

Overwhelmingly, respondents recommend that partners need to improve their interpersonal communication skills. Respondents commonly recommended that partners: "*Need to encourage rather than criticize, lessen defensive behavior, don't be threatening, listen to one another, be more open and honest, encourage open straight forward debate but avoid lectures and speeches...*" Respondents also commented that they felt that too often ideas were presented to collaborators after decisions had already been made and organizations were seeking "a rubber

stamp" rather than real participation. *"Ask for input when you really want it but don't waste our time when you already have your mind made up."*

- Respect one another's roles.

Learning to: *"Respect one another's roles and responsibilities"; "Give partners room to operate without interference";* and *"sticking to your own role"*, were common recommendations suggested by respondents. People felt that the partner organizations needed to respect one another as professionals and allow each one to fulfill their own responsibilities without hindrance. Respondents also encouraged ANGAP and DEF to forge a relationship where they could be *"real partners"* in the system, and recommended that information from agents working in the field be paid more heed.

- Increase collaboration efforts and information exchange.

Respondents recommended that efforts to increase collaboration and to strengthen information exchange be undertaken. Specific suggestions included: formalizing collaborator relationships by establishing regional or central steering committees composed of representatives from various organizations to ensure dialog, information flow, and to discuss field activities. The organization of seminars at project sites to share information at the field level. The development of a newsletter or journal to which all partners contribute, and an increase in social functions between partners to help individuals establish better informal communications. Respondents also felt that organizations needed to discuss how they could be useful to one another and that they needed to show flexibility, encouraging creativity among partners and allowing people to try new things. Respondents commented that communication efforts were hampered by the poor communication infrastructure available and recommended improving communication systems such as radio, telephone, and computer networks.

• Increase capacity of organizations to undertake their roles.

Respondents stated that they felt it was essential to *"empower organizations to do what they do best"* and recommended collaboration in administrative and technical training and organizational structure. Some respondents suggested that expatriate technical assistance be consolidated and then made available to all projects (rather than each having its own assistant). *"Form more partnerships and help people become real partners on the ground"* noted many respondents.

How have ANGAP's operations affected the ICDP's?

Many respondents reported that ANGAP had a positive effect on the ICDP's in a variety of manners:

- **ANGAP assisted in developing a global vision of the protected areas and defining appropriate tasks and activities on the projects to meet that vision.**

Helping to establish a global vision for the system of ICDP's and protected areas was mentioned commonly as one of the ways ANGAP affected the ICDP's.

Respondents reported that ANGAP helped them clarify goals and provided assistance in defining procedures and tasks through implementing and monitoring ICDP annual work plans and reports and through the introduction of pressure analysis.

- **ANGAP helped to promote a focus on protected area management and biodiversity issues.**

Respondents reported that ANGAP helped projects to focus on issues dealing with the conservation of biodiversity and management of the park. *"ANGAP helped keep the central focus [of the project] on park management."*

- **ANGAP brought legitimacy to the ICDP program.**

Several respondents stated that they felt ANGAP provided legitimacy to the projects in the sense that a *"Malagasy structure was overseeing the ICDP's."*

- **ANGAP provided leadership and assistance in monitoring and evaluation efforts.**

Respondents commonly cited that ANGAP provided leadership and significant assistance in monitoring and evaluation efforts, and that the organization helped forward testing of the SAVEM hypothesis on the ICDP's.

"ANGAP has been helpful in many areas... they have a lot of resources that we don't have, they provided training at all levels, improved information sharing through conferences and seminars and helped us be a part in preparing for the future."

-ICDP Employee

"ANGAP makes the results of the ICDP's useful and has had a positive impact on planning activities."

-ICDP Employee

- **ANGAP helped to increase personnel skill capacity and information sharing.**

Respondents commonly stated that ANGAP assisted the projects in improving the technical skills of staff members by providing technical support (particularly in GIS and park management), and by sponsoring trainings, conferences and seminars. Respondents also noted these formats encouraged information sharing among the ICDP's.

- **ANGAP improved and reinforced field activities.**

Some respondents commented that ANGAP had helped their project select, and prioritize activities (through pressure analysis and PAT's) and that the organization had *"improved and reinforced activities through recommendations and remarks."*

- **ANGAP assisted with problem solving.**

Respondents at several projects also commented that ANGAP had assisted in problem solving efforts and specifically reported that ANGAP helped the project resolve problems with local authorities, technical services, and guides.

"ANGAP provided a useful outside voice... and have really added a nice dimension to problem solving."

-ICDP Employee

Concerns.

While respondents reported many positive ways ANGAP had affected the ICDP's they also noted many concerns. Respondents reported that initially there were some problems in defining the *coordination* role of ANGAP, respondents reported that ANGAP wanted a *"supervisory role"* but the NGO's felt they *"didn't have enough room to operate"* or felt that initially ANGAP had *"excess involvement."* -- *"Originally there were different visions in how much involvement ANGAP should have"* one respondent reported, *"It wasn't clear what the difference was between a manager and a coordinator"* reported another. Respondents stated that these unclear roles initially caused *"a lot of animosity"* between the ICDP's and ANGAP, promoted an *"inordinate amount of mistrust,"* discouraged open and honest collaboration and often led to *"slower implementation"* of project activities.

Respondents also remarked on the fact that ANGAP was a newly created entity and that *"ANGAP's newness in just getting going had definite repercussions in the field."* Respondents reported that ANGAP was understaffed and that the organization had *"lots of changes in objectives and strategies,"* which resulted in a *"lack of consistency"* among personnel who *"had problems speaking with a coherent voice."* Respondents also cited problems with the internal organizational structure reporting that there was *"no clear line of responsibility"* and that the organization tended to be *"bureaucratically oriented rather than partnership oriented."* Respondents commonly stated concerns with the limited existence of partnership collaboration and reported that ANGAP personnel *"tell us what to do, are very top down"* or that they *"don't participate and then evaluate"* Several respondents stated that they felt ANGAP consulted them *"on little decisions but not on big ones."* A common sentiment among respondents was that ANGAP had participated more with the projects through papers and reports than in the field and stated that personnel *"need to be in the field a lot more."* Finally, several respondents reported that they were concerned about how ANGAP was going to affect the immediate future of the ICDP's and cited fears about losing development personnel and activities (if they were not funded as part of the protected area program).

Overall respondents cited a variety of ways ANGAP had effected the ICDP's over the course of SAVEM, many respondents reported that ANGAP's role had become clearer (and less disputed) over time and stated that currently organizations had been improving their collaboration efforts.

"ANGAP has come a long ways in a short amount of time."

What can be done to further strengthen ANGAP as it takes on management of the protected areas?

Respondents were asked what they thought could be done to further strengthen ANGAP.

Overall, respondents supported ANGAP's evolution into a National Park Service and manager of the protected areas and stated that the projects and other partners needed to: *"Do everything we can to help ANGAP succeed because the future of parks depends on their success."* Other respondents remarked on the challenges ahead for the organization *"ANGAP is now in one of its most difficult periods-- evolution to management... we need to support them."*

Recommendations suggested for just how ANGAP could be further strengthened (and supported) follow.

- **Increase / clarify ANGAP's authority.**

Respondents recommended that ANGAP's official status vis-a-vis the government needed to be clarified, and that ANGAP's mandate needed to be *"strengthened and accepted"* particularly in relationship to its partnership with DEF. Respondents routinely recommended that ANGAP take on a leadership role for protected area management and that to do this the organization needed to take on *"full management responsibility"* of the protected areas including *"law enforcement authority."*

Respondents remarked on the importance of having a *"commonly agreed to vision and objectives"* within the organization. *"Define ANGAP's role and responsibilities more precisely, eliminate overlap, and refine mission"* stated one respondent. *"Clarify the hierarchal structure, and redefine roles of people inside ANGAP"* stated another. Respondents also reported that ANGAP not only needed to clarify and strengthen their mission but that they should also promote the organization to *"make ANGAP's mission known to local, regional, and international authorities."*

- **Increase financial capacity**

Respondents commonly recommended that ANGAP could be further strengthened by increasing their access to funds and their financial management capacity. *"Encourage financial support"* remarked several respondents; *"Ensure financing so that ANGAP can undertake its responsibilities"; "Identify a source of income independent of donors for financial sustainability";* or *"Promote ecotourism, as a funding source for ANGAP"* stated others. Other respondents

recommended an increase in financial management authority: *"Give ANGAP authority to control finances"* *"Increase training and authority in financing and accounting."* Finally, several respondents remarked that the Malagasy government should be encouraged to *"make an investment in ANGAP"* to validate the protected area program and help ensure its financial sustainability.

- **Increase knowledge base regarding field issues and the contextual setting.**

Respondents recommend that ANGAP (and other partners) need to *"improve their understanding of the context"* of protected area management issues at the local, regional, national and international level. *"ANGAP needs a clear understanding of national and international context, knowing why, they need to understand and clearly state what is the reason for having a network of protected areas, why its important to Madagascar, why its important to the international community."*

Relatedly, respondents overwhelmingly recommended that ANGAP personnel needed to improve their understanding of protected area management from the ground up-- that ANGAP needed to strengthen their understanding of field activities and issues. Respondents recommended that personnel *"get out in the field more"* have *"more exchange between project and ANGAP"* during the transition phase and encouraged ANGAP to have *"more in depth discussion with field agents."*

- **Set realistic goals - prioritize activities.**

"ANGAP must be realistic about what it can and can't do" stated many respondents who were concerned that ANGAP was beginning a very difficult phase of work (taking on management authority of the protected areas). Some respondents recommended reducing the number of places of intervention - stating that they felt *"ANGAP could be spread too thin."* Respondents recommended that ANGAP receive help in *"planning and prioritizing activities"* and that ANGAP should *"reject unexpected activities if they affect planned ones."* Several respondents noted that developing quality transfer plans needed to be a priority and that ANGAP needed to develop organizational manuals defining instructions and policies of the agency.

- **Reinforce practical and strategic skills of personnel in protected area management (ecotourism and conservation of biodiversity) - Support human resources.**

Respondents commonly recommended that ANGAP staff needed to be competently prepared to be fully in charge of the national protected area network. Developing relevant human resources, building personnel competency and providing institutional support to staff members were common recommendations from respondents. *"ANGAP needs more practical and strategic direction in tourism and biodiversity"* reported one respondent. *"Need training on protected area management"* reported another. *"ANGAP needs effective human resources at each level of the protected area system."*

Respondents encouraged more technical and institutional support of staff members. "ANGAP needs a lot more technical support in the field and central office" stated one respondent. Some respondents encouraged technical assistance support through collaboration with NGO's and other partners by making suggestions such as: "Provide technical assistance , training on ecotourism, collaboration with tourism ministry"; "Work as partners with NGO's"; "Technical assistants should be at projects trying to solve problems"; "Provide more short term technical assistance and less long term"; and "Choose a group of advisors to help ANGAP develop nat park system." Many respondents recommended that ANGAP hire from ICDP personnel because "the staff is already experienced."

- **Strengthen partner collaboration.**

Respondents strongly recommended that ANGAP improve relationships with private operators, NGO's, public services and government departments: "Make sure ANGAP knows that it can't do it by itself-- it's a partnership." Respondents remarked that "collaboration is needed at all levels" and suggested close collaboration with DEF (to enforce laws) and with others.

- **Other ideas.**

Other ideas were provided on what could be done to strengthen ANGAP (although mentioned less often) among others these included: Encouraging ANGAP to undertake key development activities, or hiring a development liaison to help coordinate activities surrounding the parks, assisting ANGAP in developing park infrastructures, improving communication infrastructures (post, radio, telephone, and computer networks), publicizing what a park is and what are the needs, and ensuring that the ICDP's lay out a clear strategic approach for managing the protected area before ANGAP takes them over.

It is also of interest to note what *ANGAP employees* said could be done to strengthen the organization, recommendations included: increasing ANGAP's management authority (including law enforcement), strengthening its role at the regional level, and promoting ANGAP missions with local regional and international authorities. Developing quality transfer plans and having the projects "implement (on the ground) organized and functional systems and structures" were seen as things that could be done to further strengthen ANGAP, as was the installation of park infrastructures. ANGAP employees also suggested restructuring the organization so that it is "more practical"-- "redefining roles rather than recruiting more people"; "encouraging effective use of human resources"; and "developing a training plan at each level to prepare people for their future mission." Lastly, finding appropriate financial resources to ensure sustainability of the program and increasing ANGAP's authority to control funds were also common recommendations by ANGAP employees.

Technical Assistance

Was the technical assistance provided to the ICDP useful, why or why not?

Respondents were asked if the technical assistance provided to the projects was useful, more than two thirds of respondents stated that **YES** technical assistance was useful.

Respondents reported that outside expertise was necessary because *"technical expertise didn't exist before -- first time to manage protected areas"* and reported that it was useful because it *"gave people more exposure, more experience, and practical training"* and *"helped ground initial efforts"* and that it *"enlarged the vision of project"* and forwarded *"new ideas."* Respondents commonly stated that technical assistance provided useful expertise: *"Consultants have experience in ICDP concept"; "They reinforce the project"; "TA brought good techniques and training"; "They have knowledge in the environmental field areas like pressure studies, GIS, and monitoring and evaluation."* Other respondents commented that technical assistance: *"Seek an international standard for work"* and was *"important in catalyzing partners."* Several respondents remarked on the participatory approach brought by assistants: *"They brought the idea that it is a participatory system";* and reported that assistants had *"integrated into the team";* and stated that with the presence of technical assistance it was *"easier to get money."* Lastly, it is interesting to note that Malagasy project employees were more likely to report that technical assistance had been useful to the project than were related authorities.

A little less than one third of respondents either stated that technical assistance had not been useful or stated that it had been useful in some ways but not in others. Some respondents felt that assistance was needed but that there had been *"too much"* and that the types of expertise required should have been better specified. Respondents commonly stated that technical assistance: *"didn't respond to their expectations"* and expressed disappointment with the level of assistance provided: *"Need a better choice of advisors"* *"Technical assistants were short on management skills and experience."* Other respondents felt there was a *"lack of sufficient focus on skill building"* and that there was little or *"no transfer of competency."* Several respondents remarked that expatriate assistance: *"lacked sufficient knowledge of the region or culture"* and that they *"tried to change too many things."*

Was technical assistance *structured* in an effective manner?

In a related question, respondents were asked whether technical assistance was structured in an effective manner. Respondents were closely split in their opinion with slightly more people stating that the technical assistance *structure* was **NOT** effective.

The most common problems mentioned were that:

- **The structure had been over designed and was too complicated:**

Respondents reported that *"too many organizations were involved"* and that the structure led to *"a lot of frustration"*; was difficult to coordinate because there was a lack of cohesion among operators who *"did not always agree"*; and that there was *"constant change in approach and strategies."*

- **The structure minimized collaboration and information sharing:**

Respondents were particularly concerned that there was a lack of collaboration and information sharing from one project to the next and that this often resulted in duplication of services: *"Many short term consultants were doing the same thing"* stated one respondent; *"There was no sharing of consultants between ICDP's, we needed a better use of consultants"*; or *"There was inadequate coordination to take advantage of ideas, information sharing was largely ineffective"* stated others.

- **The structure didn't sufficiently focus on empowering Malagasy personnel:**

"Counterpart relationships were not maximized"; *"Malagasy counterparts were not empowered so the support and training were not achieved."* Respondents stated that the role and responsibilities of technical consultants were not clarified resulting in expatriates taking more of the decision making responsibility than necessary.

Other structural problems noted (although less often) included that the approach should have been *"more regional would have empowered more and cost less"*, *"was too expensive"*, that it *"needed to better define what assistance was necessary to provide at the onset"*, that it *"could have been better phased, there was too much at beginning"* and that there was a need for *"a better common understanding"* of the task. A few respondents stated that they felt the problem with the technical structure was that it focused on NGO's rather than other types of organizations *"NGO was wrong type of organization, they are short term enterprises (disaster relief, etc) don't have long term view."*

It is important to point out however, that almost as many respondents stated that they felt that the structure for technical assistance WAS effective. Respondents reported that technical assistance successfully provided support to Malagasy structures that were *"new and had to build capacity, had to get people off and running"*; *"Malagasy's needed environmental expertise early on."* Several respondents reported that they felt the technical assistance provided to ANGAP worked well: *"Internally for ANGAP, TR&D worked."* Respondents reported that technical assistance brought *"different types of networks and ideas"* and *"brought different strategies on how to manage the area."* Other respondents reported that they felt there had been a transfer of competency which was *"multi-leveled focusing on advising and training."* Respondents also reported that they felt the structure was an *"effective use of financing"*; provided *"effective control for the donor (one entity managing grants)"*; and *"increased the*

donor trust level" of the process. Several respondents reported that the structure was effective because "each had their own expertise" and that "all these players together make it work"

How do respondents feel about the relationship between expatriate technical assistants and Malagasy Nationals, and what could be done to improve relationships?

Respondents were asked how they felt about the relationships between expatriate technical assistance and Malagasy Nationals. Many respondents noted that relationships "really depend a lot on each person" and that often individual personalities and personal philosophies go a long way in defining relationships. Several respondents noted that simply because there are problems in relationships that it does not mean the relationship is unsuccessful: "There is always some friction in relationships (even best relationships have friction) don't read it as a lack of success."

That being said more than two thirds of respondents reported that they felt that relationships were **NOT** going well and could be improved. When analyzing the reasons cited for why people felt that relationships were poor, three sets of interrelated issues emerged:

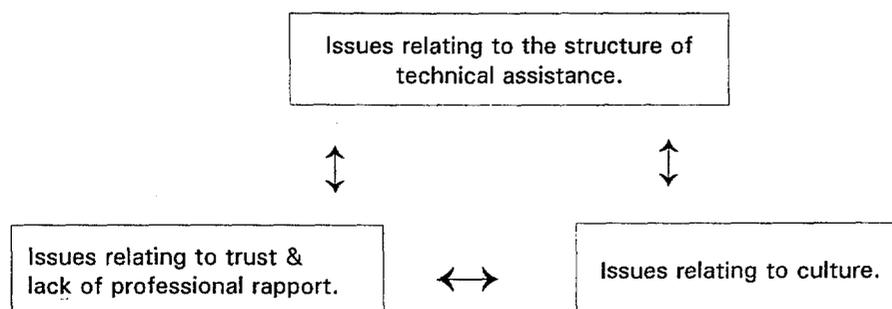


Diagram 1. Interaction of issues relating to expat/national relationships.

1) Issues relating to the structure of technical assistance.

Many respondents discussed how they disliked the structure of assistance stating that roles and responsibilities were not clearly defined, understood nor accepted. Respondents (both expatriate and nationals) clearly debated whether the role of "advisor" included management and supervisor authority and many people felt the structure did not sufficiently empower Malagasy's. Respondents particularly disliked the structure between the CTP and National Director, with nationals stating that they felt the project decision making should rest with the Director: "Technical assistance should limit role to advising, let National Directors make decisions." Expatriates on the other hand stated that they felt their role needed to be more clearly stated "NGO are held accountable and have to manage, this should have been stated up-

front." Other reasons cited on why people felt relationships were poor (relating to the structure of technical assistance) included questioning whether technical assistance was really necessary (some respondents reported that they felt the presence of technical assistance cast a negative image on the local staff and made them "look bad"); The selection of inadequate advisors--poor advice, lack of a clear plan for transfer of competency, lack of clear goals and terms of reference, and lack of evaluation of assistance were also mentioned as reasons for poor relationships.

2) Cultural issues.

Other reasons cited for poor relationships were cultural in nature. Many respondents reported that expatriates lacked the necessary knowledge about the culture, didn't take time to learn about it, had difficulties integrating into the culture, and brought preconceived ideas. *"Technical assistants don't understand culture, refuse some activities because they don't understand the reality."* Expatriates (and some nationals) also commented that by tradition the Malagasy culture is: *"A very closed society"; "not open to assistance"; and "there is a strong suspicion of outsiders."*

3) Trust issues resulting in lack of professional rapport.

Both national and expatriate staff reported problems relating to issues of trust, for example, one respondent stated that *"technical assistants only trust other technical assistants"* while another stated *"it's difficult to gain Malagasy trust."* This lack of trust seemed to lead to a lack of collaboration or professional rapport, with several respondents reporting that they felt technical assistants patronized Malagasy staff, didn't think them capable, "told" them what to do, respondents also mentioned a lack of team spirit or collaboration.

Potential Solutions.

Understanding why relationships were successful is as important as understanding why there were problems. Respondents who felt positively about their relationships stated their relationships were good because there was: good exchange of ideas and experiences, good collaboration particularly in solving problems, relevant advice was being provided, there was professional respect for one another, a sense of team work, and good integration and social relationships. Additionally, respondents also provided specific recommendations for ways to improve relationships.

- **Recommendations dealing with the structure of technical assistance:**

Respondents recommended that the technical assistance structure be **streamlined** and several respondents suggested that a principle technical assistant organization be appointed as a leader so all input of technical support could be coordinated under one umbrella. Respondents suggested that a **better definition of needs** be developed, defining what kind of technical assistance is needed including an analysis by Malagasy's of their strengths and weaknesses.

Respondents said it was important to make it clear why assistance is needed. Respondents also suggested **better recruitment** of assistance, stating that assistants need to have more relevant experience (some suggesting Asian rather than African experience) and that Malagasy's (particularly the National Directors) needed to participate in the selection of advisors. Several respondents suggested that the National Directors and CTP's should have complementary qualifications and suggested that the number of advisors be reduced.

Structure assistance so that Malagasy's are empowered, have expatriates serve in only an advisory role, and empower national directors were common suggestions. Additionally, respondents recommended developing a transfer of competency plan for each staff member to be sure transfer is evident and timely. Several respondents remarked on the importance of selecting competent National Directors to empower. Respondents recommended **clarifying goals and responsibilities**, being sure goals are commonly agreed to, are bluntly stated, and are openly accepted. Clarify everyone's terms of reference, delineate responsibilities and then be sure individuals stick to their defined role.

Separate technical assistance budget from the project budget was another suggestion provided by respondents, who felt that relationships would be improved if technical assistance was financially and logistically independent (and therefore not seen as an expense of the project). Respondents also recommended **periodic evaluation of technical assistance**.

- **Recommendations relating to cultural issues.**

Respondents suggested that assistant's undergo a **better orientation** to the country, visiting a variety of sites so that they are better able to understand problems and issues. Many respondents recommended that expatriates **learn Malagasy** to help them integrate into society. Other respondents stated that they felt it would be a good idea to **better prepare Malagasy's** for the introduction of assistants and made aware of exactly why they were needed. A few respondents felt there were no real solutions to cultural issues they just had to be recognized as issues.

- **Recommendations relating to trust and collaboration issues.**

Respondents recommended that people needed to increase trust and work on building a team environment, and that this could be done by **reinforcing discussion and exchange**, encouraging **open and honest collaboration, improving internal communication** - encouraging people to express themselves, having regular discussion meetings, and by **increasing training** for Malagasy staff. Respondents stated that co-workers needed to respect one another and needed to make an effort to get along.

What are the advantages and disadvantages of having the project implemented by an international NGO?

Respondents were asked to list what they felt were the advantages and disadvantages of having the ICDP's implemented by an international NGO and the following list was compiled.

Major Advantages

- Better access to funds, better financial capacity, ability to mobilize funds, cost effective as opposed to for profit firms.
- Bring credibility, trusted by donors, good for external relations.
- Has enough means and materials to get the job done.
- Trains people in new techniques and technologies.
- Brings an international standard to level of work being done.
- Provides national and international recognition, draws public attention to conservation issues in Madagascar, have some political power.
- Provides some neutrality less external pressure, less likely to get bogged down in local politics.
- Provide an exterior point of view.
- Have a tested structure and organization.
- Have experience and international expertise with ICDP's, can build on previous experience.
- Bring new ideas.
- Can draw on a network and pool of knowledge, sharing communication and resources.
- Have a participatory approach.
- Provides jobs with better salaries.
- Local communities more easily accept discipline implemented by outsiders.
- Committed to goals of biodiversity and conservation.

Major Disadvantages

- Expensive and therefore not sustainable. High cost of running project, lots of money goes abroad.
- Can create a dependency relationship (if NGO disappears it creates hardship for the project).
- Unstable funding, survives from one grant to the next, finances run through many people.
- Operate under grants which can't be leveraged by coordinator.
- NGO's are too autonomous for working with a national program, not much sharing.
- They are imposed, and dictate rules for Malagasy structures.
- Locals not empowered, limited capacity building, expatriates makes decisions on project.
- Don't always offer the best advice-- Don't know the habits and customs of local communities, not adapted to local realities, have preconceived ideas.
- Takes time to integrate outsiders.
- Results minimized--appearance is that when outsiders go so does success - teaches public that project means outsiders, outsiders are owners of protected areas.
- Makes local NGO's look like they are not successful (lack of money) or incompetent.
- Confuses local community members, think there are unstated interests of outsiders, mistrust of anything "vazaha."
- Too wealthy seen as a source of money, local communities think project equals money.
- Doing a lot of things beyond their expertise.
- NGO's have their own objectives.

How should NGO performance be judged?

Respondents were asked how they felt NGO performance should be judged and a variety of themes emerged.

Respondents recommended that NGO's be judged based on:

- **Their original mission and annual objectives.**

Do they have a clear mission and an institutional vision of what their role should be, were objectives well defined? Did they meet the objectives in their proposal, scope of work, and annual work plans?

- **Their capacity to effectively manage the project.**

Have they done effective management planning, is there an effective internal structure in place, did money get to the field in a timely manner?

- **Their results and accomplishments in the field.**

How have activities evolved, what has been started or put in place, how much of the PAT was realized, what have been the impacts from training and animation techniques? A comparison between the investment made and the realizations achieved.

- **Their capacity to transfer competency and build capacity of personnel and local structures.**

What has been done in terms of building human resources, was transfer of competency sufficient, was training undertaken and appropriate, were the capacity building efforts of local structures successful, what partners did they work with?

- **Their relationship and efforts within local communities.**

Have they integrated successfully with the target population, what is the level of community adhesion to project suggestions, how has the project adapted culturally, did the project improve the socio-economic well being of local people and by so doing help conserve the protected areas?

- **Their reputation at a local, national, and international levels.**

Is there a good image of the project, what is their rapport with partners, government, and communities?

- **The sustainability of what has been done.**

What has been learned by the project, are activities undertaken sustainable in the long term, has the long term sustainability of the protected area been enhanced by the existence of the project?

Local NGO's and Other Partners

Respondents were asked to discuss the role of promoting quality institutional support and building institutional capacity for managing protected areas as one theme of the SAVEM projects. Overwhelmingly, respondents reported that building institutional capacity of local Malagasy structures **WAS** an appropriate focus for the SAVEM project and that building capacity was essential to ensuring sustainability of project activities.

Was building institutional capacity of local Malagasy structures an appropriate focus for the SAVEM project?

Overwhelmingly, respondents reported that **YES**, building institutional capacity of local Malagasy structures was an appropriate focus for the SAVEM project. Respondents reported that building capacity was essential to ensuring sustainability of project activities.

Respondents noted that it was important to build institutional capacity of other local partners because in reality the actual ICDP project duration was limited; *"The project will not last forever and we must prepare local institutions to take over responsibilities"* noted many respondents who felt that building institutional capacity was an appropriate focus. Respondents also reported that it was important to help empower a variety of institutions interested in continuation of project activities to help ensure sustainability: *"In the long run sustainability is more assured - unless you get enough national institutions going it won't work."* One respondent enthusiastically summed it up best when he said: *"Empowerment is a fundamental... increasing local capacity is really what it's all about."*

Respondents did, however, commonly point out that building institutional capacity needed to be considered a long term goal and that in the short time frame provided by SAVEM it was unreasonable to expect large strides in this area. A few respondents felt so strongly enough about the time frame issue that they responded that they didn't feel building institutional capacity was appropriate; *"No, building institutional capacity of local NGO's spread SAVEM resources too thin produced very little, other development NGO's should have been progressively added in the future.";* *"For this phase should have been a lower priority activity, more of a diagnostic to see who's out there and what could be done."*

What approach for working with Malagasy NGO's (or similar structures) have been developed within the ICDP's and were they effective?

Three projects identified local NGO's partners (and two projects sub-contracted with local NGO's) to undertake activities (primarily agricultural development activities) in the peripheral

zone. The projects reported that their overall strategy was to help build capacity within these organizations by providing technical support and administrative training for the local NGO staff.

Project Ranomafana reported they had a close partnership with Tefy Saina and that they sought out appropriate NGO's whenever they undertook an activity.

Project Andasibe formed a close relationship with a local NGO organization (SAF/FJKM) and the project provided a technical consultant to assist the NGO and then hired (through a subcontract) SAF's personnel to conduct all development activities within the peripheral zone. The local NGO and the project established offices in the same building (park headquarters) and pooled many of their resources. No separate development agents were hired as part of the ICDP staff.

Andohahela funded FAFABI to work alongside ICDP development agents, and sub-contracted health program activities within the peripheral zone to ASOS. The project provided technical and administrative training. Additionally, the project promoted and participated in periodic meetings among all conservation and development organizations within the region to share information and coordinate activities.

"Capacity building is one of our positive points; health, education, population, and rural animation now have people going out and selling programs to donors by themselves. No longer are partners saying I can't do anything because I have no means, but now they are going out and looking for the means. People who work with us are motivated, do more activities, and have been promoted."

- Project Andohahela

Additionally, these projects also undertook activities to build local capacity at the community level primarily through establishing project working groups i.e. "associations" in which people received training in techniques and community organization and management. The projects also worked with local technical services such as CIREF, CIRAGRI, CIRRH, Animation Rurale, GENIE RURAL and DEF.

All three projects reported that they felt their efforts were very effective and felt both the project and the local NGO's had benefited greatly from the collaboration.

The other three projects reported that, due in part to the isolated location of their protected area, very few local NGO's (or other partners) existed and therefore the projects focused on local community capacity building, working with local authorities, and providing support to local technical services.

The reported effectiveness of this approach was mixed:

Zahamena reported that they felt their efforts to build local community capacity were effective, in large part, because they considered how to make activities financially sustainable.

"We have a very limited number of NGO's to work with. Most of our institution building has been at the very local level through associations, it's still not clear if the associations will be able to survive after the project - if we can make them financially sustainable through rural credit it could be very effective."

Zahamena reported that they had empowered local forestry committees to work with local government administration and to interface with DEF to improve forest resource management and that they worked with local technical services where possible including DEF, Rural Engineering the Ministry of Health, Education, and the CISCO. They also noted that they provided training, transportation, and field per diem to DEF agents. In the future, Zahamena stated that they hoped to create a regional development NGO from the projects development department to take over and expand development activities.

Masoala and Amber reported that their efforts to build local capacity had not been that effective. Masoala employees commonly reported that they felt "*associations just didn't work in their region*" and employees on both projects reported the need to put in "*more effort in working with local technical services*" On the other hand, Masoala had one of the better working field relationship reported with DEF, where field agents routinely conducted joint patrols.

Have Malagasy NGO's been empowered - will they be able to carry on activities if project support is withdrawn?

Respondents were asked to provide their opinions on whether local NGO's (or other partners) would be able to carry on activities if project support was withdrawn. Overall, respondents across all six projects reported that it was just too early to expect local partners to carry on activities themselves, and that more training and financial support would be necessary before local partners could become self-sufficient.

Recommendations for strengthening collaboration and cooperation:

Respondents were asked (based on the lessons they have learned) to make recommendations for strengthening collaboration and cooperation with local community partners:

- **Increase collaboration with partners.**

Respondents strongly recommended increasing collaboration with partners. Specifically reporting that they needed better relationships and collaboration with DEF and other government technical services, local officials, traditional authorities and local NGO's.

- **Improve communication strategies.**

Respondents recommended developing a structure for exchanging ideas at a regional level including participation of administrative authorities and all relevant technical services, local and international NGO's: *"Hold regular meetings with partners to exchange information, talk about what's going on and ask one another advice, try to unify policies and strategies."* Respondents advised that people should: *"Take the first step in contacting partners, don't wait for them to come to you."* Internally, respondents suggested reinforcing departments in charge of communication and *"making sure you understand the people and the contextual setting that surround the protected area."*

- **Formalize relationships and build a common vision.**

Respondents recommended that partners and local communities needed to join together to build a common vision and suggested reinforcing collaboration by having a signed agreement between institutions, evaluating what needs to be done and what will be done, and who will do it. *"Formalize partnerships and respect partnership agreements. Clarify responsibilities of partners, don't duplicate services. Plan joint trips to peripheral zone"* recommended respondents.

- **Provide organizational support, focus on training and transfer of skills.**

Respondents stated that they felt it was important to support competency building of local institutions by providing training materials and equipment and by developing a transfer of competency plan with local NGO's. Respondents encouraged projects to help find financing for partner organizations and to sponsor training (particularly in financial management).

Respondents reminded people to: *"Take your time, move slowly to make sure organizations are well established before starting the activities"*; *"Monitor partner activities and conduct evaluations, don't be afraid to be candid"*; and *"Promote confidence, provide encouragement, and give partners more responsibilities."*

- **Build lasting relationships.**

Respondents stated that they had learned how important it was to be truthful with partners and establish relationships that will last. Respondents recommended improving personal relationships among partner agencies, being sure to develop relationships where partners can be open and candid with one another to ensure collaboration.

Other recommendations:

- ▶ Choose the best local NGO's and then work to make them stronger.
- ▶ Conduct a survey of local NGO's assessing institutional strength of an organization. Utilize the OCAT model from PACT.
- ▶ Develop a structure to mobilize donors.
- ▶ Include more women (women are sometimes the key to these organizations).
- ▶ Donors should require partners to collaborate with local NGO's.

ICDP Planning

Respondents were asked a variety of questions about their planning efforts for the ICDP's particularly efforts in undertaking the development of project annual reports, pressure analysis, and efforts towards hypothesis testing.

Annual Work Plans

What is the purpose of the Annual Work Plan (PAT) process?

When asked what they thought the purpose of the PAT process was, most respondents identified it as a basic management tool for planning yearly activities: *"The PAT establishes objectives and budgets for project activities and facilitates monitoring, evaluation and possible reorientation of the project."* Other purposes identified included: a team building aspect where all key actors have a chance to work together to plan activities, a chance for people external to the project to understand what the project is doing, an opportunity for ANGAP to fulfill its coordinating role and a chance for Pact/GMU to ensure funds are being spent rationally.

Was the PAT an effective management tool?

Most respondents felt that **YES**, the PAT was an effective management tool because it provided a yearly planning framework to establish work programs and budgets, served as an every day reminder of objectives for project managers, and helped central operators to understand and supervise the project. *"Yes, process is painful but document is essential, helps to keep people on track and fixed on objectives. Gives direction to everyone from the DN & CTP to field agents and serves as a monitoring tool."*

Common Criticisms:

However, even though respondents reported that they felt the PAT's were an effective tool almost everyone had criticisms of the process for developing the PAT's (these issues led about a fifth of respondents to report that the PAT's had not been an effective tool).

Common criticisms of the PAT process were that:

- **An inordinate amount of time was required to prepare the document and have it approved.**

Respondents reported that as it was were carried out the PAT became a goal in and of itself, which took several months to prepare and that the PAT process seemed like a re-justification of the entire project.

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- **PATS were not flexible enough.**

Many respondents felt that the PAT needed to be implemented more flexibly *"It was often seen as a bible and not allowed to change."*

- **There is no clear link between the PAT, long term project goals and the pressure analysis.**

Respondents remarked that the way PAT's were elaborated they often reflected short term goals, with little or no link between pressures, activities and long term goals (10-15 years).

- **There are problems with communication and participation between ANGAP, Pact, and the Operators, that can impact on the PAT process.**

Respondents stated that partners did not communicate effectively about the PAT and that had a direct implication on how people felt about the process. *"Discussion on the PAT were not communicated effectively, a huge team descends on project and tell them how to do it - it's not based on mutual respect and partnership."*

Recommendations for improving the PAT process:

Respondents were asked if they could think of ways to improve the PAT process. The overwhelming recommendation for improving the PAT process was to:

- ◆ **Accelerate and streamline the process.**

Recommendations on how to do this included:

- 1) **Produce a standardized form or guideline for the document;**

"We need a standard outline/plan for ICDP PAT's."

- 2) **Limit the PAT's to mainly summary tables (reducing narratives and details);**

"Very short text and one table for each big activity."

"Don't be too academic, withdraw narrative part, mainly tables and simple limited comments."

- 3) **Complete a multiple year plan which is approved by CA once (at beginning) then just update PAT's internally;**

"Instead of producing an annual plan for approval, produce one for several years, and do update planning every 6 months that doesn't require CA approval. The PAT process takes too much time."

4) Dropping the CA approval process.

"PAT's should be sent out to one person each from ANGAP, PACT, USAID, and DEF then those individuals review and provide written comments which are incorporated by the project. No CA meeting, the process should not be so elaborate."

"The CA is a humiliating process that creates a lot of friction and bad feelings."

The second most frequent recommendation for the PAT's was to:

◆ **Increase the level of participation during planning.**

Many respondents saw the need to expand the level of participation in the PAT process. An important theme within this group of responses was that CA involvement should come much earlier in the PAT process rather than after the document is already written. Respondents felt this would help to ensure that the CA's concerns and interests were understood by the project up front so that they could be responded to in the PAT.

"We need more discussion and participation during the PAT process so that each responsible knows what the others have planned and for a better link between activities."

"We need more participation from members of the CA early on, not after final document is written."

Other suggestion commonly mentioned were that the PAT's should :

◆ **Give more consideration to the long term framework.**

"Need to consider long term goals."

"Need to clarify relationship between PATS, pressure analysis and long term goals."

◆ **Be more flexible.**

"Need to be able to be flexible, reviewed and updated every few months (more feedback and more chance to evolve)."

and,

◆ **Don't be overly ambitious.**

"Keep to priority objectives, if PAT's are streamlined and directly operational its a good tool."

It conclusion, it should be noted that many respondents (particularly those from ANGAP) commented on how far the PAT process had evolved and reported that they felt better about it now then they had in the past.

"There has been a big improvement in the substance of the PAT over the years."

Pressure Analysis

Pressure analysis is a technique used to identify threats to the protected area and the underlying causes of those threats. The thought is that if threats (i.e. pressures) to the protected area are clearly identified and understood, the projects can then ascertain which specific actions to undertake to alleviate these threats (thereby ensuring conservation of the park) while responding to underlying causes of those pressures (most often community economic and agricultural development issues). Projects utilized pressure analysis as their basis for integrating conservation and development activities.

What process was used to define pressures (and causes of those pressures) on the protected area; what information was utilized, and was activity selection actually linked to pressure analysis?

What process was utilized to define pressures and what information was available?

The primary process for defining pressure and causes was to have project personnel (most often field agents) brainstorm a list of pressures and what they felt were the underlying causes, based on their field observations. This brainstorming process was often undertaken with the assistance of ANGAP and TR&D personnel. Three projects hired outside consultants to lead the process. In addition to field observation, four projects conducted surveys or meetings with local communities to talk to people about their practices and reasons for undertaking them. Two projects reported they also incorporated other pre-existing information in their considerations such as satellite imagery, and socioeconomic surveys.

"We called in all our field agents and then mapped pressures based on their opinions, causes were determined based on a discussion among the team of agents."

"Everyone from the project (and a consultant) went in small groups to the field, we all noted any pressures that we saw. We then held a 3 day workshop with the department heads and field agent supervisors. We developed a list and prioritized communities based on the severity of problems. A consultant then surveyed these communities to identify the underlying causes to the pressures."

"A consultant was hired to develop pressures, he went to the field with a project team and conducted a survey of local communities, observed pressure sites and tried to evaluate the impact, then we drew a list of pressures and causes and prioritized."

Were project activities linked to pressure analysis?

The projects reported that **YES**, in reality, activities had been linked to pressure analysis. The projects identified activities or groups of activities which responded to a specific pressure and they wrote a series of sub-hypotheses statements identifying how the activities related to the pressure (*see page 67 for details*).

What was the major purpose of pressure analysis?

Respondents were asked to identify what they felt was the major purpose of pressure analysis. In general, respondents were split on whether the major purpose was to increase the projects understanding of the contextual setting of the area in which they operated, or whether the major purpose was to select and prioritize project activities.

- **A tool for reflection and understanding.**

A large group of respondents reported that they felt the major purpose of pressure analysis was to have the projects reflect on the area that they were working in to build an understanding of the context surrounding the protected area and management issues. Respondents reported that while it was important to identify specific pressures the *purpose* of the analysis was to understand the underlying causes--to understand why people made pressure on the forest because "*if you don't understand the causes you cannot solve the problem.*"

- **A tool to select and prioritize project activities.**

An equally large number of respondents stated that they felt the major purpose of pressure analysis was to identify alternatives to pressures on the protected area and to select and prioritize project activities. Respondents reported that pressure analysis provided a basis on which activity selection could be justified, helped the projects narrow their focus for what activities should be undertaken, and helped ensure that project activities had a direct impact on conservation of the protected area.

- **A tool to identify project strategies.**

Relatedly, a group of respondents reported that the major purpose of pressure analysis was to develop project *strategies* for reducing pressure on the protected area.

- **A tool to assess progress towards achieving biodiversity conservation and monitoring project effectiveness.**

Finally, a group of respondents reported that they felt the major purpose of pressure analysis was to assess how biological diversity goals were evolving during the course of the project and to monitor project outcomes.

Was pressure analysis an effective management tool?

Once it was clear why respondents felt they were undertaking pressure analysis they were then asked to judge if it had (in reality) been a useful tool to helping them manage the protected area. Most, respondents reported that **YES**, pressure analysis was an effective management tool although it led to some problems when implemented in the field. Respondents reported that pressure analysis effectively helped them understand problems and identify solutions, that it had helped them determine project strategies and prioritize activities to alleviate pressures, and that it helped them monitor project outcomes.

"Pressure analysis helped us to understand the cultural and economic problems in the neighborhood of the protected area. It helps us to appreciate how the activities evolve and to see the other constraints which may emerge even if the solutions are not yet identified. It also helps us understand our limits, it allows us to manage funds according to priority activities."

However, even though respondents reported that pressure analysis had been an effective tool they also **commonly cited problems with the approach** (these issues led about a fourth of the respondents to say that pressure analysis had not been an effective management tool).

Problems with the pressure analysis approach:

- **Too anecdotal in nature.**

Some respondents reported that they felt the approach was too anecdotal in nature, that not enough consideration was given to the underlying causes of the pressures and "*without understanding pressures you can't select effective activities.*"

"[Pressure analysis] missed the step in understanding why pressures exist, it not as simple as pressure-activity, we missed the casual link."

"We needed a strategy that related to causes rather than activities to pressures.... really need to know what it is about a technique that changes peoples' behaviors."

- **Narrow definition of issues.**

Respondents also reported that they felt pressure analysis had been too narrowly defined, that it didn't take into account pressures outside the peripheral zone, and that it lacked foresight.

"Pressure analysis directed activities to a very limited population when in reality a larger system is in place. Next year pressure could be moved and found 30 miles away, over simplification of problems around the ICDP's."

"Analysis was too locally based and resulted in local answers, didn't respond to regional pressures."

"[Pressure analysis was] implemented as a short term strategic concept, should have focused on pressures that will occur five years from now (rather than today)."

- **Didn't sufficiently consider community needs.**

Some respondents noted that projects didn't sufficiently consider community needs when they conducted pressure analysis, that local populations weren't involved, and often weren't thought about when determining which type of activity to undertake.

"Activities the pressure analysis suggested are not community priorities, thus in some regions where these activities were implemented, pressure did not diminish."

"Pressure analysis wasn't an effective tool because communities were not involved in the process."

"Pressure analysis missed the target population and understanding why pressures exist... people who put pressure are often the most inaccessible (youth, migrants, non-landowners) didn't consider how to reach them."

- **Led to problems when implemented in the field.**

Additionally, respondents reported that a pressure analysis approach led to some very real problems when implemented in the field. For instance, respondents stated that it was **difficult for them to explain to law abiding community members**, i.e. those who respected forest regulations, why it was that the project wanted mostly to work with people who put pressure on the protected area. Law abiding community members found this issue perplexing and didn't appreciate the projects helping people they viewed as "troublemakers". Respondents from several projects reported that in some instances a pressure approach led to **community members trying to "blackmail" the project**, (e.g. *if you only help communities who are putting pressure on the forest then maybe our community should start to cut forest so you will help us too. OR What will you give us if we don't cut this piece of land?*)

Some respondents also reported that they felt uncomfortable "*focusing on pressures rather than people*" and that peoples needs should have been considered equal to the needs of conserving the resource.

Recommendations to improve pressure analysis.

Based on the lessons learned the respondents forwarded these suggestions to improve pressure analysis:

- Improve understanding of contextual setting of the area, give more consideration to the underlying causes of the pressures.
- Collect a wide range of data for analysis. Gather information from other agencies and organizations in the region.
- Work with community members to identify pressures and their underlying causes.
- Take a larger geographic view of pressures. Consider pressures inside AND outside of the peripheral zone.
- Work to identify potential future pressures/threats (be proactive vs reactive).

Hypothesis Testing

Respondents were asked to discuss the role and utility of hypothesis testing within the ICDP projects. Each of the six ICDP's were asked if the project was structured to test the SAVEM hypothesis that: "*Local populations will alter destructive behavior if they see a relationship between their economic well being to the conserved area and if they are empowered to make the right kinds of decisions.*"

How were the projects structured to accommodate the SAVEM hypothesis?

All six projects reported that they had made special allowances in the structure of project activities to accommodate testing of the SAVEM hypothesis. To test the hypothesis each project developed a series of sub-hypotheses statements (*see page 67*) linking specific field activities (or groups of activities) to the education of a specific pressure on the protected area. For instance: *People who implement beekeeping in modern hives outside of the forest will be less likely to enter the protected area to destroy trees for the collection of honey.*

A large variety of sub-hypothesis were developed among the various projects and the projects used quantitative approaches (vegetation analysis, socio-economic surveys) for analysis and qualitative approaches (discussion groups, community meetings) for analysis.

Was hypothesis testing an appropriate focus for the SAVEM project?

Respondents were asked if they felt that hypothesis testing was an appropriate focus for the SAVEM project. Most respondents felt that it **was an appropriate focus**, and two central reasons why emerged.

One group of respondents felt that it was appropriate because it **guided strategies, direction and activities** for the projects. This group saw hypothesis testing as an important aspect of the overall ICDP approach as a monitoring and evaluation tool: "*The hypothesis suggests the strategy to achieve the objectives, a strategy which must be tested as effective or not.*" While another group felt that the hypothesis testing focus was appropriate because it **helped to provide feedback on whether the ICDP approach was valid**. These respondents felt the linkage between conservation and development needed to be proven: "*The hypothesis is important for testing the difference between pure conservation (regulations and prosecution) and conservation through developing communities.*"

Limitations:

However, even though respondents felt the process was helpful they also commonly cited problems or limitations with the approach. Some respondents felt that while testing a hypothesis was appropriate, they felt the hypothesis itself was not well stated or was missing some key elements. Several respondents mentioned the need for strong law enforcement to also be considered in part of the equation, while others felt that land or resource ownership should have been included as part of the hypothesis. Others felt the hypothesis, was too technically focused and needed to include a cultural aspect, since land use is so closely tied to culture. Several respondents reported that they felt that the actual hypothesis testing should have been undertaken by a separate entity that was capable of setting up an objective long term evaluation structure.

Respondents reported that the link between an activity and a pressure was not always obvious and that sub-hypotheses often ignored underlying causes of pressure which resulted in an oversimplification of issues. Respondents reported that decisions were being made according to very limited information, that was theoretical in nature or they relied on very anecdotal data gathered by field agents. This lack of contextual knowledge about the region and the people often resulted in projects focusing on activities rather than overall objectives or strategies.

The most commonly mentioned limitation of the hypothesis, however, was **the inappropriate time line**. Many respondents, both those that thought the focus appropriate and those who did not, felt that the 3-5 year time line that the SAVEM projects were set up for was far too short

to accurately test the hypothesis and that a 10 - 15 year time line would have been more appropriate to monitor change in behavior. Some people remarked that allocating project resources to hypothesis data collection was only appropriate if donors expected that the ICDP would be working in the area over a longer time period. Other respondents simply felt that testing the **hypothesis was far too complex, requiring too many resources** (human and financial) and reported that operators were often conflicted about where to put their priorities between *"getting things done on the ground"* or testing the hypothesis. Finally, a few respondents simply did not agree with the hypothesis either with its basic assumptions, its formulation, or the *"overriding importance"* that it took on for the ICDP's.

Have respondents opinions regarding the hypothesis changed over time?

When asked if their opinions of the hypothesis or testing the hypothesis had changed over time the vast majority of respondents said that they had **not changed**. For those few who did change their opinions, they were nearly evenly divided between those who now agreed with the hypothesis and those who now believed the hypothesis to be wrong or missing important components (e.g. longer time component or stronger law enforcement).

Was the development of sub-hypotheses (linking conservation and development) a useful approach to help focus project activities?

Sub-hypotheses were meant to provide the projects with a method for helping them differentiate between activities and select those that were most appropriate to their goals. Respondents reported that in general **YES**, developing sub-hypotheses was a useful approach to help focus project activities. Respondents stated that the process of writing sub-hypotheses had helped them more clearly identify how activities related to project goals and clarified how they would test the SAVEM hypothesis. Respondents also reported that the process helped demonstrate the reasons for undertaking an activity, primarily by linking activities to pressures and ultimately to the conservation of the protected area.

Writing sub-hypotheses was useful:

"Because sub-hypotheses justify and state the goal of each activity."

"Because to be effective you have to link your activities to a pressure strategy or objective."

"To evaluate the impact of each activity on protected area conservation."

"Because it really helped administration see a link and where we are going to overall goal."

However, even though respondents felt the process was helpful they also commonly cited problems with the activity (the issues led about a fifth of the respondents to state that sub-hypotheses writing had not been useful in focusing project activities).

Common problems associated with writing sub-hypotheses.

Respondents commonly reported a few problems that they encountered when writing sub-hypotheses statements, people remarked that the link between an activity and a pressure was not always obvious and that often sub-hypotheses statements oversimplified issues or ignored underlying cause. Respondents were also concerned that decisions were being made according to very limited information, that was theoretical in nature or they relied on very anecdotal data gathered by field agents. This lack of contextual knowledge about the region and the people often resulted in projects focusing on activities rather than overall objectives or strategies.

"Sub-hypotheses were developed according to actual knowledge, ending up focusing on activity rather than objective."

"Its analytical theory, began on wrong foot, baseline data is very anecdotal (agents making a list)."

"Some development activities which need to be undertaken are not obviously linked to conservation"

Respondents also commonly cited problems when they reported that they tried to write a sub-hypothesis for each specific activity rather respondents reported better success when they treated activities within a group and then linked these activities to pressure reduction.

"Overall it was useful but we made a mistake when we tried to take each of the activities and build a hypothesis for each, activities cannot be separated - activities should be considered together."



Tavy fields on the border of a protected area.

ICDP Personnel and Training

To understand how respondents felt about the level of staffing on the projects, it is first necessary to obtain an overview of the staffing situation. The following information presents an overall picture to be used as a point of reference, personnel categories were determined by the authors simply to present the reader with a generalized point of reference and are not a specific representation of any one project.

How many personnel were hired by the projects and in what positions?

Technical Staff

On average, the projects hired 62 technical staff members (although the projects ranged in staff size from 38-81 technical personnel). Technical staff was defined as those individuals in project direction, administration and operations, monitoring and evaluation, education and communication, conservation and parks, development, and expatriate consultants.

For the purposes of comparison, personnel were grouped into categories. The smallest program (beyond executive direction) was that of Communication & Education which composes an average of 3% of the project personnel. On average, the projects hired 2 staff members in this program (with a range from 0-6 positions). It is interesting to note that two projects did not hire any personnel that they specifically regarded as education or communication staff.

Expatriate consultants compose about 5% of the project technical personnel, and on average, the projects hired 3 full time consultants during the course of SAVEM.

Monitoring & Evaluation staff compose approximately 10% of the technical staff, with projects hiring an average of 6 staff members for this program (with a range of 4-9 positions) including parataxonomists and GIS staff.

Administration & Operations staff compose approximately 13% of the project staff (ranging from 4-11 positions) with the projects hiring an average of 8 administrative staff members, including administrative officers, accountants, office managers and assistants, secretaries, and other similar positions.

Development staff compose an average of 32% of the technical staff with the

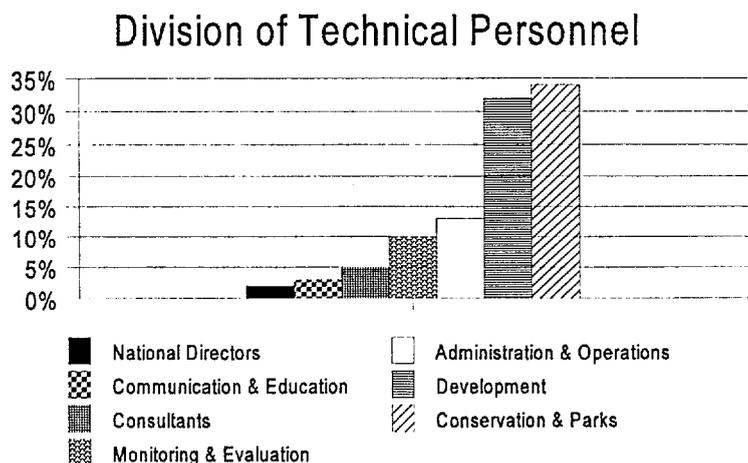


Figure 5. Division of Technical Personnel

projects hiring an average of 20 staff members. There was a significant range in the number of development program staff (from 3-29). Project Andasibe only hired 3 individuals as development staff but had a partnership agreement with SAF/FJKM who employed 10 others to work in the area. Most of the development staff was composed of field agents (and chief of sectors).

Conservation & Park staff compose an average of 34% of the technical staff with the projects hiring an average of 21 conservation staff members. There was a significant range in the number of positions (from 10-39). Most of the conservation and park staff was composed of field agents (and chief of sectors) and park agents.

Field Staff

Overall, more than half (55%) of project personnel have a position that could be categorized as that of field staff, either as conservation agents, development agents, research field staff, nursery workers, or park agents, etc. The level of field staffing varied across the projects from 39% to 63%. On average, projects employ 17 conservation field agents and 14 development agents.

Support Staff

In addition to the technical staff, projects hired a support staff of 20 persons (on average-- although the projects ranged from 13-35 support staff members). This staff is composed of chauffeurs, mechanics, boatmen, guards, cleaning crews, etc.

Staff Totals

Thus in total the projects employ more than 80 people (on average).

Were appropriate personnel resources designated for the ICDP's?

Respondents were asked whether appropriate personnel resources had been designated for their project. Overall, respondents were exactly evenly split on whether the staffing level was appropriate as is, or whether it was not appropriate. Although related authorities tended to report that the level of personnel was appropriate while project employees tended to state that it was not appropriate. Of the half of respondents who reported that it was not appropriate a little more than a third stated that they felt the projects currently had too many staff members, while about two-thirds stated that the projects were too small and needed additional staffing. National Directors from the project tended to report that either the current level of staffing was appropriate or that they needed more staff, while CTP's tended to report that they felt the project staff was too big.

No matter whether respondents felt the staffing level was appropriate or not, almost everyone had suggestions for repartitioning the current staff positions. Overall, respondents reported they first they would like to see more field agents, mostly in conservation and parks but also

development, and second, that they would like to see more personnel in communication and education positions. Conversely, respondents commonly reported that would like to see less staffing in administration and a group of respondents felt they didn't need quite as many field agents.

Is personnel turnover a problem, if so why do people leave?

How many people have actually left employment, and why did they leave?

Projects were asked to identify how many of their technical staff employees had left the project (during SAVEM), from what positions, and what was the reason given for leaving. On average 7 technical staff left the project for one reason or another (although it ranged from 2-14 people leaving per project).

The average rate of turnover for technical staff among the six projects was 12%. Three projects had a turnover rate of 7% or less, while three projects had turnover rates of 15%, 18% and 23% within their technical staff. Of those who left, one third (33%) left for better job or for personal reasons such as health problems or family matters, and two thirds (67%) left because they mutually agreed to go, were not hired after their probationary period, or were fired. While turnover was not much of an issue among field staff, it was an alarming problem among National Directors, CTP's, and department heads.

Executive Direction

There was a large turnover rate among National Directors, 4 of the 6 National Directors were replaced during the SAVEM period (which results in a turnover rate of 66%). While two projects maintained their National Director for the duration, most projects replaced National Directors (some repeatedly). One project had 1 person leave, two projects had 2 people leave, and one project had 3 people leave. Of those Directors who were replaced, 37% left because they found a better job, while 63% mutually agreed to leave, or were not hired after their probation period, or were fired. Similarly, there was also a high turnover rate among Chief Technical Consultants (CTP's) with 3 of the 6 (50%) being replaced during the SAVEM period.

Turnover Among Departments.

Among the projects there are twenty-nine positions that can be categorized as department heads (among conservation/parks, development, monitoring/evaluation, education/communication, and administration divisions) fifteen of these positions changed personnel (a few repeatedly) during the SAVEM period. This resulted in a turnover rate for department heads of 52% among the six projects. Of those who left, 37% left because they found a better job or for personal reasons, while 63% mutually agreed to leave or were fired. Every project had a department head position turnover, although two projects just had 1 turnover, one project had 2 turnovers, one project had 3 positions turnover (a few repeatedly), and two projects had 4 positions turnover (one position repeatedly).

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- Monitoring & Evaluation positions had a turnover rate of 20% among the six projects, with two projects losing their department heads in this program.
 - Education & Communication positions also had a turnover rate of 20% among the six projects with two projects losing a department head (or chief responsible).
 - Administration & Operations had a turnover rate of 15% among the six projects with four projects losing their department heads (2 repeatedly).
 - Development positions had a turnover rate of 10% among the six projects with four projects losing their department heads in this program.
 - Conservation positions had a 4% turnover rate among the six projects with two projects losing their department heads in this program.

Field Agents

Field agents were the least likely personnel to leave the project with only a 3% rate of turnover among the six projects.

Transferring Positions within the Project

Persons who transferred positions within the project were not considered in the turnover rates noted above because they did not actually leave the project. On average, the projects had 4 people switch positions internally within the project during the SAVEM period.

Is personnel turnover perceived as a problem by respondents?

Two thirds of project employees and almost all of related authorities reported that they felt personnel turnover **WAS** a problem on the projects. While turnover was not much of an issue among field staff, it was an alarming problem among National Directors, CTP's, and department heads. An exception can be made in the case of project Andasibe however, which has the lowest rate of personnel turnover, and no one reported problems with personnel turnover.

Respondents were asked why they felt that people left. Project Direction (National Directors and CTP's) were most likely to report that people left because they were not sufficiently capable to undertake the work they were hired for. Project employees were most likely to report that people left because: they get better job opportunities, because of low team spirit on the project, because they were fired, or for personal reasons (health, family). Related authorities provided similar responses adding that they felt people also left because they had problems with expatriate technical assistance.

Other reasons cited for why people leave (although less often) were because of: *"the isolation of the site"; "tribalism within the projects"; "poor project relationships with partners"; "job insecurity"; "internal problems"; "poor management of human resources"; "didn't like the top down approach"; "terms of reference unclear"; "insufficient communication"; and "not satisfied with job"* among others.

Respondents remarked on the negative effects of personnel turnover, reporting that it made things difficult because the new people had to be trained and adapted to the project. Respondents felt that turnover harmed the continuity of project activities and sometimes resulted in problems with the communities (loss of trust, relationship building, etc). Respondents also reported that high turnover rates reduced the effectiveness of the remaining staff who were forced to assume additional responsibilities until replacements could be found.

Training

Recognizing that personnel turnover was a disturbing problem for the ICDP's and that project direction reported that people left because they were not able to sufficiently capable to undertake their responsibilities, it is interesting to see the approach to training undertaken by the projects.

Have local staff received adequate training to prepare them for assuming management responsibilities?

Overall, 96% of field agents responding reported that they had participated in training while being an employee of the project, as did 82% of department heads, and 100% of National Directors. Almost all respondents reported that they felt the training provided was relevant to their work, helped them do a better job and improved their knowledge and skills.

However, over two-thirds of all respondents (and 100% of field agent supervisors) reported that staff **had not received enough training** to be able to assume management responsibilities. Respondents reported that training had not been clearly thought out, was insufficient and too sporadic: *"There should have been thematic training, should have been continuous from start of project, seems ad hoc."* Most respondents reported that employees needed more training and they were specifically concerned about a lack of training in general management skills such as financial administration (budgeting and dispersal) general policy and administration, and personnel management. Secondly, respondents reported that employees needed further training in protected area and tourism management, such as park infrastructure development, marketing for tourism, biodiversity conservation, visitor services, and guide services and training. Respondents were split over whether field agent technical training had been sufficient or not.

Some respondents reported that training had been too basic and more advanced courses were necessary, or reported they had been so overloaded with work in this phase of the project that they had not had time to undertake training. Finally, several respondents reported that they felt

employees were on the right track but needed more time to allow those who had been trained to train others, and time to gain further field experiences applying the training they received.

Did technical advisors successfully transfer skills and responsibilities to local staff?

Respondents were split on whether they believed technical advisors had transferred skills to local staff, with project employees being slightly more likely to say they had transferred skills and related authorities being slightly more likely to report they had not. Employees were only in complete agreement at one project, (Ranomafana) where everyone agreed that skill transfer had taken place.

Respondents who reported that skill transfer had not taken place most commonly stated that they felt technical assistants did not have the time to train staff members because they were too busy with management and administrative issues (budgets, management control, reports, etc.) or reported that transfer had not been sufficiently planned for or was poorly conceived. Some respondents felt that technical assistants didn't want to transfer their skills in order to retain their position on the project, while others felt transfer couldn't be sufficiently undertaken because of the consistent turnover in personnel on the projects (both Malagasy and expatriate).

What was the project philosophy / approach to employee training?

The approach towards employee training varied among the project, two projects stated they felt internal capacity building had been a major undertaking of the project and they developed programmatic training plans for the project personnel, identifying the training needs (primarily by department but occasionally by individual needs). Two other projects stated that they broadly identified training needs as part of the annual planning process. On these four projects field agents, their supervisors, department head and National Directors all reported that they had participated in training while being an employee of the project. A fifth project reported that they concentrated training efforts on field agents and their supervisors, (department heads did not report participating in training) while the sixth project reported that they felt that the SAVEM time line was so short and the work so intense that they couldn't afford the time to send personnel to outside training, and that training had been concentrated on improving local NGO capacities.

What types of training have respondents participated in and how do they feel about the training they have received?

National Directors reported that they had been on study tours and had participated in training in park management and ecotourism, and project management. Training for department heads was more varied but department heads on several projects reported they had received training in communication and meeting skills, environmental education and interpretation, photo interpretation/GIS or videography, participatory rural appraisal (PRA), rice culture/IRC, and food culture. Field agents and their supervisors reported receiving a variety of training in conducting meetings and alternative agricultural and economic field activities.

Almost all respondents reported that they felt the training provided was relevant to their work, helped them do a better job and improved their knowledge and skills. The most common criticism forwarded about training was that there was not enough or that the training that had been provided was too basic and that more advanced courses were needed. Respondents also reported that they felt that training programs had not been clearly thought out, were insufficient and too sporadic.

In terms of capacity building for developing a network of protected areas, it is interesting to look at the types of training respondents participated in across the projects to see what kinds of skills were being taught from one project to the next. All projects felt it was important for National Directors to receive training in park management, and secondarily, most projects felt training in development techniques (primarily agricultural development) was important, as was training in communication, conducting meetings, environmental education, community participation and G.P.S. / cartography.



Zahamena field agents attend a training session.

Types of training that respondents participated in:

On All Projects	On 3 Projects	Other Training
National Director training in park management / project management.	Park management & site visits.	Finances & administration.
	Ecotourism.	Training of local partners, in techniques &
	Control & surveillance / patrol procedures.	administration.
	Education on conservation of biodiversity, why its important to protect the forest.	Computers.
On 4-5 Projects	Education on specific animals (lemurs, etc).	Organizing community associations.
Project management.	Education on specific plants/ plant identification.	Rural credit.
Rice culture / IRC.	Monitoring & evaluation techniques.	Construction & maintenance of firebreaks.
Food culture (maize, peanuts, cassava...).	Photo interp, GIS,	Improved hearth
Reforestation/ nurseries.	Videography	Family planning.
Agroforestry / SCT.	Community forestry.	Health & nutrition
Animal husbandry.	Lowland management/ water control.	education.
Forestry regulation.	Composting.	Sanitation.
Communication	Beekeeping.	Coffee improvement.
techniques.	Market gardening.	Seed quality & control.
Environmental education.		Speleology.
Participatory Rural		Gender analysis.
Appraisal.		Fish culture.
G.P.S./cartography.		Surveying & inventory techniques.
		Fishing techniques.
		Literacy training.
		English language.
		Radio diffusion.
		Maintenance & repair of moto's, bikes, & boats.

ICDP Finances

Was the level of financing appropriate for accomplishing SAVEM goals?

On average, each ICDP spent more than 2 million dollars over a three and a half year period. Respondents were asked if they felt the amount allocated to the project was appropriate (for accomplishing SAVEM project goals). Respondents were equally split on whether the allocation was the *right amount* (and therefore appropriate) or whether it was *too much* (and therefore not appropriate), additionally about a fifth of respondents (primarily project employees) reported that *not enough money* had been allocated to the projects.

The allocation was right amount of money.

Those who reported that the allocation was the right amount of money cited a variety of reasons for why they believed this to be true. Respondents commonly reported that:

- **The allocation was the right amount because the projects had to start from scratch.**
"Yes [appropriate amount] we had to start at the beginning, there was no infrastructure, personnel, vehicles, etc, it required a significant infusion."
- **The allocation was the right amount given isolation of sites and the lack of partners.**
"Considering places (isolation) and lack of essential services money is not too small. In many cases these have really been regional economic development projects."
- **The allocation was the right amount because objectives were met and all activities that were necessary could be undertaken.**
"Yes, our objectives were met and we have enough staff and many activities."
"Yes, no activities were refused because of insufficient financing."

The allocation was too much money.

On the other hand, an equal number of respondents reported that the allocation received was too much money. Respondents commonly reported that:

- **The allocation was too large compared to the time frame of the project.**
Respondents reported they felt the money should have been spread out over a longer time period (usually 10-15 years).
"Far too much money... should have spread out funding over 15 years."
"Critics who say projects are too expensive are justified, one could do more, longer with same amount."

- **The large allocation caused the creation of "large scale" inefficient projects.**
 "Too much money... created large programs which might have been more effective if smaller."
 "Too much money, institutions grew too fast, recruited too many staff too quickly, people didn't know jobs, built a lot of waste in the system."
- **The large allocation (and short time frame) encouraged projects to be activity versus objective driven.**
 "Didn't have enough time to think strategically, needed to spend money, its like working on a tread mill."
 "Too much money... encouraged doing more but learning less ...was activity driven versus objective driven."
- **The allocation was too large compared to the results.**
 "Too high of an amount compared with results obtained"
 "Value for money is highly debatable if it could be measured."

The allocation was not enough money.

A third, and smaller group of respondents reported that **not enough money** had been allocated to the projects. These respondents commonly reported that:

- **The project could not afford to work with all the communities it needed to work with.**
 "Not enough [money], because of insufficiency of financing, the project has had to chose which villages to work in rather than working in the entire peripheral zone."
- **The project could not afford to undertake all the activities it wanted to undertake, particularly large scale activities.**
 "The project can not afford to undertake all activities needed or programs to execute these activities (for example, financing was available for intensifying rice culture, but not for dams which are a priority for achieving IRC)."
 "Not enough [money] when you think of the actual situation of villagers, all activities are undertaken at a small scale, need a larger scale intervention."

Related Authorities versus Project Employees

In terms of sub-populations *related authorities* were most likely to report that 1) too much money had been allocated, followed by 2) those who felt it was the right amount, followed by 3) a few who felt it had not been enough. Conversely, *project personnel* were most likely to report that 1) the allocation had been appropriate and was the right amount, that 2) it had not been enough, and lastly 3) that it had been too much.

Common criticisms of the financial structure:

It is important to note that most respondents (whether who felt the allocation had been appropriate or not) still cited some problems with the financing structure; primarily they reported that they were displeased with the project time frame (stating that it was difficult if not impossible to achieve the SAVEM objectives in such a short period), or they reported displeasure with the partitioning of the money, stating that too much went to overhead and technical assistance and not enough to the field, or that too much was spent on a particular program (and most programs were mentioned such as the conservation program or the development program). Many respondents criticized the financial structure of the ICDP program stating that they felt it was overly complicated, created extra work, that there were too many intermediaries between the operator and the donor, and that the grants manager was overly involved, *"Pact micro- managed, more cumbersome than working with AID direct."* *"PACT too wide spread, we need less technical assistance and more financial assistance."* Respondents recommend streamlining the financial process, some suggesting that it would have been better to have given a one time grant to each NGO rather than renegotiating the budget each year because this resulted in what appeared to be *"micro management."*

How did projects determine spending priorities?

In a related question, projects were asked to identify how they determined spending priorities. Each project reported that prior to beginning work on site, a proposal had been written that helped set major budgetary priorities, and that each year the project developed an annual work plan and submitted a corresponding budget. Three projects reported that their spending priorities for their annual budgets were based on funding key activities identified (and prioritized) through pressure analysis (*see page 61*). Another project stated they gave priority to conservation activities. One project stated that at the end of each year they evaluated the activities based on their effectiveness in the field and then selected the most effective activities. And finally, one project stated that they didn't find it necessary to prioritize because they had enough money, they could simply determine which activities they wanted to undertake and budget for them.

How do respondents feel about spending priorities on the ICDP's?

Three-fourths of respondents, cited some concern over spending priorities on the projects. The most common concerns noted were that:

◆ **Time frame was inadequate.**

"Would have preferred to spend the same amount of money over 10-15 years."

◆ **Operation expenses were too high and not enough money reached the ground.**

(Including NGO overhead, project administration, and equipment.)

"Overhead and administration are too high in relation to what we are accomplishing."

◆ **In general, spending priorities were not well thought out, nor clearly prioritized.**

"Priorities are not always well targeted, people lack knowledge about the context and the trend is to try and satisfy everyone."

◆ **Too much money was spent on technical assistance.**

"Too many expenses on technical assistance and coordination from abroad."

Respondents also commented on spending priorities for specific programs, interestingly, an equal number of respondents reported that too much money was spent on *conservation and park activities*, as those who stated that too much was being spent on *development activities*. In fact, this duality occurred on a variety of topics where roughly equal numbers of respondents reported that too much / or not enough money was being spent on research, health, and training. Only one program--Education & Communication was mentioned solely as an area that needed more money.

When comparing responses within and between projects very few common patterns arise. However, it is interesting to note that on two projects (Andohahela and Zahamena) more than half of the project staff stated that they were comfortable with the spending priorities on their project. Conversely, on two other projects, everyone stated that they had a concern. Respondents from two projects also reported significant cash flow problems on the project which at one time either threatened to, or did, require the project to shut down for a brief period.

ICDP Monitoring & Evaluation

How did projects determine what to monitor?

The projects primarily selected their indicators for monitoring based on the monitoring and evaluation directives forwarded by ANGAP. Four of the six projects also stated that they utilized two separate lists for monitoring, one which was the "ANGAP list" and the other "the project list" which was seen as the priority list because it focused more closely on the specific pressures to the protected area and the activities undertaken.

Was the monitoring and evaluation system beneficial to project management?

Respondents reported that the monitoring and evaluation system had been **very beneficial** to project management because it helped them monitor how activities evolved, helped them analyze impacts of project efforts, helped them map and delimit the area, and it provided essential feedback necessary to evaluate the strategies undertaken.

Respondents reported, however, that it had taken several years for the system to sufficiently develop, and that it was just now being used effectively. When discussing the monitoring and evaluation program respondents reported the following problems:

Common problems:

- **Too many changes to the system.**

Respondents reported that initially the program had been very confusing and was difficult to understand.

- **Lack of long term trend data for comparison.**

Respondents reported that the lack of long term trend data was a major stumbling block for using the data results effectively. Respondents also reported the data they did have were slow to be analyzed.

- **Lack of technical knowledge to interpret the results.**

Respondents reported that often the information was being collected but was not properly analyzed or not relevant to management. *"We have results but what does it mean to management?"*

Of the things monitored which items were NOT particularly relevant and useful to the projects?

All of the projects reported that they were required to monitor a lot of indicators that were not particularly relevant to them and most projects said they were in the process of clarifying with ANGAP which items those were so that data collection could be streamlined. Examples of items cited include the price of rice, DEAP items (where project had none), overall expenses of ICDP, number of kilometers patrolled, number of rice fields watered by forest sources, etc.

Of the things monitored which items were particularly relevant and useful to the projects?

Projects were asked if any of the things they monitored were particularly relevant and useful. Almost all of the projects reported that **spatial data relating to vegetation cover** was particularly useful to help determine the rate and location of deforestation. Relatedly respondents appreciated data relating to the illegal exploitation of forest products and the **number of infractions transmitted to DEF**, and the number of those that DEF agents follow up on. Data pertaining to local communities was also seen as particularly useful including **attitudes, perceptions and behaviors of community members, population demographics, and socio economic data** (particularly household income). Data relating to **impacts of activities** in the PAT was seen as being particularly relevant (such as data from pilot households) as were **biodiversity/ ecological** indicators including plant and animal inventories. Several projects said they also found data pertaining to tourism relevant and useful.

Management of research efforts beyond normal monitoring and evaluation efforts.

All projects reported that they undertook research efforts beyond the normal monitoring and evaluation program, and four of the six stated that they had cooperative partnerships with Universities for student research. Outside researchers also worked in the protected areas once they had approval from ANGAP and DEF, and two projects relied heavily on outside researchers to conduct initial inventory work. Research incorporated a wide variety of topics but focused mostly on inventories of plants, mammals, birds, insects, reptiles and aquatic species. Socio-economic research was also commonly undertaken.

Projects reported that they had more involvement with Malagasy student research projects and were able to help supervise and direct the research effort, students were also more likely to leave a copy of their findings with the project and thus the ICDP's were very pleased with most of their efforts. Outside research efforts were not as well received, with projects commonly reporting that they did not know who had been given permission to conduct research, that researchers did not always check in with the project when they were on site and that only rarely were research findings left with the project. Several projects tried to implement strategies to reduce this loss of information, requiring researchers to sign a contract that they would submit any findings back to the project and that they would present an initial summary of their activities and findings immediately prior to leaving the site. One project required every outside

researcher to be paired with a counterpart from the project to help ensure transfer of information.

Overall, projects reported that research efforts had been useful in meeting project goals, particularly University research. Significant stumbling blocks arose when findings were not submitted in a timely fashion, and in the case of one project, the number of research efforts was significantly high that the project felt that they may be having a negative impact on the forest resource. Projects recommended that ANGAP raise the research permit fee and require monetary deposits from the researcher refundable once results are submitted.



Collecting data from a community member.

ICDP Implementation of Principle Conservation and Development Activities

The establishment of field activities is a central focus of the integrated conservation and development projects. On average, the projects hired 30 individuals as full time field agents to undertake activities (with local communities) within the park and peripheral zones.

It is important to note that the projects defined "activities" differently some referring to them as techniques, strategies, methods or actions. For the purpose of simplicity we refer to all these undertakings as "activities".

Approach to "Conservation" Activities.

All six projects have a group of agents (often referred to as conservation agents) whose primary responsibilities are to conduct control and surveillance patrols and to raise public awareness (usually on information relating to park management policies and environmental issues).

Additionally, these agents may help collect monitoring and evaluation data, delimit and maintain boundaries and firebreaks, and oversee project nurseries and reforestation activities. Agents live in the field (excluding agents at Andasibe) and most are from the local communities within the region. Amber, Andasibe, and Ranomafana also have a group of agents (welcome / ecotourism agents) whose primary responsibilities are collecting entrance fees, maintaining park roads and trails and identifying tourism sites. Masoala worked in partnership with an international NGO (WCS) who helped undertake conservation activities.

Amber employs 30 conservation and welcome agents, Andasibe employs 15, Andohahela employ 18 individuals, Masoala 16, Ranomafana 9, and Zahamena employs 23 conservation agents.

Approach to "Development" Activities.

All six projects have a group of agents (often referred to as development agents) whose primary responsibilities are to conduct agricultural extension activities within local communities. The projects undertook very similar activities (see Appendix 1, page 130 for breakdown of activity by project).

List of agricultural activities undertaken by "Development" Agents:

Improved rice culture	Coffee / fruit tree	Additionally agents assist with:
Improved food production	improvement	Artisan associations
Agroforestry	Reforestation	Health programs
Market gardens	Community	Community pharmacies
Beekeeping	Forestry	School environ. education
Com. granaries /	Irrigation	Adult literacy
Seedbanks	Rural credit	Community libraries
Animal husbandry		
Fish farming		

Andasibe and Andohahela chose to undertake development activities in close association with local NGO's. Andasibe funded SAF/FJKM agents to conduct development activities in the peripheral zone and did not hire any development agents as part of the ICDP staff. Andohahela funded FAFAFI and ASOS employees to work alongside ICDP development agents. Both projects reported satisfaction with their partnerships. Ranomafana collaborated with Tefy Saina (a local NGO) and Cornell University. Amber undertook development activities in partnership with two other international NGO's, CARE and VSF (veterinarians without borders).

In total, Amber employs 6 development agents, Andasibe 0 (utilizes SAF agents), Andohahela 15 (plus local partners), Masoala 15, Ranomafana 23, and Zahamena employs 20 "development" agents. Agents live in the field (excluding agents at Andasibe) and most are from the local communities within the region.

What activities do respondents think were the most successful and why?

Project employees and related authorities were asked "Based on your experience what do you think are the most successful project activities and why?" Project employees responded directly for their specific project while related authorities commented on activities in general.

Field Agents (and field agent supervisors)

Agents reported that they felt "conservation activities" were among the most successful activities undertaken by the project, they defined these activities as: "Efforts to educate surrounding population and to protect the flora and fauna in the protected areas." Agents felt combining education of local populations with park surveillance was a success because it resulted in a direct reduction in pressure on the protected area. The **health program** was seen as a successful activity because it was important to local people. **Improving food production** particularly the introduction of new seeds (such as beans and corn) was seen as a successful activity because it increased yield and generated revenue for the farmer. **Market gardening** was also seen as a successful activity for the same reason.

Field Agents	Project Direction	Related Authorities	Communities
Control & Surveillance / Public Awareness	Park Operations: Control & Surveillance	Public Awareness	Agricultural Training
Health Program	Delimitation	Community Structuring	Infrastructure
Improving Food Culture	Park Infrastructure	Biodiversity Research	Health Program
Market Gardens	Health Program	DEAP	Protection of Forest
Infrastructure	Infrastructure	Rural Credit	

Table 8. Most successful activities.

Rural infrastructure was seen as a successful activity because local participation rate was high (particularly in building dams and schools).

Community granaries, small animal breeding, rice culture/IRC, and soil improvement methods were also commonly mentioned as successful activities (though less often).

Field agents from Andasibe felt that ecotourism was one of the projects most successful activities because the project had improved park infrastructures and had high tourist visitation. Agents from Zahamena most commonly listed reforestation efforts as a successful activity because "*people needed the trees.*" The rural credit program was also mentioned because it helped relieve household needs. Masoala agents listed efforts to forward the creation of the National Park as one of their most successful activities citing community and inter-agency collaboration as the reason it was successful. Andohahela agents thought their community infrastructure activities were successful particularly dams and schools.

Project Direction (National Directors, CTP's, Department Heads and Technical Assistants)

Project direction across all six of the projects reported that they felt efforts to establish basic **park operations** were among the most successful activities undertaken. Specifically, control and surveillance, delimitation, and park infrastructure and arrangement. Respondents felt these activities were successful because they lessened opportunities for illegal activities to occur within the protected area, and because they felt that they had made major strides in this area: "*There was nothing when we started*". Respondents also reported that efforts in establishing park operations resulted in mutual learning between the project personnel and local populations.

Establishing park operations...
"... brought us to each and every hamlet, working with villagers, talking, learning, it took a long time but it was worth it."

- ICDP Employee

Health programs were seen as a successful activity because it helped a large number of people and made people more receptive to the Project.

Infrastructure development was seen as a successful activity because it was seen as priority undertaking by local communities (resulting in high participation rates) and because they showed the communities that the project "*cared about them*".

It is interesting to note that direction at Ranomafana reported that ecotourism had been among their most successful activities, Andohahela direction felt their adult literacy program had been very successful, and Andasibe direction felt their bridge installation had been very successful.

Related Authorities

Related authorities felt that **raising public awareness** (education of local populations) was one of the most successful activities undertaken because they felt it was critical to changing behavior

"We have to change someone's mentality, [education is a] critical component if we are progressing towards behavioral change and towards empowerment."

Improving **community structure** and getting people working together was also seen as a successful activity. One respondent combined the two themes:

"The most effective progress was with those techniques which advanced general consciousness and organization at the local level."

Progress towards increasing **knowledge on biodiversity** was also seen as a successful undertaking among the projects, because they had advanced the state of knowledge.

DEAP was seen as one of the most successful activities (particularly by ANGAP and USAID respondents) because they believed it illustrated how the park could have a direct impact on the population:

"DEAP increases peoples awareness of the ecological value of the park, and it is an income generating activity dealing with ecotourism."

Finally, **Rural Credit** was also commonly listed as one of the most successful activities because related authorities saw it as a key aspect to changing peoples status and their ability to change agricultural practices.

Reasons why respondents classified an activity as "most" successful:	
<p>When discussing activities respondents tended to classify an activity as successful when it:</p>	<ul style="list-style-type: none"> ◆ Reduced pressure on the protected area. ◆ Was regarded as important activity by local people. <ul style="list-style-type: none"> - Had a high participation rate. ◆ Helped a large number of people. ◆ Illustrated how the park has a direct impact on communities. <ul style="list-style-type: none"> - Improved relations project / community. ◆ Assisted people in improving their economic status. <ul style="list-style-type: none"> - Increased yield & generated revenue. ◆ Helped people change behavior. <ul style="list-style-type: none"> - Assisted people in changing agricultural practices. ◆ Lessened opportunities for illegal activities to occur. ◆ Advanced the state of knowledge on biodiversity.

Table 9. Reasons why an activity is successful.

Local Community Participants

Local community participants were asked what they appreciated most about the project (see page 116 for complete discussion). Of the activities most commonly mentioned **agricultural training** and advice received their highest praise, specifically, people appreciated assistance with rice culture (including intensive rice culture) and market gardens. Individuals in local communities also liked **infrastructure developments** particularly irrigation related activities (dams and canals) but also schools and hospitals. The **health program** was strongly appreciated by local community members. Significantly, respondents also commonly cited that they appreciated the fact that the **forest and the environment were being protected**.

What activities do respondents think were the least successful and why?

Project employees and related authorities were asked "Based on your experience what do you think are the least successful project activities and why?" Project employees responded directly for their specific project while related authorities commented on activities in general.

Field Agents (and field agent supervisors)

Field agents were much less unified on unsuccessful activities than they were on successful activities, very few strong patterns emerged by activity type. Rather patterns emerged on why project agents felt they were having troubles. Respondents reported that they felt that activities didn't go well when: a) there was not enough demonstration of the technique--farmers didn't get to see concrete results, and b) when not enough education was done.

Zahamena agents felt that building dams had been one of their least successful activities. Andasibe agents felt park protection activities weren't very successful because there were not enough field agents and infractions still occurred.

Two activities appeared in both the most successful and least successful categories, rural credit and market gardening. Agents at Ranomafana reported that they felt only a few people benefited from the rural credit program and that many people didn't apply because they were afraid they would not be able to repay the loan. At Zahamena, agents reported that locals hadn't received enough education on the system, were still afraid of it and were not sure their savings would be safe. Market gardening was listed as an unsuccessful activity when it was conducted in areas without good ties to outside markets.

Project Direction (National Directors, CTP's, Department Heads and Technical Assistants)

Across the ICDP's project direction reported that **communication efforts**, particularly environmental education efforts were among the least successful activities undertaken by the project. Respondents cited a lack of training of project personnel, and difficulties in working with local teachers as reasons, they described the activity as a "*big expense without a big payoff.*"

Intensive Rice Culture was seen as one of the least successful activities by project direction, respondents reported that they felt that farmers found this activity difficult to follow and labor intensive. IRC required control of water resources which also served as an impediment to participation.

Project direction at Andohahela found their agroforestry program to be lacking, and reported that the approach taken had not been appropriate and that field agents lacked training. Ranomafana direction reported that their small animal breeding program (specifically pig breeding) had not been successful because it wasn't well monitored by the project. Masoala direction reported that creation of associations was one of their least successful activities and stated that it was not appropriate in their region and that it just "*never worked.*"

Related Authorities

Related authorities rarely discussed specific field activities as being least successful rather they looked at broader programs and discussed why they felt they had fallen short. Related authorities reported that in general, they felt the projects had lost focus, were too spread out and took a shotgun approach to field activities.

Communication activities, specifically communication within and between projects was cited as an unsuccessful activity. Related authorities felt there was little interaction among departments on the same projects, or between one ICDP and the next, they cited a lack of resources (and effort) as the reason.

Community participation was also listed as an unsuccessful activity, related authorities felt that "real" community participation just hadn't been undertaken because activities had been "led" by the projects.

Technical Assistance was also seen as an unsuccessful activity by many related authorities (although no one from the operators cited this). Respondents felt technical assistance did not provide enough "*professional level*" advice.

The only specific field activity that was commonly listed as not being successful was **animal husbandry**:

"Animal husbandry mainly because its out of context, very difficult to tie to conservation, its an activity that should come later on."

Local Community Participants

Local community participants were asked what they disliked about the project, what they wanted to change and what problems they were having (see page 117 for complete discussion). Regarding project activities, locals reported that they were upset with what they believed to be broken promises or long delays in starting activities, respondents were (understandably) unhappy whenever an activity was delayed and delays in receiving bees, hives, chicks, fish, and seeds were reported as problems. There were also a lot of problems reported with the distribution of seeds (primarily for improved food production--beans, maize, etc...). Farmers complained that seeds were delayed in distribution, didn't grow, too few were given, and some farmers felt that they shouldn't have to pay for seeds. Rural credit was another activity community respondents reported problems with, stating that they didn't like the idea that when they were loaned money they had to pay interest but when they saved money they did not receive interest. Respondents also reported that not enough money was available for loan.

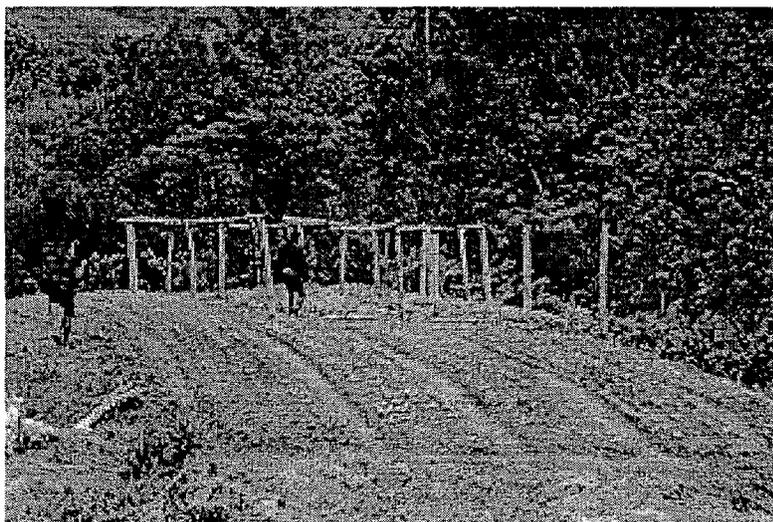
Reasons why respondents classified an activity as "least" successful:	
<p>Respondents reported that activities did not go well when there was a:</p>	<ul style="list-style-type: none"> ◆ Lack of demonstration of the technique. ◆ Lack of education regarding benefits and methods of the technique. ◆ Helped large number of people. ◆ Lack of enough field agents to implement techniques. ◆ Lack of training of project personnel. ◆ Lack of resources or effort by project. ◆ Lack of professional level advice to the projects. ◆ Lack of monitoring by the project. ◆ Lack of quality community participation, or activities where only a few people benefitted. <p>Or when activities:</p> <ul style="list-style-type: none"> ◆ Required lots of labor and complexity. ◆ Required control of water sources.

Table 10. Reasons why an activity is least successful.

Additional recommendations for implementing activities based on lessons learned:

A comparative analysis of 25 principle field activities can be found in the Appendix 1 of the report, in a brief synopsis respondents stated they had learned the following lessons about implementation of activities:

- ◆ **Give more consideration to community needs when selecting activities.**
- ◆ **Start out with fewer activities - limit activities to those you can teach & monitor well.**
- ◆ **Engage participants in activities in such a manner that they take responsibility for the activity to increase community ownership and improve chances for the long term sustainability of an activity.**
- ◆ **Demonstrate techniques to farmers either through demonstration plots or site visits.**
- ◆ **Increase collaboration with local authorities, government services, and local NGO's when undertaking field activities.**



Crops planted by association members.

Increasing Public Awareness and Participation

Increasing public awareness and incorporating local communities was one of the fundamental tenets to the ICDP program, thus respondents were asked to discuss the lessons they had learned in working with local communities. In the broadest sense the projects took a very similar approach to working with local communities although they implemented these same steps differently. In general they: introduced themselves to the communities, conducted a community needs assessment, described the types of activities the project could assist with, selected activities, and then worked with those who volunteered. The projects provided technical expertise and training to participants (who were commonly organized into associations) and activities were undertaken in the field and monitored by the project.

The following section identifies the methods used and any unique innovations in the approach, cites how respondents felt about the approach, reports stumbling blocks found along the way, and notes project suggestions for what they would do differently, *next time*.

What strategies were undertaken to promote community participation and how effective were they?

Project introduction into local communities.

Community Selection.

Projects varied in their approach to community selection: Three projects undertook activities with all willing communities within the peripheral zone and three projects chose to undertake activities in selected pilot communities (although they conducted education efforts throughout the peripheral zone). Projects who worked with all the communities surrounding the protected area reported that they sought to influence as many people as possible within the peripheral zone while projects who worked with pilot communities reported that they wanted to showcase activities in specific areas and wanted to be able to seek comparisons in non participating communities.

Traditional Community Structures.

To introduce the project and obtain permission to work in the communities, four of the six projects reported that prior to starting work in communities they contacted traditional community structures (such as the tangalamena). These projects reported that they routinely kept traditional authorities informed and asked for their assistance in project activities. Field agents from several projects reported that contacting traditional authorities was important because local people "*respect them and listen to them.*" Two projects, however, did not specifically contact traditional authorities; one reported that people in their area were recent immigrants and therefore no traditional community structures existed; while the other project

stated that they "*left it up to the local communities*" to determine who would work with the project (communities could select their traditional authorities to sit on a community management committee, if they so wished, or could chose other representatives).

Official Community Structures.

Three of the projects also routinely contacted official community structures (such as mayors and representatives of the fivandrona) when undertaking work in communities. Several projects reported excellent relationships with official authorities and stated these relationships were vital to completing project undertakings, particularly infrastructure improvements. Three other projects reported that they did not regularly maintain contacts with official authorities. One project reported that they felt these structures were "*just too highly politicized*" and they stayed away from them, the other two projects reported that while official structures were originally contacted, they were not consulted during the project (although respondents from both these projects reported that if they had to do it over again they would work more closely with local authorities, and both projects reported they had just recently renewed efforts to contact officials).

Community Needs Assessment

All of the projects conducted a community needs assessment prior to starting work in local communities. To obtain input, projects reported that they conducted community meetings to discuss local needs and gathered input from informal discussions between project agents and local residents. Additionally, several projects conducted in-depth participatory rural appraisals and two projects conducted community surveys including socio-economic information.

It is interesting to note that projects did *not* report obtaining background information about communities from partner agencies or government services nor did they report identifying partner agency needs, rather most projects focused on defining the existing situation through discussion with local community members. Three projects reported that they maintained an on-going analysis of community needs, primarily through the use of monthly agent reports. One project asked participants to maintain diaries regarding project activities, the project utilized this information to identify needs and monitor and evaluate activities.

On reflection, most respondents reported that their community needs assessments were insufficient, projects reported that they did not obtain enough information from local community members or from partner agencies or government services about the communities. Many respondents reported that they would have liked more on-going analysis of community needs to "*maintain a better pulse on local community perceptions.*"

Selection of Community Activities

In general, projects selected activities to undertake in communities based primarily on their pressure analysis (see page 61) and secondarily on their review of community needs. These activities were then proposed to the communities to "see if they wanted to do it." If the community approved of the activity (which they almost always did), interested individuals were identified and the projects began work (see Appendix 1, page 130 for a review of community activities). Additionally, several projects reported that they originally selected "entry" activities (i.e. those activities which local communities would be quickly responsive to, allowing the projects to build positive relationships at an early stage). Two projects reported that community committees assisted in activity selection. One project reported that they asked for advice from a partner NGO and consultants, and one project reported that most of their activities were inherited from a previous phase of the project and that many activities were stipulated by donors.

Respondents commonly reported that if they could do it all over again they would involve communities more in the design phase of the project, base activity selection more on needs rather than pressures and that they would identify the needs and causes of pressures based on a broader analysis of the region (beyond the peripheral zone). Several respondents reported that they would have liked to have started out with fewer activities, limiting activities to those you could "teach and monitor well."

Community Organization.

While activity selection was similar, the organizational approach to working with local communities differed from project to project. Overall, two broad approaches were initiated, projects either focused efforts on working with individuals, or they focused on working with groups (establishment of associations). Additionally, projects also included a variety of other methods to encourage participation including conducting community meetings, utilizing pilot farmers and installing demonstration sites. Three projects set up community groups to oversee and monitor field activities.

Example Activity Selection Process

"To select activities we considered:

- Human pressure on protected area.
- Conservation impact of those pressures.
- Possibilities to increase agricultural production & breeding.
- The needs of local population.
- Probability of success.
- Population motivation to participate with the project."

While it can be said that at one time or another each project undertook several approaches, in general:

- Amber primarily focused on training individuals, although they set up some associations.
- Andasibe concentrated on training associations.
- Andohahela began with an individualized approach but felt that teaching community structure was important so they switched to associations.
- Masoala initially focused on individuals and pilot farmers but moved to associations (although they questioned this decision and were scaling back).
- Ranomafana began working with individuals, moved towards associations and pilot farmers, and now are setting up unions of associations.
- Zahamena focused on associations, unions of associations, and later incorporated pilot farmers.

◆ Working with Individuals

Three projects concentrated efforts on working with individuals and their approach was similar - individuals who voiced an interest in a particular activity were contacted by project agents who visited the site and discussed the activity, the agents provided technical support (and occasionally supplies and equipment) and then monitored activity progression.

Respondents reported that because *"all activities are based on human relations,"* working one-to-one with individuals *"just made sense."* The approach provided the opportunity for agents to build relationships with local residents, and establishing trust was seen as an important element to ensuring the successful relay of project messages. Field agents reported that working with individuals facilitated learning because *"an individual can easily voice their ideas and problems, and together we could find solutions."* Projects noted that individual farmers in many cases served as pilot farmers (see page 98) and that neighbors watched them closely and often copied agricultural techniques.

Some field agents reported that they preferred an individual approach to a group approach because it was less political, trust level between members of a community were often low and people *"had problems working in groups"* thus many agents felt that residents preferred an individual approach. Agents reported that group meeting structures often imposed a social hierarchy which made it difficult for people to talk openly or disagree in a group setting. Agents also reported that they liked working with individuals because responsibility lines were clear *"people can't say some one else was supposed to do it."*

Stumbling blocks were encountered along the way, however; agents reported that it often became difficult to monitor activities in communities *"where everyone participated"* because agents did not have enough time to visit all

"All project activities are based on human relations. Working with individuals lets you build a relationship that helps ensure your message gets through."

- ICDP Field Agent

the plots, particularly during critical agricultural periods. Project direction commonly reported that an individual approach left out an important community empowerment lesson -- how to work together for the betterment of the community. Field agents also reported some problems with jealousy between individuals in the community "*some people felt that we were playing favorites when we worked more with certain individuals (those who were putting more pressure on the protected area).*"

Two of the three projects that began with an individualized approach reported that they were now moving towards building more associations stating that they felt that teaching community structure was important and that they felt project activities could more easily be controlled and monitored in a group setting.

◆ Working with Associations

Three projects concentrated their efforts on working with groups of people interested in the same activity. Individuals were asked to organize themselves into associations and these associations were taught skills in basic organizational structure (including how to set up rules of operation and financial management methods). Field agents provided technical support (and occasionally supplies and equipment) to the associations and then monitored activity progression. Agricultural associations were often asked to set up association plots where agents conducted training in agricultural methods. All members of the associations participated in the care of these plots and shared in the crops produced.

Two projects reported that prior to receiving assistance in a specific activity the associations were asked to write (with help from project personnel) a short proposal describing what they wanted to do and how they planned to go about it (detailing what materials were needed, what they wanted the project to provide and what they were willing to provide). The projects would review the proposal, negotiating changes as necessary. Once finalized, the representatives from the project and association members would sign the agreement. One project required proposals for every activity undertaken by an association (from market gardening to dam construction) and required that the proposals be approved by a broader community development committee (*see page 100*), the other project required proposals only in cases where a significant investment of project funds (dams, granaries) was requested. Respondents reported that some activities just naturally lent themselves to an association format (such as community granaries) and that they felt that associations encouraged community capacity building by strengthening community organization and encouraging community ownership.

Field agents reported that they liked working with associations because it was practical; they reported that they could train more people at one time, that it was easier to distribute materials, and that it reduced the number of sites they had to monitor. Agents also stated that they liked the group synergy and collaboration shared among members and reported that "*people share ideas and help one another with problems.*" Agents reported that associations were "*a good way to handle lots of people*" and felt they were "*more effective*" and had a "*bigger impact*" on

the community thus facilitating the transmission of project messages. Projects noted that agricultural association plots often served as demonstration sites (see page 99) and that people closely watched them and often copied the agricultural techniques taught to association members.

Stumbling blocks were encountered along the way. Field agents commonly reported that *"people don't trust one another"* and resisted working as a group, agents felt that many community members preferred an individual approach to associations. Agents also stated that occasionally groups got too big, making training and group decision-making difficult (agents reported that they preferred to work in groups of 6-8). One project reported that it originally established so many associations, that they failed to provide adequate training or support to them thus creating false expectations within the communities. Field agents also reported that creation of associations could play into existing community rivalries--groups of people would either work with the project, or not work with the project depending on what the other faction did, and agents were accused of favoring one group over another. Respondents also voiced concerns over whether the associations could become financially self sufficient. Projects responded by encouraging association membership fees, and group activities to raise money (such as selling seeds), several projects encouraged the formation of unions of associations to increase their economic power, and one project responded with a rural savings and loan program.

Respondents cautioned that associations were not appropriate for all activities but were better suited to those activities which could provide a *"rapid economic return"* and those that are *"relatively simple to implement"* (market gardening, community granaries, etc). More complicated techniques like agroforestry and were too difficult for groups to implement easily and the *"benefits were too long*

Example - Approach Including Community Associations

"Our approach to working with communities was based on forming groups (associations) at the village level. First we went to villages and met with traditional and official authorities. We organized community meetings and explained the project. Villagers were asked to develop a list of what they needed and were interested in, we then compared this list to what the project could provide and together we worked out a final prioritized list of activities. Villagers who were interested in participating in these activities were asked to form associations based on the type of activity (i.e. beekeeping, market gardens, etc.). These associations were trained in organizational structure and were required to set up rules of operation. Agricultural associations were asked to set up plots where agents conducted training in agricultural methods. All members of the associations participated in care of the plot.

We now have 85 associations and are concentrating our efforts on creating unions of associations to help increase the economic power of these associations. The associations are also being closer aligned with our rural credit system which should help to make their activities financially sustainable.

Last year we added demonstration plots and pilot farmers. We also empower local forestry committees to help with fire control, work with local government administration and to interface with DEF agents to improve forest resource management."

term to ensure group participation." (Respondents recommended pilot farming and demonstration sites for these types of activities).

In the future, most projects reported that they planned to maintain their approach and will continue working with associations (although one project was scaling back on the number of associations they supported). Several projects reported that currently they were working on building unions of associations to improve the economic power of these groups and to increase the sustainability of activities. Although many respondents advised projects to:

"Start small just with those groups who you can support, perhaps start by getting people together just to buy seeds and then build from there."

◆ **Additional methods for working with communities.**

While projects may have taken a more individualized or a more group approach to community organization, normally they also included a variety of other methods to encourage participation including: conducting community meetings, utilizing pilot farmers and establishing demonstration sites. Three projects also set up community groups to oversee and monitor field activities.

Community Meetings.

Field agents reported that they felt that meeting routinely with the entire community was a very important element to successfully achieving project goals. Agents reported that more people came to community meetings (than other activities) and this "*facilitated education [efforts] about the importance of protecting the forest*" and that it was important "*to make people aware of what the project is doing.*" Agents felt that community meetings demonstrated to residents that "*everyone was invited to participate*" and helped limit concerns over favoritism. Agents cautioned against having too many meetings "*just to make speeches*" and stated that people "*get tired of just listening to words*" rather, agents advised projects to call meetings whenever they had something of interest to share with the community such as a slide show or when a project activity was going particularly well (so they could discuss it with community members). Agents reported that the one draw back to community meetings was that they imposed a social hierarchy that often excluded women, or made it difficult for people to talk openly.

Pilot Farmers.

Several projects reported that they selected individuals within the communities to become pilot farmers. Pilot farmers are individuals who implement, in their own fields, specific agricultural techniques being taught by the project. These fields are viewed by the projects as demonstration areas showcasing techniques to neighboring farmers and encouraging skill transfer from *farmer-to-farmer*. Respondents reported good success when they selected respected community leaders (opinion leaders) because "*people really watch what they are doing.*"

Respondents reported problems, however, in obtaining suitable land for demonstration, reporting that farmers were hesitant to change techniques on plots where they felt things were growing well, rather farmers offered sub-standard land where they felt *"they had nothing to lose."* Respondents reported that while productivity on many of these plots could be improved they did not allow for the *"quality of illustration"* being sought by the projects. Respondents cautioned against selecting *"just anyone"* to be a pilot farmer, stating that often people who volunteered were individuals who had *"nothing to lose"* because their plots were unsuitable or were individuals who the community already viewed as *"outcasts"* and that few community members would follow their example.

In the future, most projects reported that they planned to maintain their approach and will continue to work with pilot farmers. Several projects reported that currently they were increasing the number of farmers participating and were working on having pilot farmers demonstrate an entire agricultural system (rather than just one or two techniques). Respondents advised projects to hold community meetings when things are going well at a pilot farm to encourage people to view the area and discuss the techniques utilized.

Demonstration Sites.

Most projects established project demonstration sites. The projects viewed these sites as centers for teaching different agricultural techniques which can be applied by farmers. Most demonstration sites were centrally located and featured technical demonstration often based on the latest research available in Madagascar. In general, respondents stated that demonstration sites were successful and field agents reported that they felt demonstrations were very effective and the number of demonstration plots (and site visits) should be expanded because *"people believe what they see."*

Respondents reported problems, however, in obtaining suitable land for demonstration, reporting that communities were hesitant to offer fertile well drained land, preferring to offer sub-standard land that was not in use and often not located near a water source. Similarly to pilot farming plots, respondents reported that while productivity on many of these plots could be improved they did not allow for the *"quality of illustration"* being sought by the projects.

Some projects reported that initially their demonstration efforts were limited, demonstrating a few techniques rather than an entire system. One project reported that they were now focusing on technical demonstration of an integrated *"agro-sylvo-pastoral"* system of land use capable of replacing the traditional tavy system. The project reported that they were focusing on demonstrating how all the techniques (the project taught) fit together as a system to improve land use and the standard of living (*introducing new vegetables improves nutrition and provides an additional source of revenue for households, composting is used to improve soil quality along with agroforestry techniques, which improve and protect soils and provided a source of wood products, etc....*). Respondents advised projects to hold community meetings when things are

going well at a demonstration site to encourage people to view the area and discuss the techniques utilized.

Community Management Groups.

Three projects established community groups whose responsibilities included overseeing project activities. In general, there were two approaches: One project utilized a community workshop approach where representatives from local communities gathered once a year to discuss and evaluate activities and plan for the following year (this group, in turn, set up an off shoot community development committee to consider issues such as DEAP funds). The other two projects established a series of community committees within the project area who were to serve as a community contact group for the projects and oversee project activities undertaken in the community. Additionally, one project also set up a central community management committee (composed of representatives from the other committees) to help evaluate activities and plan for the following year.

In general, respondents reported that community groups had been very helpful to the project and were considered a successful undertaking.

"[The community workshop] has been very useful for managing activities, we can tell if we need to make changes or rotate agents (perhaps one village needs someone who specializes in a particular activity), it's also very helpful for our annual planning efforts. We would recommend this approach to other projects."

"The Community Management Committee has been useful and is a good a morale building activity, generally meetings have been a positive experience."

Respondents did report some problems however: Obtaining "good" community representatives was sometimes a problem, respondents noted that often communities sent "rich people" who were more likely to represent their own interests than those of the "common villager." Projects also reported that it was difficult to obtain input from women because communities usually selected male representatives.

"Projects should carefully consider how to get quality community representation. Representatives should know what activities are being done, must be able to gather and voice villager needs, and must be able to provide feedback to villagers [who are not on the committee]."

One project reported that while they originally created community management committees they failed to connect these committees to the project associations (who became the main focus of participation). This created confusion among committee members who did not see a benefit to project activities for the community at large (profits were kept at an association

Example - Approaches Including Community Management Groups

Approach #1:

"When the project wants to start an activity agents hold a community meeting to present the activity and to see if the community wants to do it, if yes, we take list of volunteers and work from there. Normally, we follow up with [interested] individuals, although associations were established for dams, granary credit, and market gardens. The project department head always starts off a new activity in a village.

Villagers also participate in an annual workshop. 80 people participate each year (2 representatives from each of 40 villages in the area), villagers choose their own representatives (and they have changed for each meeting). We divide the group in half and hold 2 meetings (one on the east side and one on the west) each for 5 days. The project pays all expenses. Discussion centers around evaluating activities, what has been done and with what results, and how to solve problems, we use this information in the annual work plan. We also inform villagers of any change in the project.

A community development committee was set up by the 80 villagers (at an annual workshop) and has had one meeting to discuss what they should ask DEAP to do. We are hoping to build this as a legal confederation of villages so they can officially request money from donors, in the future."

Approach # 2:

"Communities were divided into 13 village groups and a participatory rural appraisal (PRA) was completed with the villagers to identify needs and to present the project. In each of the 13 communities residents were asked to form a Village Development Committee, composed of 5-6 people, nominated by the people who were involved in PRA. This group served as contact committee for the project and reviewed activities proposed within the community.

The project then told the village develop committees that villagers needed to form associations in order to undertake an activity - people who were interested in the same activity (poultry breeding, beekeeping, etc) formed associations. To start an activity each association writes a "community action plan" describing what they want to do, and what will be provided by villagers and what they are requesting from the project. This action plan is sent to the community development committee for approval and is then given to the project who rewrites it more formally, finalizing who is to do what, the association signs and work begins. The process usually takes no longer than a month.

Two to four members of the Village Development Committees sit on the Community Management Committee. This committee meets twice a year, to review what has happened, discuss future activities, and to come up with an agenda of activities they would like to do (project says which ones they can help with). Decisions are made by voting, there are 13 votes (one for each Village Development Committee)."

Table 11. Community management groups.

level). The project also reported that management committees created problems within the community by initiating a power structure that didn't exist prior to the project. The project reported that "*not all villagers accepted the committees*" and that sometimes the committees were perceived as "*privileged people.*" In a few cases people actually created their own splinter groups (parallel to the project committee).

Other Types of Committees.

In addition to community management committees, projects constructed an assortment of community committees to undertake specific tasks such as; community forestry committees, community land management committees, community fire committees (*see page 151*), and DEAP committees (*see page 161*).

Working with Partners in the Field.

All of the projects worked with partner agencies or local government services in the field and reported this to be an important element in their work with local communities. Partners provided additional expertise, helped spread the burden of work, and often helped fund activities.

Three projects chose to undertake development activities in close association with local NGO's. Andasibe funded SAF/FJKM agents to conduct development activities in the peripheral zone and did not hire any development agents as part of the ICDP staff. Andohahela funded FAFAFI and collaborated with BIT/FID to work alongside ICDP development agents. Ranomafana reported they had a close partnership with Tefy Saina and that they sought out appropriate NGO's whenever they undertook an activity. All projects reported that they were very satisfied with their partnerships (*see page 54*). Several projects also worked with other international NGO's. Four projects reported a working relationship with DEF although joint patrols were only routinely conducted on two projects.

While respondents cited some problems dealing with issues surrounding lines of responsibility or differing philosophies regarding development issues, in general respondents felt these partnerships were very beneficial and commonly stated they had do it all over again they would increase activities with local partners.

Role of the Project Agent.

The major conduit between the project and the community was of course the project field agent, and it is interesting to note that projects took a slight difference in approach in defining the role of the field agents.

Five of the six projects placed agents in the communities to live among the local population, reporting that this encouraged relationship building and facilitated the relay of project messages, and they felt it was just more practical. One project did not place agents in communities preferring to have them routinely visit the communities.

While most projects hired agents from the region surrounding the protected area, one project hired agents specifically from those local communities with which the project was working. They felt that these agents (who were already established in the communities) were the best people to transmit project messages because community members already "*knew them and trusted them.*" Additionally, the project reported they improved community responsiveness by providing employment to local families. The project also stated that by training *local* agents, they felt they improved the chances for long term skill transfer and facilitation of project messages because expertise would remain in the community (even if the project left). The

project also reported that they cross trained all field agents in conservation, development, and health activities of the project and found this to be a very successful approach to integration and skill transfer.

Methods utilized by field agents to raise public awareness were much the same project to project (*see page 134*) and in general, the projects felt that the agents efforts to raise public awareness were successful. Projects cited an increase in participation and requests for assistance as indicators of success and reported: "*Overall people listened to what we had to say.*"

Field agents remarked on the importance of having a clear well defined message to communicate "*that made sense to the villagers.*" Several projects reported that *water* (saving forest to ensure water sources) was one of the most readily understood messages within local communities.

Some problems did surface, however. For the most part, field agents received little or no training in communication techniques and project communication teams did not identify key target populations (*beyond people who cause pressure*) nor developed targeted messages for field agent transfer.

Respondents reported if they could do it all over again they would train agents in communication skills including non formal communication techniques. Agents reported that it was important to listen closely to local residents to determine what people wanted and *needed* to learn and that they felt:

"The best way to get people to listen to you is to live in their community and work alongside them."

What do field agents think is the most effective approach to working with local communities?

Field agents reported that they felt that, in reality, all activities in the communities were "*based on human relations*" and there was no one *right* method for working with local people. Agents reported that methods should be selected based on the specific activity type (*e.g. what works best to teach agroforestry*) and taking into consideration the structure of the local population (*can this community work together, are there traditional authorities to work with, etc*). Agents reported that, in general, they slightly preferred an association approach but also reported that working with individuals, holding community meetings and establishing demonstration plots were very effective (pilot farming was also cited, but less often). Agents emphasized that they felt activities where people "*can see results*" were very effective including demonstration plots and site visits.

While there is no "best" approach respondents did proffer a few **guidelines to consider when selecting an approach**:

- Associations are better suited to those activities which can provide a rapid economic return and those that are relatively simple to implement.
- Work with individuals when activities are complex, and labor intensive.
- While important, community meetings are often over utilized as an approach to participation. Hold communities meetings only when you want to showcase a field activity (when it is going well) or when you have something specific to share. Don't hold too many meetings.
- In general, respondents reported good success with demonstration sites and with pilot farmers when community leaders were selected because "*people watch and believe what they see.*"

Approaches to Community Empowerment.

Respondents reported that primarily they felt communities were empowered when they participated in decision making activities, and commonly cited community management groups, and DEAP committees, as prime examples of their approach to empowerment. Projects reported that they empowered people by "*making it clear we weren't imposing priorities*" and stated that communities were empowered because they "*choose their own people to represent them*" within the community management groups and that they "*participate in planning and have a voice on how funds would be used, and what activities are selected.*"

Several projects reported that activities surrounding community land management efforts empowered local communities, particularly contracting mechanisms for managing land (DINA's and ZOC's) to control the use of the forest and new immigration. Community forestry committees were also commonly mentioned. Respondents reported that group associations empowered communities by demonstrating the strength of community collaboration. Technical training in agricultural skills, group management and financial accountability (taught through associations) were reported to empower communities. The rural saving and loan program was cited as an approach to empowerment by providing individuals and associations a means to financial assistance, and lastly, adult literacy was cited as project activity that "*really empowers people.*"

Common problems in working with communities that are still plaguing the projects today.

Respondents on several projects reported that there were several problems that continued to be a dilemma for the projects:

- **Confusion / Lack of trust.**

Respondents commonly reported that they believed that many individuals in local communities still were "*confused*" about the project and "*did not trust the mission of the project.*"

Respondents reported that this confusion was due in part to the complexity of the project (numerous project agents and partner organization agents visited the communities).

Respondents reported, however that they were making progress in this area.

"Villagers have a hard time understanding the project, too many players, very complex, its confusing, but on the whole they are starting to see concrete results."

- **Problems with dependency behavior.**

Respondents commonly reported that they were consistently challenged with "*getting people to play any role other than recipient.*" Reporting that communities often viewed the project as "*wealthy donors*" and that this attitude was occasionally reflected through "*community blackmail*" (what will you give us if we don't cut down the forest). Respondents reported that this was due in part to the historical nature of development projects (who previously came into the communities and built things for free) and that sometimes these problems were aggravated by the projects themselves through "*gifts*" to communities (including small things such as seeds, to large infrastructure improvements).

- **Difficulties in getting target populations to participate.**

Respondents at several projects reported problems in getting the targeted populations (people who put pressure on the protected area) to participate in project activities. Projects reported that the people who put more pressure on the protected area (for instance immigrants and young men) were often less likely to participate in project activities (than other community members).

Related authorities also cited some concerns, a few respondents questioned the overall approach the projects took to community involvement citing a "*lack of commitment*" to participation and empowerment elements. Related authorities also reported that they felt projects "*hurried through*" participation activities to achieve quick results (although they reported this was more of a design problem with SAVEM than the fault of the projects).

Overall Recommendations

Beyond the ideas listed in the sections above, respondents provided a variety of recommendations about what they would do differently, *next time* based on the lessons learned:

◆ **Seek "Quality" participation.**

- Don't rush through community involvement. Participatory approach requires a long term commitment.
- Take more time with design and provide activities based on *needs* not just pressures.
- Move more slowly with communities.

◆ **Establish relationships with traditional and official community authorities.**

- These relationships are vital to successfully complete project work.

◆ **Involve community members more in design and evaluation phases of the project.**

- Involve locals at very beginning of process, don't tell them what to do.
- Work more closely with communities in planning and evaluation, be sure proposals for activities come from community members.
- Collaborate on activity design - determine what to do together and work together for execution.

◆ **Obtain more input from community members regarding their needs.**

- Get a better idea of local communities perceptions, obtain more input on what communities think are *their* problems and needs.
- Conduct more on-going analysis of peoples needs to make sure project objectives match.
- Consider causes of problems, not just pressure areas (think about the region).

◆ **Find ways to incorporate women in activities**

- Many traditional methods limit their participation.

◆ **Demonstrate!**

- People believe what they see.

◆ **Conduct more education and training in communities.**

- Increase training of community beneficiaries to increase sustainability.
- Conduct more training on specific techniques instead of general education.

◆ **Develop a target message.**

- Develop a clear well defined conservation message that makes sense to local people.

-
- ◆ **Train field agents in communication skills.**
 - Field agents are your most important tool.

 - ◆ **Hire field agents from the area/region and have them live in the local communities.**
 - The best way to get people to listen to you is to live in their community and work alongside them.

 - ◆ **Cross-train field agents in both conservation and development activities.**
 - Improves integration and skill transfer.

 - ◆ **Encourage community empowerment.**
 - Encourage participants to take responsibility for activities.
 - Use DEAP as a community strategic tool to build relationships and empower people.
 - Focus on rural credit, make sure people have a way to develop self sufficient funding abilities.
 - Support community management groups such as COGES.
 - Remember, often real beneficiaries organize themselves on activities they feel are important.

 - ◆ **Teach organizational skills and encourage community structure.**
 - Help people learn how to work together for the betterment of the community.

 - ◆ **Avoid "gifts".**
 - Results in dependency behavior.

 - ◆ **Widen project intervention zone.**
 - Instead of limiting activities to peripheral zone focus on communities who really want to collaborate.
 - Take a larger geographic view not just peripheral zone.
 - Develop gateway communities to encourage people to go back to their original home towns (outside the peripheral zone).

 - ◆ **Involve local authorities and public services when working with local communities.**
 - Help local NGO's make the most of the value of local communities.
 - Catalyze local agencies, work through technical and government services.

 - ◆ **Enforce rules and regulations.**
 - Enforce rules and regulations, as well as providing activities to reduce pressures and increase the standard of living.
 - Punish those who break rules.

 - ◆ **Don't make sweeping promises to communities be very conservative.**
 - Don't make promises that you can't keep.
 - Respect time lines for activities discussed with communities.

Results from Interviews with Local Community Members

To obtain feedback from community beneficiaries regarding the ICDP's, individuals from eighteen communities were selected to be included in this inquiry. The purpose of the community interviews was to obtain a pulse on how community members felt about the project, and to see if there was any evidence that community participants were learning from the project or being empowered.

Description of Community Respondents

The results represent individuals from three communities per project (i.e. 18 communities) which were selected by the facilitators from a purposive sample based primarily on the level of project activities within a community: 1) Individuals within a community where the project has a lot of activities, 2) Individuals within a community that has some activities but is not a major site and, 3) Individuals within a community with no project activities (control community).

Communities were also selected based on their ethnic structure and location (to incorporate a variety of geographic regions and peoples). Interviews were conducted with members of project working groups (referred to as *associations*), pilot farmers or other involved individuals, and non-participants. Additionally, individuals were interviewed in communities where there were no project activities to provide a point of comparison (control communities). Individuals were randomly selected from these sub-populations. All interviews were conducted with *adults* (individuals living within their own households). Eighteen representatives from the fokotany (either a village elder or local official) spoke with the facilitators answering a few questions and granting permission for the inquiry to be conducted within the community.

One hundred and sixty one (161) community members participated in a 30 minute face-to-face interview. Men and women were nearly equally represented (53% male and 47% female). On average, the community respondent was 39 years old, although age ranged from 18 to 78. The majority of respondents had lived in their community for approximately 27 years (on average) although length of habitation in the community ranged from 3 months through 78 years. The major source of revenue for respondents was generated by growing and selling rice (40%), followed by growing and selling cash crops, primarily coffee and vanilla (20%), and then through trade (primarily in small shops) (16%). About one fourth of the respondents made a living in some other manner such as working as a field laborer, having a salaried job at a community business, selling crafts, teaching, or through wood and charcoal exploitation.

Respondents from communities where the ICDP's had activities.

Sixty-eight percent (68%) of community respondents were from communities where the projects had activities. Within these communities, sixty percent (60%) of respondents participated in project activities (either by joining project associations or by some other manner,

such as pilot farming), and forty percent (40%) were individuals who chose not to participate with the project.

- **Association Members**

Twenty six percent (26%) of community respondents belonged to project associations. More than one-fourth of which belonged to general agricultural associations (primarily rice culture but also corn, beans and peanuts, etc). Many individuals belonged to associations whose primary activity was market gardening (19%), or belonged to artisan associations (17%). Individuals belonging to a variety of other associations also responded including: breeding associations (poultry and bovine), fishing associations, community granaries, beekeeping associations, community forestry associations, and dam associations.

Community Respondents

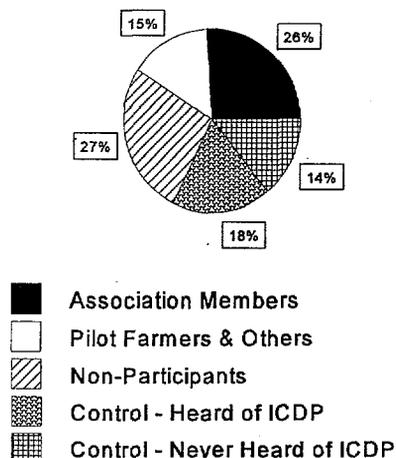


Figure 6. Community Respondents

- **Pilot Farmers and Other Involved Individuals.**

Fifteen percent (15%) of community respondents were involved with the project in some other manner than through associations. Within this group of respondents, one fourth (25%) worked as pilot farmers undertaking intensive rice culture, twenty one percent (21%) worked on reforestation efforts and nurseries, and thirteen percent (13%) had market gardens assisted by the project (although not through an association). Individuals involved in the school environmental education programs, beekeeping, poultry breeding, corn and bean crops, dam construction, and family planning, also responded.

- **Non-Participants in communities where the ICDP'S had activities.**

Twenty seven percent (27%) of the respondents were from communities where the project had activities but reported that they had chosen not to participate with the project.

Communities Without ICDP Activities (Control Communities)

Thirty two percent (32%) of respondents were from communities that were nearby the protected areas but didn't actually have any project activities. These communities were selected as "control" communities, so respondents answers could be compared between communities where the project was working, with those from where the project was not working. Within this population respondents can be further grouped by those who had heard of the ICDP's (57%) and those who had never heard about the ICDP's (43%).

Attitudes and Perceptions about the Project

What are people's perceptions about the NGO, ANGAP, and DEF, how do local authorities feel about the project?

Perceptions about the NGO.

Respondents were asked if they were aware of an organization called xxx (WWF, SBU/ICTE, CI, CARE, or VITA), the question was phrased utilizing both the abbreviations and the full names of the organizations (e.g. *Are you aware of an organization called, CI or Conservation International?*). If respondents stated that yes, they had heard of the organization, they were then asked if they were familiar with the responsibilities of that organization.

Overall, most people were not familiar with the NGO, a little less than two thirds (63%) stated that they had never heard of the organization. Of the more than one third (37%) who had heard of the NGO, three fifths (63%) reported that the responsibilities of the organization were related to protection of the forest/environment (half of which reported that the NGO responsibilities were to guard the forest and grant permission for access, in a similar role to that of DEF) and fifteen percent reported the responsibilities more general terms of general protection of the environment or the protected area]. One fifth of respondents stated that although they had heard of the organization they did not know what their responsibilities were, and fifteen percent reported responsibilities having to do with development or agriculture activities.

Few exceptions were noted when comparing sub-populations. More than half (56%) of local authorities reported that they had heard of the NGO, and in the case of WWF, more than eighty percent of the all respondents from Amber and Andohahela reported that they were aware of the WWF organization, who's responsibility (according to most of the respondents) was to guard the forest.

Heard of NGO

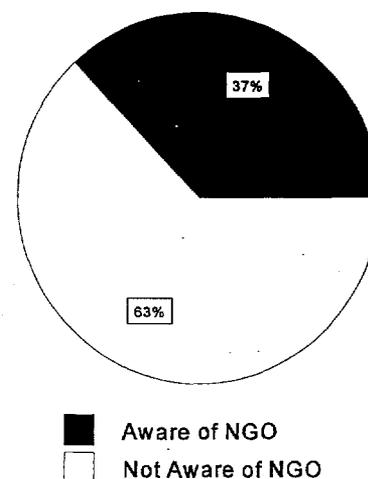


Figure 7. Heard of NGO

Perceptions about ANGAP.

Respondents were asked if they were aware of an organization called ANGAP, the question was phrased utilizing both the abbreviations and the full name of the organization. If respondents stated that yes, they had heard of the organization, they were then asked if they were familiar with the responsibilities of ANGAP.

Overall, most people were not familiar with ANGAP, more than eighty percent (83%) of respondents stated that they were **not** familiar with the organization. Of the respondents who had heard of ANGAP, twenty-nine percent reported that ANGAP's responsibility was to manage the reserve, thirteen percent reported that ANGAP worked in rural development, and ten percent associated ANGAP as an agency giving money to local communities (probably DEAP funds). Almost half (48%) of respondents who said they had heard of ANGAP reported that they did not know what the responsibilities of the agency were, or they reported that ANGAP worked with the project but couldn't say how.

Heard of ANGAP

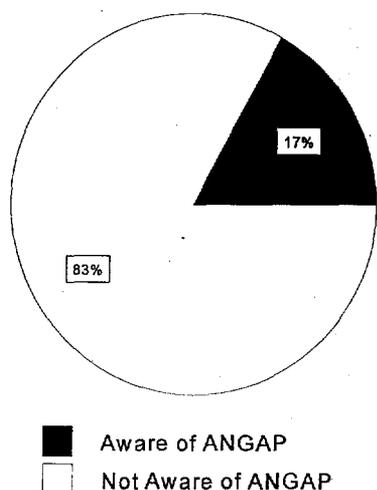


Figure 8. Heard of ANGAP

Exceptions were noted in a few cases when comparing sub-populations. More than half (61%) of local authorities reported that they had heard of ANGAP, and most identified them as the managers of the protected areas. In the cases of Ranomafana, Amber and Andasibe, approximately one-fourth to one-third of community members reported they had heard of ANGAP. Respondents at Ranomafana identified ANGAP as managers of the park, while most respondents at Amber did not know what ANGAP did (although they had heard of the organization). Respondents at Andasibe tended to identify ANGAP's responsibilities in terms of development activities.

Perception of DEF.

Respondents were asked if they were aware of an organization called DEF, the question was phrased utilizing both the abbreviations and the full name of the organization. If respondents stated that yes, they had heard of the organization, they were then asked if they were familiar with the responsibilities of DEF.

Overall, most people were familiar with DEF, more than ninety percent (92%) of respondents stated that they were familiar with the organization. Of the respondents who had heard of DEF more than half identified DEF's responsibilities as being the manager of the forest in charge of protecting the forest. Twelve percent identified DEF as the agency in charge of granting permission for forest use. Ten percent identified them as the agency in charge of prosecuting those who break the law. Six percent said they were responsible for prohibiting

Heard of DEF

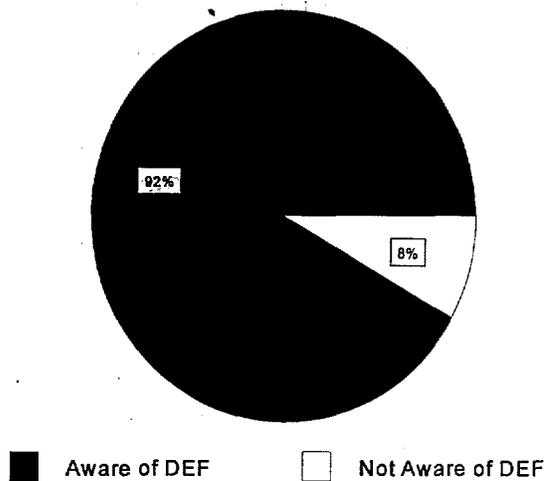


Figure 9. Heard of DEF.

forest clearing. Eleven percent of respondents who had heard of DEF reported that they did not know what the agency's responsibilities were or reported that they worked with the project but could not say how. A few respondents reported that it was confusing to separate the variety of organizations.

"Don't know [their responsibilities] because we call everyone who goes in the forest DEF."

What do people perceive to be the goal of the project?

Respondents were asked to identify what they felt was the goal of the project. Overall, five major categories emerged: Respondents either 1) didn't know what the goal of the project was, or they felt it was to 2) protect the forest, or 3) develop the community, or 4) protect the forest through community improvement, or 5) to increase food production.

It is interesting to consider these responses in terms of the sub-populations. In communities where the projects were working over half of the *non participants* reported that they had **no idea** what the goal of the project was, and approximately one-sixth (16%) of *those who were working directly with the project* (association members and pilot farmers, etc) could not verbalize the goal of the project. In control villages, *of those who had heard of the project* about half (48%) reported that they didn't know what the goal of the project was, while the other half (45%) reported that they believed the project goal was to protect the forest.

There were also some clear differences between responses from association members compared to pilot farmers (or other involved individuals). **Pilot farmers** and other involved individuals were more than twice as likely to report that the goal of the project was to protect the forest *through* community improvement. **Association members** were two and half times more likely to report that the goal of the project was to develop the local community (which they did not tie to protection of the forest).

Goal of Project	Communities with ICDP's Activities			Control Communities	
	Association Members	Pilot Farmers & Others	Non-Participants	Heard of ICDP's	Never Heard of ICDP's
Most common response.	Develop the community.	Protect forest by community improvement	Don't know.	Don't know.	NA
Second most common response.	Don't know.	Don't know.	Protect forest.	Protect forest.	NA

Table 12. Goal of project.

Local authorities in control communities were asked if they knew what the project was about, four of the six control communities understood the project goal as protection of the forest, one reported that the purpose of the project was to protect the forest *and* to develop the community, and one had no idea.

Why do local authorities think the project is working in their community (or not working in their community)?

Local authorities from communities where the project was undertaking activities were asked *why* the ICDP was working in their community, forty-two percent reported that they *did not know why* the project was working in their community, about one-third understood that their community was linked to the project's work in the protected area (one fourth of which, reported that the project was working in their community because it was in the peripheral zone of the protected area), and one fourth of the local authorities saw the project in terms of development and reported that the project worked in their community to increase development.

Authorities from control communities were asked if they knew a reason why the project was *not* working in their community, four reported that they understood that the project was only working in communities that were in close proximity of the forest/park, one reported the project simply worked in another area, and one had no idea.

Are people aware of all that the project is doing in their community?

When asked to identify what activities the project was doing in their communities respondents could only readily identify a little more than a third of the project activities that were actually underway in their community, only a few respondents (3%) identified all of the activities that were underway, while approximately one-seventh (14%) of respondents could only identify one activity. On average, the projects had nine activities underway in selected communities.

Why did people begin to work with the project or why didn't they work with the project?

Why people chose to work with the project.

People who had chosen to work with the project either as association members, pilot farmers, or other involved individuals were asked why they began work with the project. Respondents were equally divided among four responses, people said they worked with the project because: of **personal interest** in what the project was doing, or because they wanted to **increase their household income** or standard of living; people said they joined because they **were asked to join**, or because they **wanted to do what other people were doing**. Association members often said they joined because **working in a group was beneficial** to the individual. Other reasons for joining (although less commonly cited) included: To learn new things/skills, to receive supplies and materials, to help improve / develop the community, and to gain assistance with agricultural activities.

Examples - Why did you work with the project?...

"I listened to the project explanations, thought I would like it, so I took the risk."

"I expect to earn money from the harvest."

"Standard of living is low here, project explained how activities can improve standard and would teach us so I could benefit."

"I would like to do the same thing as other people are doing."

"I came here for a better life and as an association is supposed to improve an individuals capacity, I joined."

"I can benefit from other peoples ideas in the association."

Why people chose not to work with the project.

Respondents who did not participate in activities (even though they lived in communities where the project was active) were asked if there was a reason they were not working with the project. Most respondents stated that either they still **didn't trust the project**, and said that they were still watching to see how things went before joining, or reported that the project goal hadn't been made clear to them, or cited **personal reasons** reporting that they were *too old, too young or in poor health*. Other respondents said they didn't work with the project because they **hadn't been asked** or reported that the project selected the people with whom it worked. Some respondents reported that they were **too busy** to work with the project, and a few (eight percent) reported that they **did not like what the project was doing**

How does the project assist with activities?

Participants in project activities were asked to explain how the project assisted them in undertaking the activity. More than half of the participants reported that the project assisted activities by providing money and/or supplies. Less than a third of respondents mentioned that the project provided training assistance, and eight percent said they received no assistance from the project.

How often do community members see an agent of the project, and what do agents do when they are in the community?

Respondents in communities where the project has activities were asked how often they saw an agent of the project. Remarkably, participating respondents reported that they saw an agent an average of **10 times per month**. Non participants reported that they saw an agent an average of 6 times per month.

Community members were also asked what the agents did when they were in the communities. Respondents were fairly evenly split in reporting that agents spent their time in the communities **providing advice and training (23%)** or **monitoring activities (21%)**.

"Agents go in fields, show us what to do and how to do it."

"Agents go around and ask people how activities are going, and monitor what people are doing."

Some respondents (12%) reported that agents went in the forest and conducted patrols: *"Agents make a tour in the forest, maybe to protect it."* Other respondents (12%) reported that agents utilized their time in the communities to organize meetings or associations, or that agents primarily took care of demonstration sites, market gardens, or nurseries (8%). Other respondents (7%) stated that agents spent their time increasing public awareness: *"Agents explain why and how the public can benefit from activities."*; *"Agents increase public awareness for forest conservation."*

The remaining respondents reported that agents spent their time in activities relating to health care, distributing seeds, transporting community goods to market, or other miscellaneous tasks. Only seven percent of respondents (primarily non-participants) reported that they did not know how the agents spent their time, or reported that they did "nothing".

How do local authorities feel about the project?

Local authorities from communities where the projects were working were asked how they felt about the project. Respondents reported that they felt good about the project, stating that they felt the project helped the community and that they were pleased with the collaboration.

- "I feel good, the project helps the community a lot "

Respondents from two communities, however, couched their praise with some caution, one stating that they felt the community and the project held different visions for the protected area, and the other noted concerns over continuous delays with project activities.

"We get along well... [but] we have a different vision for the reserve than the project."

"Project would be good if they would undertake what they promise, requirements to start an activity are hard and that's why they are always delayed."

Finally, one respondent, reported on the success of the project (indirectly highlighting another problem):

"People are very happy about the project here... since project is here people like to move here now and the village is very big."

What do respondents like most about the projects?

Respondents from communities where the project had activities were asked to identify what they liked best about the project.

- **Agricultural Training:** Of the activities most commonly mentioned agricultural training and advice received their highest praise, specifically, people appreciated assistance with rice culture (including intensive rice culture) and market gardens.

"[I like] the fact that the project helps us with rice culture because we have a better harvest."

"[I like] learning about market gardening."

- **Infrastructure Development:** Individuals in local communities also liked infrastructure developments, particularly irrigation related activities (dams and canals) but also schools and hospitals.

"I appreciate that WWF is improving schools here, because of the school we can learn and have more knowledge."

"[I like] the dam, because of the dam we can get enough water."

What do like/appreciate most about the project?

- Agricultural Training
- Infrastructure Development
- Health Program
- Protection of Forest
- Collaboration & New Ideas

- **Health program:** Visiting medical teams and health programs were strongly appreciated by local community members.

"[I like] the doctor and health care."

"Family planning, because condition of women is and will be improved."

- **Protection of Forest/ Environment:** Significantly, respondents also commonly cited that they appreciated the fact that the forest and the environment were being protected.

"The fact that the project protects the forest because if everyone clears there will be no more forest."

- **Collaboration and New Ideas:** Respondents commonly reported that they liked that the project brought new ideas into the community and reported that they liked that the project *"collaborates with us"* and *"brings new ideas."*

"I like that the project is giving us knowledge about things we didn't think of before."

"[I like] the fact that the project wants to collaborate and work with us."

"The project brings new ideas, things we didn't think about before."

— Community Association Member

It is interesting to compare responses among the differing sub-populations. Association members were more likely to report that they liked infrastructure improvements the most, while pilot farmers/other involved individuals reported that they appreciated assistance in agricultural training the most. Non-participants were split, reporting equally that they liked assistance in agricultural training and infrastructure improvements. Local authorities were most likely to report that they appreciated the collaboration and new ideas brought by the projects.

What do respondents dislike about the project?

Individuals in communities where the projects have activities were asked what they disliked about the project. About a third of respondents reported that they felt that there was *"nothing to dislike"* or reported that they had *"no idea."* Most respondents could, however, identify something they disliked about the project, and seven major categories emerged (*percentages reported represent those who cited something they disliked*):

What do you dislike about the project?

- Broken promises or long delays.
- Project prohibits community from clearing forest or taking products.
- Communities infrastructure needs are not all met.
- Relationship problems within associations or other project groups.
- Not enough explanation or training.
- Problems with distribution of seeds.
- Problems with Rural Credit.

1. Broken Promises or Long Delays: More than a fourth of the respondents reported that they were upset with what they believed to be broken promises or long delays in starting activities.

"The project promised many things but they don't do it"

"Activities start slow (if at all), they don't do what they promise..."

Respondents reported problems when their expectations were not met or whenever an activity was delayed--delays in receiving bees, bee hives, chicks, fish, and seeds were reported as problems.

2. Project prohibits community from clearing forest or taking forest products: Approximately one-sixth of respondents reported dissatisfaction with regulations and policies limiting their access and use of the protected area and its resources.

"We live from rice fields and project doesn't allow us to practice clearing."

"They prohibit tavy and know very well there are not enough fields for this increasing community."

Respondents also reported that they didn't like it when they were told that they could not: fish, gather raffia, collect firewood or take building materials from within the protected areas.

3. Communities infrastructure needs are not all met: One-sixth of respondents reported that they disliked that the project had not met an expressed need for a particular infrastructure, most commonly dams and wells, followed by schools, roads and other structures.

"Community asked for a dam but project is not yet ready for this."

4. Relationship problems within Associations or other project groups: A tenth of respondents (primarily association members) stated that they were unhappy about a relationship problem within their association (or other project group).

"Some members don't share our same ideas and don't want to work."

"People fought a lot and then they quit."

5. Not enough explanation or training: A tenth of respondents reported that they were dissatisfied with the level of explanation or training provided by the project, some respondents identified this as a problem in general terms and others in terms of specific activities:

"[The project] doesn't really educate here, they just bring in materials and seeds."

"Nurseries, I don't understand what they are for."

"Population asked to go inside reserve to get firewood and graze cattle, project said no but not why."

6. Problems with distribution of seeds: A tenth of respondents reported that there were a lot of problems (things they didn't like) with the distribution of seeds (primarily for improved food production--beans, maize, etc...). Farmers complained that seeds were delayed in distribution, didn't grow, too few were given, and a few farmers felt that they shouldn't have to pay for seeds.

7. Problems with rural credit: Approximately, one-tenth (9%) of respondents reported dissatisfaction with the rural credit program, stating that they didn't like the idea that when they were loaned money they had to pay interest but when they saved money they did not receive interest. Respondents also reported that not enough money was available for loan.

What would local communities like to change about the ICDP's?

Community respondents were asked if they could change one thing about the project what would it be? Approximately one fourth of the respondents reported that they couldn't think of anything to change (most reported that there was nothing to change because things were going well, while others stated they had no idea what to change). Three fourths of the respondents identified something that they would like to see changed and the following categories emerged (*percentages reported represent those who listed an item to change*):

- **Increase agricultural support (training, monitoring and materials).** More than one fourth (27%) of respondents reported that they would like to receive further agricultural training or supplies. Some respondents asked for increased assistance in general terms, while others had specific ideas on ways to improve:

"Would like more training in agricultural techniques."

"Give more information about techniques and more training about IRC."

"Agents should stay one week [rather than 1 day in the community] to advise and train us."

Several respondents also asked for specific agricultural activities or supplies, not all of which were appropriate for the projects to provide:

"Would like project to provide fertilizer."

"Would like project to provide seeds."

"Project should extend rice fields."

If you could change one thing about the project what would it be?

- Increase agricultural support.
- Eliminate restrictions on land use.
- Don't make promise that can't be kept.
- Increase infrastructure support.
- Hire a teacher for school.
- Improve rural credit system.

Closer monitoring of existing field activities was also requested:

"Technicians should monitor activities more closely, they don't really monitor the activities undertaken so people don't know if they have done well or not."

"If project decides to undertake something they should monitor it well."

- **Eliminate restrictions on land use.** One-seventh of respondents reported that if they could change one thing about the project they would eliminate the restrictions on land use, particularly those about tavy, burning, cattle grazing and wood collection.

"Make them [project] agree to allow people to clear land."

"Would like to be able to do tavy."

"Let cattle graze inside forest, and let us take firewood."

- **Don't make promises that can't be kept.** One-seventh of respondents reported that if they could change one thing about the project it would be to ensure that the project didn't make promises it couldn't keep. Many respondents reported that the project raised their expectations of what activities could be done and then did not follow through, or reported that activities were significantly delayed:

"Don't promise what you can't give, people are going back to tavy because they are discouraged."

"Undertake what has been promised, among five or six [activities] promised they have started only two."

"Would like project to stick with what it starts."

- **Increase infrastructure support.** About one seventh of the respondents reported that if they could change one thing about the project it would be to have the project provide further infrastructure development within their community. Primarily respondents requested irrigation structures (dams and canals), followed by schools, and roads.
- **Hire a teacher for school.** Some respondents (primarily from the Masoala region) expressed a wish that the project would provide a teacher for their school.
- **Improve rural credit system.** A few respondents primarily from Zahamena and Ranomafana reported that they would like to change the methods for obtaining and refunding loans, in particular they would like to be able to receive loans without interest and would like to be able to take larger loans.

Other ideas. A variety of other suggestions for changes were reported by respondents although there was very little repetition of ideas, some respondents suggested that the project schedule their training sessions in advance so participants could know before hand when activities would take place. Other respondents wanted to improve access to health care by providing more doctors or an additional hospital or pharmacy, and other respondents had specific requests for materials such as saws, sewing machines or fishing boats.

Are communities learning from the project and are they being empowered?

What do people say they have learned from the project?

Community members who had participated in project activities were asked what they had learned from the project. Responses were varied about one-sixth of the respondents stated that they had learned new **agricultural techniques**, particularly techniques regarding rice culture and IRC. Similarly, about one sixth of the respondents stated that they had learned about **techniques for planting and maintaining a market garden**. About one tenth of the respondents stated that they had learned about **reforestation, planting trees and agroforestry**. Other things that people said they learned (although mentioned less often) were, beekeeping, construction and maintenance of dams and wells, techniques for raising poultry, artisan skills (embroidery, raffia and sculpture). Respondents also reported they learned what an association was and how to manage it, they learned about the environment and how to protect it, they learned how to read and write, and they learned how to make and maintain fish ponds, among other comments.

One sixth of respondents reported that they **had not learned anything** from the project--although several respondents stated that even though they knew about the types of activities the project was teaching (e.g. market gardens or IRC) they hadn't practiced them prior to working with the project.

What did you learn from the project?

- Examples -

- Learned a lot of agricultural techniques.
- Learned how to plant on contour lines.
- Learned rice culture techniques.
- Learned the IRC system.
- Learned project system for planting cassava.
- Learned what carrots and cabbage were and how to plant them.
- Learned how to prepare soil, how to plant seeds and how to water.
- Didn't know how to get money from market gardening before.
- Learned how to have bees outside the forest.
- Learned a new way for raising poultry (did it different before).
- Learned how to make a fish pond.
- Learned how to plant trees, didn't know if we cut trees down they wouldn't come back.
- Learned how to protect against fire.
- Learned that a type of tree was good for maintaining the soil.
- Learned how to weave on a loom.
- Learned how to make sculpture.
- Learned how to embroider.
- Learned about how to take care of a dam.
- Learned about the idea of wells.
- Learned how to set up an association.
- Learned to read and write.
- Learned money management.
- Learned how to make a cake.
- Learned about health care for children.
- Learned what to protect about the environment.
- Learned everything about the environment.
- Learned that project didn't come to claim land but to protect the environment and make forest sustainable.
- Learned how to improve our lives, we didn't know what to do to improve our lives before.

Do project participants demonstrate a higher level of knowledge concerning forest conservation than non-participants?

• Is it important to have natural forest?

All community respondents were asked if it was important to have natural forest, and if so, why? Overwhelmingly, respondents (99%) from both project communities and in control communities, stated that it is important to have natural forest. However, when asked why it was important to have natural forest, answers differed dramatically. Those respondents who lived in communities where the *project had activities* were most likely to state that it was important to have natural forest for **non-extractive reasons**, primarily, to ensure rainfall and a supply of water (or for other non-extractive reasons, such as to protect animals, the environment, or improve soil and air quality), while respondents who were from communities where there were no project activities (*control communities*) were most likely to state that it was important to have natural forest for **extractive reasons**, primarily, because the forest provided timberwood for houses (or other extractive reasons, such as forest provides a place for grazing, for rice fields, and for gathering firewood and honey).

Additionally, responses across the sub-populations seem to indicate that the more exposure a person has to the project, the more likely the respondent will list a non-extractive reason for protecting the forest.

Number one reason cited on why it is important to have natural forest:

Forest ensures rainfall and water supply.

-Respondents from communities with project activities.

Forest provides timber for houses.

-Respondents from communities without project activities.

Most likely to list non-extractive reasons for why its important to have natural forest (from most likely to least likely)

- Pilot farmers or other involved individuals.
- Association members.
- Non-participants in project communities.
- Respondents from control communities, who had heard of the project.
- Respondents from control communities, who had never heard of the project.

Most likely to list extractive reasons for why it's important to have natural forest (from most likely to least likely)

- Individuals from control communities, who had never heard of the project.
- Individuals from control communities who had heard of the project.
- Non-participants in project communities.
- Association members.
- Pilot farmers or other involved individuals.

- **Why is it important to protect the park?**

In a related question respondents in communities where the projects had undertaken activities were asked if they had heard of the protected area, for example "Have you heard of Ranomafana National Park, or Have your heard of Zahamena Integral Reserve?" If they replied they had heard of the park or protected area (as did almost all of the respondents--90%) they were asked why it was important to protect the park. Most commonly respondents reported that it was important to protect the park because by protecting the forest you ensured rainfall and water for the community, secondarily respondents reported it was important to protect the park for animals, animal habitat and for other important species of flora and fauna, thirdly respondents reported that it was important to protect the park to protect the forest (in and of itself or for timber needs).

It is interesting to compare across sub-populations while association members and pilot farmers or other involved participants provided very similar answers, there were some differences between the projects. Respondents from Amber, Andohahela, and Zahamena, were most likely to report that it was important to protect the area to ensure rainfall and water for community, while respondents at Andasibe and Ranomafana were more likely to report it was important to protect the park because of the animals that lived there and to protect flora and fauna species. Respondents at Masoala were more likely to report that it was important to protect the area to protect the forest from being cut down.

- **Are There Threats to Losing The Remaining Forest?**

Respondents were asked if there are any threats to losing the remaining forest, and if so what were they? More than eighty percent of all respondents (both in project communities and control communities) reported that there **was a threat** to the remaining forest and reported that the threats were human caused either through clearing, burning, tavy, or wood exploitation.

Are there threats to losing the remaining forest?

Yes, and they are caused by people who cut, burn or exploit wood from the forest.

- Common sentiment among community respondents.

In an interesting twist for some sub-populations, the presence of the project in their community seemed to reduce their fear of threat to the forest: While only two percent of respondents in control communities reported that there was *no threat* to the forest, a larger portion (15% & 16%) of association members and non-participants in project communities reported that there was no threat to the forest. Half of these stated that there was no threat to the forest because the project protected it, or imposed rules about forest use. Interestingly, pilot farmers or other involved individuals were more likely to believe the forest was in danger, with almost all (96%) reporting that there was a threat and that it has human caused.

- **What can you do to help protect the forest?**

Respondents who stated that there was a threat to the forest were asked what they could do to help protect the forest. Responses were grouped into 5 major categories (only 2% of responses fell outside of these categories):

- 1) **Activities I can undertake myself:** Individuals who provided responses grouped into this category answered the questions in terms of personal actions they could undertake to help protect the forest. This category includes statements such as; *I won't cut, burn, or touch the forest* and statements like, *I can use a firebreak, plant trees and reuse fields.*
- 2) **Education of others:** This category represents respondents who answered they could tell / educate others in the community not to cut or burn the forest. This includes statements such as; *teach my neighbors not to cut, tell others it's not good to burn, teach our children why they need forest, etc.*
- 3) **Help enforce rules / report those who break rules:** This category includes responses such as; *work with DEF to track those who are breaking the law, report those who cut forest, and help DEF in prosecuting those who are burning.*
- 4) **There is nothing one person can do:** A group of respondents stated that there was nothing that they, or any one community member, could do to help protect the forest. The group believed powers outside their community controlled the fate of the forest such as the government, or natural forces.
- 5) **I don't know what I can do:** Not as adamant as those who stated that there was nothing that could be done, this category represents a group of respondents who simply reported that they couldn't think of anything that they could personally do to help protect the forest.

Results

Data results indicate that individuals who participate in a project activity are more likely to be able to identify a specific action that they could personally undertake to help protect the forest. In fact, no one who had been involved in a project activity, reported that there was *nothing that could be done*, compared to almost a third of respondents from control communities (although about one-seventh of project participants reported that they couldn't think of anything they could do).

Non participants and respondents from communities where there were no project activities (control communities) were most likely to report that *they couldn't think of anything they could do*. Interestingly however, the groups differed beyond the first point, with non-participants in

What can you do to help protect the forest?	Communities with ICDP Activities		Control Communities
	Participants	Non- Participants	No Activities
Actions I can undertake myself.	Can't think of anything I can do.	Can't think of anything I can do.	
Educate others.	Actions I can undertake myself.	Nothing can be done.	
Can't think of anything I can do.	Educate others.	Actions I can undertake myself.	
Help enforce rules.	Nothing can be done.	Educate others.	
	Help enforce rules.	Help enforce rules.	

Table 13. What can you do to help protect the forest.

project communities being more likely to identify actions they could undertake than respondents from control communities.

Helping to enforce rules by reporting infractions or by assisting DEF and/or the project in locating those who had been using the forest illegally was mentioned as an answer by all groups of respondents although it was among the least common suggestions forwarded (less than ten percent of all respondent populations).

Do project participants demonstrate a higher level of knowledge concerning problems associated with tavy or burning than non-participants?

Respondents were asked to identify if they knew of any problems associated with tavy or burning (depending on which was a more pertinent problem in that project area).

A little more than one forth of all respondents (from communities with project activities and from control communities) reported that there were **no problems** associated with burning or tavy. Additionally, a little more than one-fourth (of all respondents) stated that the problem with tavy or burning was that **it was prohibited and if caught you would be prosecuted**. Communities differed on some ideas however, respondents from communities with project activities seemed to see **uncontrolled fire** as more of a problem than did respondents from control communities (23% to 8%). While respondents from control communities were more likely to state that **obtaining permission** to undertake tavy or burning, was a problem (22% to 5%). Only a small group (7%) of respondents from communities where the project had activities mentioned

problems dealing with the **sustainability** of the practice (for example they stated that the problem with tavy of burning was that it: *reduced soil fertility, required a long fallow period, reduced opportunities for maintaining water sources*, etc). However, no one from communities without project activities stated a problem dealing with sustainability.

Is there any evidence that local communities are being empowered?

- **How do local authorities and community participants perceive activities were selected for their community?**

Overall, more than two-thirds of the respondents reported that **the community participated** in selecting the activities that were undertaken within the community, in fact more than one third of respondents stated that activities were selected by the community members, themselves:

"Activities were selected by the community, we were seeking sources of revenue so we asked [the project] to help us."

Relatedly, one-third of respondents reported that the activities were selected based on discussion between the community and the project:

"The project suggests and the community discusses and approves, they bring stuff we have never heard of before."

Most of the remaining respondents (29%) reported that activities were selected by the project or at the suggestion of the project.

"The project proposed [activity] and did it here."

When looking across the different projects sub-populations, community respondents from Zahamena were most likely to report "*we did it*"--eight-three percent stated that the community selected activities. Andohahela and Andasibe followed with more than a third (38% and 36%) of respondents reporting activities were selected by the community.

How were the activities undertaken in your community selected?

"Everyone in community sees many people going in to cut trees, we discussed with the project the need for forest conservation. Project said there are riches that need to be protected, so community responded to protect what is nearby and we decided to set up a committee."

- Community Association Member

-
- **Have associations begun to undertake activities without the assistance of the project?**

Individuals belonging to project associations were asked if there were any activities that the group does without the assistance of the project. More than forty percent of the respondents reported that there **were** activities undertaken by the association without the assistance of the project. Of those who reported their associations were undertaking other activities, one third belonged to associations which were formed prior to the project (and thus already undertaking separate activities) such as church groups, or women's groups. The remaining two-thirds (representing approximately twenty-five percent of the entire population of associations) belonged to strictly project associations which reported that members were helping one another plant seeds, gardens, fill and sell craft orders, or other activities not associated with the project.

- **Have rules for use of natural resources been incorporated into local community policy?**

Respondents were asked if there were any community guidelines about using the forest. It was clarified that the question was not asking about government regulations, but instead if there were any informal community rules/guidelines related to the use of the forest.

Interestingly, respondents in communities *with* project activities were **twice as likely to report that there were community guidelines** about using the forest compared to respondents in communities without project activities (52% to 26%). The types of guidelines specified included such things as:

"Yes, we have a DINA about burning the forest."

"Anyone who is caught burning must pay 40,000 fmg to the community."

"Community must give permission to any person who wants to cut trees (before they go ask DEF's permission)."

"Yes, if someone is caught clearing the community will take them to forest responsible."

"Yes, we have delimited forest and elected strong young men to be in charge."

"Anyone who cuts trees from the forest will provide the village with a zebu."

Summation

Results from the local community interviews are in many ways very positive. Participants have a positive attitude about the projects, and based on data from these indicators there appears to be evidence that participants are learning from the project and can demonstrate a higher level of knowledge concerning forest conservation (than respondents from control communities); are better able to envision how they personally can be involved in helping to protect the forest; can demonstrate a higher level of knowledge concerning problems associated with burning or tavy; and in fact, even a group of project participants are beginning to see their current agricultural practices as being unsustainable (which was not the case in control communities). Teaching and empowering individuals is an ongoing process that takes a significant amount of time but project communities seem to have started down the path.



Community members discuss their experiences with the project.

Conclusion - Focusing on the Future

While most of this study focused on lessons learned from the experiences gained in the past, project employees and related authorities were asked two questions about the future (what will be the key park management issues and rural development issues in the next five years?). Their responses to these questions in combination with the review of their past efforts, are invaluable not only for obtaining lessons from EP1 but for conceiving conservation and development activities as Madagascar moves into the second phase of the Environmental Action Plan (EP2).

What will be the key park management issues over the next five years?

- Improving park infrastructures for ecotourism (roads, trails, campsites, visitor centers...).
- Building the professional capacity of park staff and ANGAP.
- Maintaining protection of the parks through increased law enforcement authority, collaboration with DEF, and control and surveillance.
- Strategic planning and implementation of management systems for parks.
- Developing sustainable financing for long term support of the parks.
- Community participation in park management.
- Generating revenue for local communities (DEAP).
- Protection, research, and monitoring of biodiversity.
- Marketing and publicity of parks to attract ecotourism.
- Improving infrastructures to support ecotourism (hotels, restaurants, tour associations...).
- Regional planning and ensuring ANGAP has a role.
- Finalizing park status and delimitation.
- Reinforcing alternatives to destructive behavior.

What will be the key development issues over the next five years?

- Involving communities as an active partner (promoting ownership & empowerment).
- Diversifying and intensifying agriculture practices.
- Emphasizing use of low lands and intensive rice culture.
- Establishing access to markets.
- Strategic planning and coordination of development activities utilizing a regional approach.
- Increasing capacity of local Malagasy structures--community associations, government technical services, DEF, and local NGO's.
- Obtaining financing for activities.
- Continued health care and family planning.
- Land tenure and reform.
- Improving government legislation, policy and the macro-economic climate.
- Continued support to infrastructure development particularly dams, roads, schools and hospitals).
- Continued micro-project financing through DEAP.

Appendix 1

Comparative Analysis of 25 Principle Field Activities

Comparative analysis of 25 principle field activities undertaken by the projects.

Projects initiated numerous field activities in and surrounding the protected area. In addition to natural resource management activities, the projects focused on implementing activities which illustrate alternative agricultural techniques and introduced new techniques for people to raise their standard of living.

A brief analysis of twenty five principle activities follows, this analysis includes why the projects chose to undertake an activity, provides examples of the varying approaches utilized, and includes a summation of common problems reported and overall results, as well as recommendations made by respondents based on the lessons they have learned. Information was provided primarily by field agent supervisors (where possible) as well as field agents and conservation and development direction. This analysis is not meant to incorporate an exhaustive listing of every activity ever completed but rather it focuses on the key activities which agents reported that they spent most of their efforts on implementing.

Projects defined "activities" differently some referring to them as techniques, strategies, methods or actions. For the purpose of simplicity we refer to all these undertakings as "activities". It is also important to point out that no one activity stands alone, but rather projects offer a group of alternative activities to local populations--taken alone an activity might have very little effect but when grouped with others progress can be very exciting.

It is interesting to note, that a few recommendations consistently occur in the lessons learned section. Respondents routinely recommend engaging participants in activities in such a manner that they take responsibility for the activity thus increasing community ownership and improving chances for the long term sustainability of an activity. Respondents also commonly point out the importance of demonstrating techniques to farmers either through demonstration plots or site visits, respondents repeatedly stated that "*people believe what they see.*" Finally, respondents commonly recommend increasing collaboration with local authorities, government services, and local NGO's when undertaking field activities.

Activities discussed within this section:

- ◆ Control, Surveillance, & Maintenance of Protected Areas.
- ◆ Raising Public Awareness - Activities of Agents
- ◆ Improved Rice Culture
- ◆ Improved Food Culture
- ◆ Agroforestry
- ◆ Seed Banks
- ◆ Irrigation Activities
- ◆ Vegetable Production for Market & Subsistence Crops
- ◆ Beekeeping
- ◆ Community Granaries
- ◆ Animal Husbandry
- ◆ Fish Farming
- ◆ Artisan Associations
- ◆ Coffee Improvement
- ◆ Rural Credit
- ◆ Community Forestry
- ◆ Reforestation and Nursery Management
- ◆ Land Ownership and Management.
- ◆ Health Program Activities
- ◆ Community Pharmacies
- ◆ School Environmental Education Programs
- ◆ Adult Literacy Programs
- ◆ Community Libraries
- ◆ Youth Associations
- ◆ DEAP Activities

Control, Surveillance and Maintenance of Protected Areas

All projects undertook regular patrols in and around the protected area and saw this as a major field agent activity. Projects felt that control and surveillance was a standard park practice--that it helped them learn why people went into the park and what they did there. Patrols were seen as a way to reduce illegal activities. Three projects reported that they undertook patrols because DEF did not have enough personnel available to do so.

Example Approaches:

- Andasibe identified areas of high and low pressure, high pressure areas are visited everyday by two agents traveling together, patrols operate primarily during the week and are reduced on weekends. When agents witness an illegal activity they take note of the location and type of infraction for record keeping. If they see a person conducting an illegal activity in the *Reserve* they take the individual to Park Headquarters where there is a DEF office, if they see a person conducting an illegal activity in the *Park* they take his name and report it to DEF.
- Masoala agents (who have a significant larger territory) plan patrol routes from project headquarters, high pressure areas are identified and visited twice per quarter. During tavy season DEF and project agents conduct joint patrols. When agents witness an illegal activity they take note of location and type of infraction for record keeping. When they see a newly cleared area they make inquiries about who was doing it, talk to the President of the local community security program about the infraction, meet with the individual identified, tell him the risks of clearing without permission and then report the incident to project headquarters, who in turn report it to DEF. A subsequent patrol is planned to the area as a joint DEF and project mission.
- Ranomafana agents follow a monthly patrol schedule, normally agents travel alone or in pairs. Patrols to high pressure areas are planned each month (and include areas where there are dahalo--cattle thieves where agents travel in groups of 7). DEF and project agents conduct routine patrols together each month. When agents witness an illegal activity they take note of location and type of infraction for record keeping. If they see the individual they stop him, educate him about why the activity is illegal, and take his name and report it to DEF. Agents investigate newly cleared areas trying to determine who did it, a written report is submitted to project headquarters who in turn submit it to DEF. A subsequent patrol is planned to the area as a joint DEF and project mission.

Four of the projects reported a working relationship with DEF although only two projects had routine joint patrols and a relationship where DEF regularly followed up on transmitted infractions. Agents on two other projects said they felt disheartened, that DEF rarely followed up, and one group of agents reported that, in general, they had quit reporting infractions.

Projects emphasized that community involvement was an essential element to control and surveillance activities. Three projects encouraged local individuals to go with the agents on patrols, and three projects had a targeted education program to make communities and local authorities aware about why patrols were being conducted. Agents routinely stopped in the communities to inform residents when patrols were in their area. Overall, respondents felt that local communities accepted the patrols although a few projects reported that they felt a consistent need to educate people about why they were going in the forest to dispel rumors that agents wanted to steal cattle, mine gold, or exploit the forest.

Other activities conducted on patrols (beyond recording infractions) include maintaining delimitation markers, recording animal sightings, collecting flora and fauna data, identifying potential tourist sites and at one project agents maintain firebreaks. Trails are usually maintained by separate trail crews.

Overall, respondents reported that control and surveillance was one of the most successful activities undertaken by the projects. Respondents said that they learned more about who was going in the forest and what they were doing, and that this information helped them more adequately respond to pressures. Projects felt that patrols dramatically reduced illegal activities.

Respondents offered the following advice based on the lessons they have learned:

- ▶ Study the cultural context of the area, understand local community structures and rules so that agents can conduct themselves in a culturally appropriate manner.
- ▶ Hire agents from the local communities, they know the region best and are often the best people to transmit an environmental education message.
- ▶ Community education must be conducted simultaneously with patrols, people need to know why agents patrol, why protecting the area is important to locals, and what they can do to help.
- ▶ Encourage community participation, by constructing community forestry groups, fire committees and encouraging locals to participate in patrols.
- ▶ Use patrols as an opportunity to educate people about all of the project activities, interests and messages.
- ▶ Provide appropriate support materials to agents: log books, walkie talkies, transportation.
- ▶ Vary patrol routes and times so locals won't become accustomed to specific routines.
- ▶ Collaborate with DEF, involve them from the beginning, train DEF and project agents together on patrol procedures.
- ▶ Set up a clear system for communication with DEF, outlining how reports of infractions will be transmitted and followed up on.
- ▶ Don't undertake patrols until you have established good relationships with the community, its nice to have other project activities in place prior to beginning patrols.

Raising Public Awareness - Activities of Field Agents

All project agents conducted activities to raise public awareness of environmental issues and improve local population knowledge level on land management policies. Conservation agents often reported *raising public awareness* as one of their primary activities while development agents said it was more of an informal undertaking. Agents said they wanted people to know about the projects goals, the protected area, and the advantages of a sustainable environment. Respondents reported that they felt it was important to be sure people understood the rules and regulations (before prosecuting them), and that people needed to understand *why* things had to change before they would alter their behavior.

General Approach:

- Activities to raise public awareness through field agents were much the same project to project. Agents commonly organized meetings within the communities or spoke to people one-on-one. Occasionally, agents spoke to school groups. Primary messages commonly transferred included: the activities of the project, why it's important to protect the forest, rules and regulations of the protected area, and procedures for clearing, burning, cattle grazing and wood collection.

In general, the projects felt that the agents efforts to raise public awareness were successful. Overall people listened to what the projects had to say (even if some of them chose not to follow the advice). Ranomafana reported that park naturalist clubs had sprung up in a few communities and that songs about conservation were commonly sung in some communities. Zahamena had begun a more formal public awareness program targeting specific environmental messages to specific groups. Projects also cited an increase in participation and requests for assistance as indicators of success.

However, some problems did surface: for the most part, field agents received little or no training in communication techniques and project communication teams did not identify key target populations (beyond *people who cause pressure*) nor developed targeted messages for field agent transfer. Agents also reported feeling frustrated from time to time when they discovered people were not following the projects' advice.

Respondents offered the following advice based on the lessons they have learned:

- ▶ Consider this activity as one of the most essential, develop a program for meeting goals.
- ▶ Identify target groups and create target messages.
- ▶ Train agents in communication skills including non formal communication techniques.
- ▶ Don't focus information exchange on large lecture style meetings (don't give speeches) rather utilize a series of animation techniques including songs, leaflets in local language, etc.
- ▶ Don't start with a tool (don't say I want to do a poster what should I make it about) but rather identify the environmental problem, determine the target population and then decide what is the best tool for reaching that group.
- ▶ Make environmental education an integral part of the entire project.
- ▶ Include monitoring to see if people are changing their behavior.
- ▶ Identify the communication material that already exists before starting to develop your own materials.
- ▶ Listen closely to local residents to learn about what education they want and need to know.
- ▶ The best way to get people to listen to you is to live in their community and work alongside them.
- ▶ Use the same language as the local people and stay away from technical terms.

Improved Rice Culture

Production of rice is the primary agricultural activity of local populations, and all the projects responded with an improved rice culture program. Projects felt that if production of rice could be improved than potentially pressure to do tavy on highland areas could be reduced.

Approaches:

- Five projects initiated intensive rice culture (IRC) programs. Projects provided training, advice and monitoring. Four of the five projects worked closely with a partner agency to train project field agents and local participants (primarily Tefy Saina, FAFAFI, and agricultural services). Three projects worked primarily with individual farmers and two projects asked farmers to establish group associations. Three projects showcased this activity through demonstration plots. Two projects provided weeding tools to participants.
- One project chose to distribute a higher quality seed as a primary response to improving rice culture. The project organized community meetings, interested individuals were provided high quality seed and asked to repay the amount of seed they took plus an additional 1/5 of seed produced at harvest. Participants were trained in how to space rice for improved yield.
- Two projects, both distributed higher quality seed and initiated an intensive rice culture program.

In general, projects reported that while farmers increased yield with improved seed, but also recommended undertaking IRC activities as well. Results from intensive rice culture programs varied project to project: Ranomafana has had the best success with IRC incorporating 200 farmers and 50 hectares of land. Masoala, Zahamena, and Andasibe had some success with IRC but to a lesser degree (fewer participants). Andohahela agents reported that IRC had not been a very successful activity, stating that agents did not receive sufficient training and that perhaps they had rushed this activity with participants --even so, agents were hopeful for the future of the IRC. All projects noted that being able to control water flow was a critical aspect of this activity and at present water mastery was a significant impediment to participation. Projects were also concerned that farmers were only practicing some of the techniques taught (rather than the entire package) and therefore yield was lower than might otherwise be expected. Projects reported that farmers were encouraged by the yield potential of IRC, but discouraged because it was labor intensive and required following a different agricultural calendar.

Across the projects, respondents reported that they felt that if practiced more widely IRC could have a very positive impact on the protection of the reserves, but they cautioned that simply increasing yield does not necessarily result in a reduction of tavy and that IRC (like all methods) has to be just one activity in a package of alternatives presented to local farmers. Projects also felt the activity was imminently sustainable.

Respondents offered the following advice about IRC based on the lessons they have learned:

Prior to undertaking the activity:

- ▶ Conduct inventories of land where IRC could be undertaken with present water systems, approach farmers and intensify monitoring.
- ▶ Take time to teach farmers about this activity (many have never planted rice in lines before), IRC is a big step, don't rush.
- ▶ Set up demonstration sites.
- ▶ Consider how water will be controlled, build dams when necessary.
- ▶ Think twice before giving tools for free, this may promote a feeling of dependency on the project.

Improved Food Culture

Most projects chose to teach techniques to improve food production as a field activity. Food culture includes: subsistence gardening and field crops (primarily, beans, corn, peanuts, and ginger) utilizing in line culture, crop rotation, and composting (*see also agroforestry*). Projects undertook the activity to increase yield and diversify available food crops.

Example Approaches:

- Andasibe primarily taught improved food production through the use of field crops, particularly peanuts, beans, corn and ginger. The project focused on training association members and utilized demonstration sites.
- Ranomafana taught improved food production through the use of field crops (including off season crops), potatoes, corn, and beans coupled with subsistence gardening activities focused on cabbage, carrots and corn along with fruit trees. Ranomafana utilized pilot farmers and demonstration sites along with training individual farmers.
- Zahamena primarily taught improved food production through the use of subsistence gardens and demonstration sites. The project focused on working with associations but also incorporated pilot farmers.

Improved food culture may be one of the most far reaching activities that was undertaken--with an estimated 700 farmers receiving training from the projects. Respondents reported that practices were quickly transferred from farmer to farmer, and agents saw a rapid expansion of these practices within the communities. Masoala cited this activity (combined with agroforestry techniques) as one of their most successful and reported they felt it was directly tied a reduction in forest clearing. Problems were commonly reported with pest infestation and composting - respondents reported that farmers hoped that the projects would provide fertilizer and were unenthusiastic about composting as an alternative, and saw composting fields as a labor intensive activity.

Respondents offered the following advice based on the lessons they have learned:

- ▶ Farmers need to see the benefits of utilizing new techniques, stress demonstration sites and site visits--take people around to sites so they can see for themselves.
- ▶ Utilize pilot farmers, they are often the best way to ensure transfer of skills, farmer-to-farmer.
- ▶ Off season crops need to be combined with good seed banks, results in revenue and additional protein sources.
- ▶ Include composting from the beginning of the program.
- ▶ After initial input of seeds don't continue to give seeds. Teach seed collection for sustainability of the activity.
- ▶ Undertake this activity side by side with agroforestry activities.

Agroforestry

Five projects undertook agroforestry activities (ally cropping, contour line planting, and improved fallow). This activity was seen as a way to improve soil fertility, reduce erosion, lessen burning, and encourage increased yields.

General Approach:

- Agroforestry was undertaken much the same way from project to project, primarily incorporated as a tangential activity to improved food production. The projects trained farmers and showcased this activity in demonstration plots (one project did not use demonstration plots but reported if they were to undertake the activity again they would have). Three projects focused training primarily on individual farmers and two projects focused primarily on associations. Two projects also incorporated pilot farmers.

Respondents reported mixed results, Masoala, Ranomafana and Zahamena found this activity to be very successful (when combined with improved food production). Andasibe felt that farmers needed more time to be convinced of the benefits, and Andohahela cited agroforestry as one of their least successful activities (citing a lack of farmer interest because soil fertility was high to begin with). Respondents noted that while this activity required a 3-4 year investment of time the early results were very promising, ally cropping seemed to actually lead to a reduction in burning and the fertility of soil was increasing.

Respondents offered the following advice about agroforestry based on the lessons they have learned:

- ▶ Farmers need to see the benefits of utilizing these techniques, stress demonstration sites and site visits--take people around to see for themselves.
- ▶ Utilize pilot farmers, they are often the best way to ensure transfer of skills, farmer to farmer.
- ▶ Undertake this activity side by side with improved food production.

When selecting species:

- ▶ Experiment with species prior to distributing them to farmers to be sure they are appropriate for the area.
- ▶ Consider utilizing endemic species - wild species often grow better.
- ▶ Consider species which are edible to increase community interest.
- ▶ Consider species which give shade to crop.
- ▶ Consider species which work as a fertilizer.

Seed Banks

Seed banks were undertaken as an activity on one project to control and improve the quality and quantity of seeds available and to encourage two crops per year.

Approach:

- Interested individuals were asked to set up a users association. Associations were provided (for free) the building design, cement and tin from the project, while labor was provided by the participants. High quality seeds were then stocked by the project (rice, beans, potatoes...). Farmers were allowed to take seeds but had to put back the initial amount plus an additional percentage, over what they had borrowed, at the end of the season (each association determined the percentage required on return).

Eight seed banks were started and after one year, six are working (four are in good shape). About 60% of the seed had been lost or not replaced and two associations dropped the activity. A cyclone had a lot to do with the problems although two associations just didn't harvest seed. Many association members still liked the idea of the seed bank and wanted to try again. The project felt that while the first year had not gone as smoothly as hoped, they felt the activity was sound and that the extreme weather conditions had caused many of the problems. Seed banks, if presented as part of a package of alternatives provided to farmers, were still considered a good tool and one that could be sustained by the associations.

Respondents offered the following advice about seed banks based on the lessons they have learned:

- ▶ Don't give all the high quality seeds out during the first season, rather spread them out over time so you control risk of loss.

Irrigation Activities

Three projects chose to undertake irrigation activities with local communities. Projects sought to improve lowland culture and reported that dams and canals were commonly requested by local communities.

Approaches:

- Andohahela works in partnership with BIT and FID. BIT sets conditions for the project requiring a socioeconomic study of potential sites, education, and an establishment of a water users association. Once completed BIT will bid the project to a contractor. Communities are required to provide sand and gravel. The approval process takes about six months. The water users association is trained to maintain the dam and individuals pay a membership fee of 5000 fmg (\$1.25) plus an additional 100 fmg per hour of water usage. Six dams have been built (outside funding sources have been found for all 6 dams) and all are working.
- At Ranomafana dams and canals are only constructed where the lowland plots are legally parceled out. Communities are required to set up a water users association (the project trains them in organizational management). Communities provide sand and gravel and the project provides the rest (including design). Three dams have been completed and are working, one is in progress and two more have been planned.
- At Zahamena one dam is being constructed, a study was undertaken by the project to judge the potential site, land ownership was determined with the community and fokotany. The Rural Engineering Office was then asked to assess the site, draw plans and calculate the cost (under supervision of the project) the local community provided sand gravel and transport some of the materials. The actual construction was bid to a contractor.

Nine dams have been built and are operating through the assistance of SAVEM. Andohahela and Ranomafana found their irrigation activities to be very successful. The projects felt pleased that they could respond to the one of the most common community requests, and they felt that lowland production had been increased in a cost efficient manner (Andohahela found outside funding sources for all their irrigation projects and Ranomafana felt that at approximately \$50-\$200 per hectare their irrigation activities were cost efficient). Zahamena stated this was an unsuccessful activity for them (the dam is not working), primarily because of the logistical difficulties in getting concrete to the site (thus they are now exploring use of alternative local materials). Both projects who contracted the work out reported problems with contractors and cited the need to carefully oversee contractors budgets and work.

Respondents offered the following advice based on the lessons they have learned:

- ▶ To ensure that communities are sufficiently engaged prior to building the dams ask them to dig canals and do other preparatory work, make sure they feel involved and responsible because if you just give them the dam they won't appreciate the value of the gift.
- ▶ Teach water user associations how to maintain the dams and canals, and manage association fees. Train them how to write proposals for funding assistance.
- ▶ Carefully review budgets submitted by contractors, often prices are inflated.
- ▶ Carefully review the construction in progress, be sure work is top quality.
- ▶ Involve communities in all phase of the irrigation project; this is a great activity to teach empowerment.
- ▶ Use local materials when possible (not concrete).
- ▶ Be sure that rice field owners who benefit from the dams pay user fees and participate in maintenance to ensure sustainability.

Vegetable Production - Market Gardening and Subsistence Crops

All six projects included improving vegetable production techniques among their activities. Projects undertook vegetable plots because they viewed it as a potential source for increasing an individual's revenue as well as an opportunity to improve nutrition levels.

Example Approaches:

- Andohahela undertook vegetable plots as a women's association activity (*the project began initially working with individuals but switched their approach to facilitate the monitoring of plots and to teach organizational structure*). Participants were provided seeds (for free) during the first year of the activity while they were being trained in seed collection methods. If participants don't collect seeds on their own they can purchase them from project agents. Two associations set up plots specifically for seed production (members harvest the seeds then plant their own gardens). Agents routinely monitor gardens providing advice as needed.
- Masoala focused at first on pilot farmers to initiate the program expanding later to other individuals and a few associations. The project provided seeds to participants, who can either pay cash up front or reimburse the project after harvest. When someone asks for seeds the agent goes to their field and then provides advice on how to prepare the soil and discusses methods for planting, the agent revisits the site prior to harvest.
- Ranomafana chose to work primarily with individuals. Cabbage, carrot, and corn seeds were provided in the first year along with fruit tree seedlings to encourage ally cropping. Participants were taught seed collection methods and composting methods.
- Zahamena worked primarily with women's associations and asked the members to set up small demonstration sites where traditional methods could be compared side by side with the improved methods being taught. Seeds were initially provided for free (*CARE provided seeds after Cyclone Bonita*) but the project is now moving towards a evoking a payment system where unions of associations obtain loans from the rural savings and loan program to purchase seeds. Agents routinely monitor gardens providing advice as needed.

Field agents commonly reported that they felt that improving agricultural techniques for market gardening was one of the most successful activities undertaken by the projects. They cited a high participation rate of individuals and felt the activity was very relevant to improving the lives of local populations, and remarked that it was an easy activity for participants to undertake. It is interesting to note that the projects utilizing an association approach most commonly referred to this as a "very successful activity" and cited that the methods taught were quickly transferred to other individuals (farmer to farmer), they also noted that it was easier to monitor association sites to be sure techniques were being practiced correctly.

The most common problem reported was difficulties with pests and not having adequate means to control them. Secondly, respondents reported problems because the vegetables being introduced were new and locals didn't know how to plant, cook or preserve the species. Respondents were also concerned about market saturation because the new methods led to over production in some areas where market access was limited (Masoala and Zahamena). Amber dropped their gardening program in 1996 because they had difficulties getting individuals to reimburse the project for seeds.

Respondents offered the following advice about gardening based on the lessons they have learned:

- ▶ Teach people how to cook and store vegetables.
- ▶ Develop a strategy for getting products to market.
- ▶ Utilize a demonstration site and compare traditional methods to improved methods.
- ▶ Work with local technical services.
- ▶ Train people in seed collection and don't provide them seeds after the initial season.

Beekeeping

All of the projects chose to undertake beekeeping as a field activity. Honey collection was seen as a pressure on the protected area (*the traditional method to collect honey is to burn down the tree with the hive*). Respondents also reported that local populations were accustomed to the idea of beekeeping (with traditional hives) and saw raising it as an additional source of income.

Example Approaches:

The approach to beekeeping was simple and much the same between projects--get a group of interested individuals together, train them, provide hives, and (in theory) produce honey. However, there were some interesting nuances:

- Andasibe worked with traditional beekeepers and newly identified participants. The project hired a local professional to help train field agent and community participants. The project purchased hives and bees for participants.
- Andohahela purposively began work only with people who already had traditional hives to improve their methods and gain their confidence. Only later were modern methods introduced and the number of participants increased. New hives were placed next to traditional hives so participants could compare results. Training was provided to agents and participants in collaboration with government service. The project bought planks and taught locals how to make hives and how to attract and transfer bees.
- Similarly to Andohahela, Zahamena purposively began work improving traditional beekeeping practices, later introducing modern methods and increasing the number of participants. New hives were also placed next to traditional hives so participants could compare results. Local individuals experienced in beekeeping were hired to help train field agents and community participants. The project also hired a carpenter to build hives which were then transported to the project where participants were taught how to attract bees to them. All participants were expected to pay for the hives once they had a harvest from the boxes.

In total there are 88 modern working hives on the projects, although 174 additional hives have been ordered. Whether or not beekeeping is a successful activity is still somewhat unclear because at the time of data collection, no one had yet harvested honey, in fact, two projects were still waiting for bees. Overall, the projects felt very hopeful about beekeeping: Andohahela stated that it was one of their most successful activities because participants liked the activity and 80% of those trained had successfully built hives and attracted bees to them, and because the agents felt there was a very direct link between this activity and a reduction in pressure to the protected area. Most projects also felt the activity was imminently sustainable and would result in increased income for participants.

The most common problem cited was that participants were very hesitant to accept new hives--people were not confident they would produce as well as traditional methods, some projects reported that hives were difficult to construct, they had difficulties in attracting bees to the boxes and were worried about potential price fluctuations for the product and the difficulties in getting the product to market.

Respondents offered the following advice about beekeeping based on the lessons they have learned:

- ▶ Work with people to improve existing techniques, move slowly, it may be better to use an improved hive (rather than a modern hive), until people become more confident.
- ▶ Teach people how to build hives.
- ▶ Select a hive design that is easy to construct in the field (for example the Kenya Top Bar Hive).
- ▶ Study how to capture bees.
- ▶ Organize existing traditional beekeeper's into an association and then work to improve their techniques.
- ▶ Work with reforestry program to plant appropriate species, one key to beekeeping is having the plants they need nearby.

Community Granaries

All six projects chose to undertake community granaries. Projects recognized that during harvest season rice was sold at its lowest price, while during the off season rice was difficult to buy and very expensive, if communities could stock rice they could increase both their income and the availability of the product.

Approaches:

- Amber: Chose to undertake community granaries as part of the DEAP program, twelve communities set up a granary association and utilized DEAP funds to build a granary and buy rice stock.
- Andasibe: Interested community members were asked to form an association, and build a granary. Project provides a one time loan of 3,200,000 fmg to the association with which to buy initial stock. Profit is returned to an account kept by the project, added to the capital and used to buy more rice the following season (although the project has advocated for the associations to spend some of the profit on other community micro-projects association members have not done so). Seven granaries have been established.
- Andohahela: The project targeted three areas where they felt the system was viable and approached the communities. The project asked those interested to form an association, establish a site for the granary and send a written request for the amount they needed to BTM (request assisted by the project). Each association member was required to propose collateral, money was given only once the rice was in the granary. Associations had to repay the bank within one year at 30% interest. Profit was kept in a BTM account. Three granaries have been established.
- Masoala: The project proposed a granary system to the communities, to participate communities had to form an association and each participant had to pay a membership fee, the associations were also required to have a building specifically set aside (or built) for rice storage. Project loaned the associations money to buy initial stock (the associations will refund the project over a three year period.) Association members sell their rice to the granary during harvest season and then buy it back (at a good price) during the off season. Profit goes into a bank account and is used to purchase rice the following season (and pay off the project). Two granaries have been established.
- Ranomafana: The project targeted two pilot communities, interested individuals were asked to form an association. The associations provided labor and local materials while the project provided tin for roofing and technical support. Additionally, the project provided an initial amount of 6,000,000 fmg to buy rice. By selling rice to the association you become a member at harvest time. One association members buys and sells rice only to other association members while the other association sells to anyone. Profit goes to buying rice for the following year and pays a salary for the individual selling the rice, additionally one association has set up a bank account for community development projects and one association finances agricultural equipment for members. Two granaries have been established. An additional nineteen community granaries were established as part of the projects DEAP program
- Zahamena began their community granaries as rural credit system used to establish a community owned and operated rural savings and loan program (MEC) which now handles granary credit. Twelve granaries are now financed by the MEC.

Overall, 26 community granaries have been established through SAVEM funding (and an additional 31 have been funded through DEAP). Community granaries were seen as a successful activity by the projects and for most communities, granaries were profitable. Andohahela reported that two of their granaries had received 100% profit and that rice stock had increased three fold.

Respondents reported that while granaries were successful they were also complicated and burdened by social relationship problems, two granaries had lost money because they bought bad stock (rice that wasn't well drained) and because of social relations the association wanted to continue to buy the bad stock. Two granaries had problem with theft one had their rice stolen, and one had a theft of 800,000 fmg from the initial start up fund (the project is currently considering their response).

Respondents offered the following advice based on the lessons they have learned:

- ▶ Don't begin with lots of granaries - start small and do it right.
- ▶ Be sure that participants have collateral so they can refund the bank if necessary
- ▶ Consider establishing a rural credit program its easier for the communities and interest could be set at a more appropriate rate (30% is too high for communities).
- ▶ Make an effort to set up associations legally so they can act as an official entity to borrow money and set up accounts with banks.
- ▶ This activity doesn't necessarily have to be undertaken as a group activity, could be very successful for individuals.

Animal Husbandry

Four projects undertook animal husbandry as a field activity, primarily to diversify and increase household income within local communities.

Approaches:

- Amber worked in association with a partner NGO (Veterinarians San Frontiers -VSF) and also employed a veterinarian as a technical consultant. Field agents were primarily involved in a poultry breeding program which was started in 1993 by VSF. Agents said that they approached individuals in communities, presented the activity and those who were interested were asked to build a coop according to norms provided by the VSF. Once the chickens coops were built people were provided 20 chicks (more if they had previous experience). A mandatory training was offered (if you didn't participate in the training you weren't provided chicks). The project lends 60% of the food price for the chicks (breeders are expected to refund the project after they sell eggs). Agents monitor the activity and sell vaccines. Twenty-three individuals and four associations have joined the program.
- At Andasibe a poultry breeding association was established in one community. Members built a coop to norms provided by the project and were given training. The project provided chicks (but the association was to pay back the project with an interest of 5%). The project provides food (to be refunded once eggs are sold) and agents visit the coop once a month. The group had not yet collected eggs.
- Ranomafana provided pigs to one community as an alternative to illegal plant exploitation, but is now planning to focus their program on poultry and other small animals.
- Zahamena organized fifty-one Animal Health Associations. Members received training in cattle and poultry husbandry, people were taught how to keep cattle in the same area, how to build poultry pens, improved grazing methods and how and when to give vaccinations. The project employs a full-time veterinarian who trains project agents in how to give vaccinations and treat parasites. A government technical service provides some of the vaccinations.

Amber found their poultry breeding program to be successful, it provided another source of revenue for participants, and agents said they have received a lot of requests for the activity, although the price of chicken feed has increased dramatically creating some problems. Andasibe was still waiting for their first egg collection, but the chicks are healthy and progressing nicely. Ranomafana reported that their program hadn't been followed closely enough and results were unsustainable (participants sold their pigs rather than breeding them). Zahamena reported that the animal health program went well, citing the fact that the local farmers had specifically requested help with their animals, and cow and poultry health had improved overall.

Respondents offered the following advice based on the lessons they have learned:

- ▶ Conduct a market study for selling animals and animal products prior to undertaking the activity--be sure the activity can be profitable.
- ▶ Encourage associations to buy their vaccines together, medicine is cheaper when bought in bulk.
- ▶ Carefully monitor breeding programs once they are underway, make sure efforts are sustainable.
- ▶ Consider supporting a small poultry food operation to be sure communities have feed at reasonable prices.
- ▶ Train community technicians in poultry health and vaccinations.

Fish Farming

Four projects undertook fish farming as an activity. Projects reported that they felt fish ponds could potentially generate income for farmers and increase food diversity. For two projects fish farming was undertaken prior to SAVEM and continued by the projects.

Approaches:

- At Andasibe the fish ponds had been previously built but were spoiled by a cyclone in 1994. Communities repaired them and an association was developed. The project will provide fish for ten ponds (for free) in late 1996 / early 1997.
- At Andohahela project agents discussed fish culture with local populations and those who were interested submitted their names, technicians from Fishery Services evaluated and selected three sites. Those individuals were then asked to dig ponds to certain dimensions. A training was conducted on fisheries management (by technical services) and fingerlings were ordered (paid for by the project).
- Masoala project agents discussed fish culture with communities. Individuals stated their interest and agents visited the potential sites and advised people on how big to build their ponds (based on how many fish they wanted). Participants dug ponds and are awaiting fish which will be provided by UNDP/FAO and sold to the farmers by the project. Thirty-two ponds were built, eight farmers found fish to stock their ponds with (although not the species the project wanted to introduce) the others are waiting.
- Ranomafana project representatives told villagers how to construct ponds and 350 ponds were built. The project provided fish but had a high mortality rate--only about 10% of ponds are currently providing economic return to the farmer. Project efforts are undergoing further refinement. The project has a fish center to provide fingerlings and plans to turn this site into a training center for fish culture in the future.

Whether fish farming is a successful activity or not is unclear with three of the four projects still awaiting fish. Ranomafana who is furthest along reported some stumbling blocks (ponds not built to standards, poor fish selection) but felt there was great potential in the activity and obviously a lot of local interest.

Respondents offered the following advice based on the lessons they have learned:

- ▶ Carefully research which species are the best to introduce, consider reproduction and feeding needs as well as mortality rates. Get people away from raising carp its technically difficult.
- ▶ Be sure that ponds are constructed to technical standards, ponds which can be easily flooded are not sustainable.
- ▶ Have a farmer in each area produce fingerlings.
- ▶ Be sure project agents are trained in fish culture so they can provide technical assistance.
- ▶ Go for quality not quantity.

Artisan Associations

Three projects sponsored community artisan groups. Projects undertook this activity primarily to diversify household income sources.

Approaches:

- At Andasibe women in the local communities told the projects that they were interested in finding a way to make money, the project suggested artisan groups. The project hired a responsible for women's promotion (through SAF) and eight associations were formed. Women provide available materials and looms, the project provides materials not found in communities (dye, sewing machines, zippers) and transports goods to market (crafts are sold at the park entrance, ANGAP Headquarters and through SAF/FJKM). The project works to help participants improve quality and sponsors skill improvement training. When collecting items to take to market, the project counts with participants how much it costs to make and sets a sale price, profit is divided in three parts, one part refunds the project for materials, one part goes towards an association fee, and one part goes to the women who made the item.
- Masoala has set up two artisan associations who make baskets and woven mats, but no sales have yet occurred. Individuals are currently making baskets and will send one association member to market (in the near future). Products will be transported to market by the project. Profit is expected to be returned to the individual with a small percentage taken to run the association.
- Ranomafana has fifteen associations (with about 104 participants) producing a variety of crafts including embroidery, wood carving, sculpting basketry and weaving. The associations have joined together and created a federation. The project works to help participants improve quality and sponsors skill improvement training and visits from outside experts. Participants provide local materials. Originally, the project provided materials not found in communities (dye, sewing machines, zippers...) but now associations are pooling their profits and buy materials for themselves. The project transports goods to market, the federation runs a small shop near the park entrance, some items are sold in the park interpretation center, and some are sold by ANGAP. Use of profit varies by association but usually it is divided in three parts, one part pays an association fee, one part goes towards purchasing raw materials and one part is returned to the artisan.

In total, SAVEM funds 25 artisan associations with approximately 200 members Andasibe and Ranomafana view their artisan associations as a successful activity (Masoala says its too early to tell). Projects reported that associations who produce quality goods routinely make a nice profit, and that this activity keeps participants occupied (and thus hopefully reduces time they have to go in the forest). Common problems reported include poor artistic quality of goods, a lack of access to markets, and a lack of a stable market (markets fluctuate based on the tourism cycle).

Respondents offered the following advice based on the lessons they have learned:

- ▶ Train participants in how to work together in an association format--associations can increase the benefits to individuals.
- ▶ Teach and encourage participants to find their own markets. Ask associations to consider how and where goods could be transported (without the assistance of the project) to ensure sustainability of this activity.
- ▶ Help associations identify what kinds of goods to make (which ones can be readily sold).
- ▶ Consider selling rough materials (raffia for example) because final goods are not always of the highest quality.
- ▶ Encourage associations to form a federation to help one another achieve common goals.

Coffee Improvement

Two projects chose to assist local coffee farmers. Coffee had been an economic factor in both areas although plantations were old, unattended (because of reduced coffee prices) and losing productivity. The projects hope to shift agriculture to permaculture, increase the number of people planting trees and generate another source of income for the farmer.

Approaches:

- Ranomafana hired a Malagasy consultant for two months to train agents and interested coffee farmers primarily in pruning and mulching techniques. The project is planning to form a coffee growers association in the near future and the consultant will return to continue his work. Additionally, the project is growing a higher quality coffee species in the project nursery which they hope to introduce to the communities soon.
- Zahamena agents conducted a census of who had coffee plants, held a group meeting to see who was interested in technical assistance and agents followed up with specific individuals. Primarily agents teach farmers how to prune trees.

Coffee improvement was seen as a mildly successful activity. Both projects reported a low participation rate (about 35 families) primarily because coffee prices were low. The activity is also seen as a labor intensive activity by farmers, and it is difficult for one person to complete the pruning during the appropriate time of year. Zahamena agents reported a boost in interest after a 1996 cyclone because farmers saw that trees which had been pruned survived and the others did not. The activity is helpful in reducing burning and tavy and could contribute to economic growth (if coffee improvement prices increase).

Respondents offered the following advice based on the lessons they have learned:

- ▶ Divide coffee plantations into three parcels, cutting one each year (people are used to coffee each year with old techniques and with the new techniques it takes three years to produce--this way farmers can still have coffee each year).
- ▶ Consider carefully whether you want to encourage farmers to rely on a crop that is so dependent on outside factors (international price) - if its a choice between this activity and another do something else.

Rural Credit

Two projects offer rural credit programs that provide loans for a range of activities beyond granary credits. Project Ranomafana's program is designed as an economic initiative established to support small scale enterprise that undertake activities in the peripheral zone. Zahamena's saving and loan system (MEC) was established to help sustain development activities in local communities and to assist local people with their personal financing needs.

Approaches:

- People who would like to undertake a micro projects nearby Ranomafana are asked to fill out applications. The project selects applications based on established criteria (which include a preference to support women and an assurance that the micro project won't threaten the park in any manner). Selected applications are then forwarded to a local NGO- *Entrepreneur a Madagascar* (EAM). EAM reviews the applications and makes a final selection. The project then loans money (2 million fmg minimum and 10 million fmg maximum / \$500.00-\$2,500.00) through an established bank account managed by EAM. Participants have to propose collateral and sign a contract. The loan must be repaid within 3-5 years at an interest of 15% per year. If not repaid the matter will be handled through the legal system. The program is in its first year of operation, twenty-seven applications were received and three micro projects have been selected (one individual will prepare and sell jam, one is buying milk cows, and one is building hotel bungalows). At the time of data collection the loans had not yet been made.

- The Zahamena rural credit program was originally established as a granary credit in 1993, the program grew into a savings and loan program for the seven community granary associations (1994) and then grew into a savings and loan program for both associations and individuals (referred to as the MEC).

Originally, the project conducted a feasibility study and approached an international NGO (SDID - a Canadian rural development association) to operate as a partner organization in the endeavor. SDID provided training in financial management to the project and local community members involved in the program.

The MEC is operated by three committees: 1) a five person administrative council oversees operations, books, and membership, and oversees the work of a hired MEC cashier/manager, this council is elected from the MEC membership during a general meeting, 2) a three person surveillance committee operates as an internal control, reviewing the work of the administrative council and, 3) a credit committee studies the demands of the people who want credit and make recommendations for loans. Anyone can join the MEC, members must pay a one time membership fee of 1500 fmg fee (50 cents) and they must put 10,000 fmg (\$2.50) into their account within the first six months. Many of the projects associations also participate in the MEC (for instance the granary associations, and community pharmacy associations). A person (or group) can borrow up to four times what one has deposited into a savings account. A member has to offer collateral and sign a contract. Repayment schedules depend on the activity but most loans are repaid within six months. The MEC bases their loan interest rate on current bank rates (around 36%). If a person defaults the MEC will solve the problem legally (with the intention of selling the collateral), as of now community pressure has been sufficient to ensure repayment.

Two MEC's have been established, the first MEC (established as a pilot program in 1995) has 175 members and has taken in almost 36 million fmg / \$9000.00 (in the form of membership fees and savings, and has mobilized 33 million fmg in the form of small loans. The second MEC has just recently been established and has 50 members with 4 million fmg / \$1000.00 in savings (the project expected membership to be up to 100 by early '97).

While both projects had high hopes for their rural credit programs both felt it was too early to judge success. In the case of Zahamena the MEC's were grappling with how to pay for operations costs having found that membership fees were not enough. Not having insurance on the savings was also a concern (money is stored in a safe and routinely transported to an account in Tamatave). The project reported that a big impediment to the program was that a change in mentality was necessary for the local population - many people did not see the need to plan for the future and were not interested in establishing an account. In general, though, the project has high hopes for the program in the future and feels it has been set up to be self sustaining.

Community Forestry

Four projects worked with local communities to manage forest resources for harvest. Projects reported that they undertook this activity to generate income for local communities, illustrate the benefits of sustainable forest management, and to try and dispel the idea that the forest is owned by "outsiders".

Approaches:

- Andasibe hired a consultant to assist in this work. The project identified potential forest management sites and contacted nearby communities. Two communities were selected and each established a community forestry association. At one location the forest was inventoried, boundaries marked and an official request (allowing the community to manage the area) was sent to DEF. Currently, a management plan is being drafted for the forest (by the project). Association members are being trained in forestry techniques and management is scheduled to be transferred to the association in the upcoming year.
- Andohahela selected a classified forest pilot site in 1995 and approached the community with the idea of managing it. In 1996, the project and community members delimited a grove parcel and an exploitation parcel. A forestry consultant will write the management plan (not yet started) and community members will be trained in forestry techniques. Peace Corps and CRF are also participating as partners in this program.
- Masoala identified three potential community forestry sites and began work on one in 1995. The project approached the local community and explained the activity. The community had set up a local community association to work with the project and this group concurred with the activity. People in the town who were interested in working as foresters (actually doing the wood cutting) joined a foresters association (the foresters are to be paid by the community association from the profit generated by the sale of wood products). The community and the project inventoried the forest and prepared a request to DEF. A community management and forest zoning plan were written (by the project) and submitted to DEF at the same time as the request (June, 1996). 1,200 hectares were requested for community management, 80 of which for exploitation. The community is awaiting approval (expected in late 1996). The project conducted training for the foresters association and provided equipment (cost to be refunded to project after timber sale). A second community forestry project is currently under study.
- Zahamena identified potential community forests and conducted inventories on five forests. Forest use data was collected from one target community. A model plan is being developed with local community participation (and will then be replicated on the other five forests).

In general, the projects felt it was too early to evaluate success of community forestry activities but they were hopeful for the future. Andasibe reported some problems with the request to DEF (the original plot requested was given to someone else and the project had to start the process over again on a second plot). Masoala reported a low attendance at their forester training session which they felt was a result of not having enough equipment for each person. Masoala was also concerned about market access and was unsure where the products would be sold.

Respondents offered the following advice based on the lessons they have learned:

- ▶ Collaborate closely with DEF in identifying parcel location.
- ▶ Include local community members in all phases of the development of a community forestry program.
- ▶ Be sure that market access is viable.

Reforestation and Nursery Management

All six projects chose to undertake reforestation activities and sponsored nurseries. Ranomafana and Masoala have nursery programs focused on reforestation of indigenous trees and habitat, the other projects focused more on reforestation as an economic instrument for communities. Amber focused on fruit trees, (Ranomafana had also just started fruit and coffee tree plantings in 1996) while Andasibe, Andohahela and Zahamena focused on providing trees for a future source of timber (primarily Eucalyptus planting).

Three major approaches were utilized:

- The first approach was to develop "project" nurseries where the project grew trees for the communities and distributed them to people (a few projects hired and trained local nursery assistants). This approach was the most common approach and was originally utilized by four of the projects although one project switched to an individual approach, and another was going to.)
- The second approach was to provide seeds and training to individuals who planted the trees on their own land.
- The third approach was to develop community nurseries where a group of individuals (either a community, a project association, or school group) worked together on a common nursery and were provided seeds and training by the project.

In total, there are 79 nurseries funded through SAVEM. Four projects collaborated with DEF in their nursery programs and one project was training a local NGO to take over nursery management. Masoala had a consignment nursery (run by the project) selling indigenous plant species to the Zurich Zoo.

The two projects utilizing a community nursery approach (Andasibe and Zahamena) reported reforestation efforts were going well because eucalyptus trees were requested by local residents and that they have had a high success rate (trees were transplanted and taken care of). Unfortunately, most other efforts were reported to not be going as well, in fact two projects stated that this activity was unsuccessful. Common problems reported included a low survival rate of seedlings, a large drop out rate of participants, and a lack of care of seedlings by villagers. Only two projects felt that nurseries would be continued by communities if the project dropped support for the activity. It is important to note, however that respondents retained a positive attitude about this activity and felt that it could be very effective in reducing pressure on the protected area in the future, by limiting the need to cut forest and by generating revenue.

Respondents offered the following advice about nurseries based on the lessons they have learned:

- ▶ It is important to encourage ownership of nurseries by communities, seedlings should not be given as a gift but rather people must learn that nurseries require a lot of work but can have great rewards if they are tended.
- ▶ Potentially land tenure can assist this activity by increasing an individuals ownership to specific tracts of reforested land.
- ▶ Species selection should be done by community participants (the project working with them) because trees of highest significance to the individuals are better cared for.
- ▶ Project nurseries are beneficial particularly at the start of the program when people are learning.
- ▶ Nurseries need to be located near a water source.
- ▶ Plant endemic species, indigenous trees may grow better and help preserve biodiversity.
- ▶ Transfer project nurseries to communities once they are trained.
- ▶ Only use local materials (no plastic pots, etc.).
- ▶ Collaborate with DEF.

Land Ownership and Management

All projects undertook land ownership and management activities with communities within the peripheral zone. These efforts were designed to clearly delineate boundaries of the protected area, and to negotiate agreement with local communities for preserving the forest while still allowing for some managed use of the area. Projects reported that they undertook these activities to establish realistic boundaries, clarify responsibilities and to promote sustainable land use. Respondents reported that efforts to prohibit and exclude all community uses of the forest were not effective nor realistic, rather communities needed to be coopted into accepting responsibility for preserving the forest, while at the same time taking benefits from it.

Approaches:

In general projects established a series of negotiated agreements with local communities:

- **Delimitation:** all projects undertook delimitation efforts with local communities. Local residents and project representatives toured boundary areas discussing and identifying boundary limitations, disputed areas were negotiated and communities signed an agreement with DEF stating that they knew where boundaries were located.
- **Dinas and Zocs:** Most projects initiated dinas (traditional agreements which outline land use practices). Dinas commonly delineate who can go in the forest, what can be taken from the forest and identify who within the community is responsible for overseeing activities within the forest. Several projects also initiated ZOC's (controlled occupation zone agreements) with communities who were living in areas around the protected area. The ZOC's typically identified what type of agricultural techniques may be practiced and where.
- **Community land management plans** were implemented on five projects including plans outlining community forestry agreements and other land use practices. One project is working with a pilot community to develop a participatory land management plan which includes agricultural management, community forest management, and health and education improvement plans developed by the local community).
- **Many projects established community land management committees** to help with fire surveillance, control and protection.

Respondents stated that, in general, efforts to clarify land ownership and management went well, and reported that these activities were one of the best methods utilized to empower communities to make them feel responsible for the forest and surrounding land. Respondents reported that delimitation efforts brought the project to each and every hamlet thereby increasing understanding of the context of the protected area (from both a project and local resident perspective). Projects felt that communities liked the dinas particularly for controlling the use of the forest, generating revenue and limiting immigration to the area. Efforts to negotiate land use agreements resulted in collective discussion and "true" community involvement. Field agents at Masoala reported that they now have a better control of the forest because people ask permission (from the fokotany) to go in, and that because of dinas, agents have a better idea of the quantity of products taken out of the forest.

A variety of problems were reported with these activities. Projects noted that the legal status for community management of forest resources was still somewhat tenuous (although a 1996 ruling had improved the situation). Projects also reported that there were many areas surrounding the protected area where no one was clearly identified as being responsible, respondents reported the need to delimit a buffer zone outside the park to eliminate land abuse. Several projects were also concerned about lack of support from legal tribunals for

enforcing land use regulation, citing cases where illegal users were prosecuted but individuals were either released or received a very slight penalty. A few projects reported that some communities rejected identifying ownership of agricultural plots for fear of being taxed by the government.

Respondents offered the following advice based on the lessons they have learned:

- ▶ Start by assigning responsibilities for fire surveillance, prevention, and control as a practical method to begin the delimitation of boundaries and responsibilities.
- ▶ Encourage the Malagasy government to legally formalize the right of communities to manage local resources.
- ▶ Collaborate with local authorities and government technical services.
- ▶ Utilize GIS capabilities to map areas and delineate zones based on type of land use.

Health Program Activities

All six projects undertook a health care program. Respondents reported a general need for health care in local communities and also that these activities served as a "door opener" to build relationships between the project and the communities.

Approaches:

- Andasibe funded one doctor through a local NGO (SAF/FJKM). The doctor tours the peripheral zone (in areas where there are no other doctors) for 14 days each month. The doctor works to educate people about health care (specifically malaria), sanitation, and provides primary care including vaccinations (provided by the government and international NGO's). Andasibe also offers a community pharmacy program.
- Andohahela funds three doctors and a midwife through a local NGO (ASOS). The doctors tour the peripheral zone communities throughout the month (sending word ahead of time regarding when they will be in the town). They provide primary care, bring medicine to sell to patients, provide vaccinations and family planning services. Additionally, doctors work to educate people on health, nutrition and sanitation. Volunteers from local communities are trained to assist the medical program.
- Masoala has hired three nurses to live in the field. The nurses primary responsibility is to provide medical care for the project agents, however with their daily presence in the communities, care is extended to local people. The project also funds a small community medicine program.
- Ranomafana employs two health team workers funded under a separate grant (non-SAVEM). The doctors provide primary care, vaccinations, and family planning services and education on health care and sanitation. The teams also make special family planning tours. Two people in each community are trained as local health care workers. Project field agents have also been trained to assist the medical team, make tours with the team and assist in health care education efforts.
- Zahamena employs three doctors and three paramedics. The team provides some primary care but work primarily in partnership with the Malagasy government to train local health care workers to improve diagnostic and prescription abilities. Project doctors take over patient care when local health care workers attend training. Vaccinations and family planning services are also provided along with community health, nutrition and sanitation education. Doctors also oversee the community pharmacy program.

The health programs were seen as a very successful activity by projects and local individuals. In total, SAVEM funds 13 health team workers which help bring health care to communities surrounding the protected areas. Approximately 500 people in the six peripheral zones are participating in family planning efforts. In general, projects report that death from dehydration, malaria, and complications in pregnancy have diminished. Vaccination rates have increased dramatically. Projects report that health teams provide one of the best avenues for transmitting environmental education messages because local people listen very closely to what they have to say. In some projects, the health teams were also utilized to encourage vegetable production activities by teaching people proper food preparation and storage combined with nutrition education (specifically the importance of diversifying food intake). Common problems that were reported include; an unwillingness in local communities to improve sanitation standards (particularly pit toilets), suspicions about family planning programs, and problems transporting medicines particularly those requiring cold storage.

Respondents offered the following advice based on the lessons they have learned:

- ▶ Remember that health teams are carefully listened to by the communities, have health teams transmit conservation messages.
- ▶ Select communities (for inclusion into the health program) where other project activities are underway so locals can see a link between the health program and preservation of the protected area.
- ▶ Collaborate closely with public services (reinforce public service structure when possible through infrastructure restoration, and training), its the only way to ensure long term sustainability.
- ▶ Don't use a top down approach to health care, integrate yourself into the community, gain peoples confidence and health care training will occur automatically.
- ▶ Focus training existing health care practitioners to improve the quality of medical care, don't provide redundant assistance.
- ▶ Before starting any health activity study the population needs and strive to raise public awareness about the health issue.
- ▶ Explain clearly who needs vaccines and why, prior to providing the service.
- ▶ Involve communities in all aspects of the health program - train local people to become health care assistants.
- ▶ Involve community health agents and public services in family planning.
- ▶ Discuss "spacing births" as the primary message for family planning, this message is more readily accepted than controlling the number of children.
- ▶ Study the main diseases in a region so you can provide the appropriate care.
- ▶ Ask people to pay for medicine right from the beginning of the service, make sure people understand that medicine is not free.
- ▶ Find resources for medicines that are affordable, identify vaccine suppliers.
- ▶ Be sure you know how to "preserve the cold chain" when transporting temperature dependent medicine.
- ▶ Respect your appointments once they are made.

Community Pharmacies

Two projects sponsored community pharmacies. Project Zahamena supported community pharmacies because the region was isolated and medicines were hard for locals to obtain and store. The project also wanted to fight against the unscrupulous traveling medicine suppliers who charge exorbitant prices and often provided inappropriate or expired medicines. Andasibe opened a pharmacy in response to a community request (there was not a pharmacy in Andasibe prior to the project).

Approaches:

- During a community meeting in Andasibe people requested assistance from the project to install a pharmacy. The project utilized the existing community store (sponsored by SAF/FJKM) to house the pharmacy. An association was established to oversee the activity. SAF donated the initial set of medicines. Medicine is sold to the public at a 20% profit. Profit is used to buy new medicine.
- Zahamena targeted several communities for pharmacies, the project explained the activity to locals and three communities were interested. Each of the three communities elected a pharmacy management committee who developed a set of internal regulations for operation. These rules were approved by the fokotany and the local officials responsible for health care in the region. In two cases medicines are stored in the local hospital, and in one case an individual's home is being used. Local doctors are given permission to prescribe medicines (although some medicines can be sold without a doctor's permission). One member of the management committee is responsible for selling to patients, the community sets the price (40-60% profit). The project provided the first set of medicines and trained the committees in community pharmacy management. Profit is utilized to repay the project for the initial stock and utilized to buy additional medicine.

Both Andasibe and Zahamena felt their community pharmacies were successful. Zahamena reported some problems in identifying a consistent supply source where the communities could buy medicine for themselves (to make the activity sustainable), but otherwise the project was pleased with the results of the activity.

Respondents offered the following advice based on the lessons they have learned:

- ▶ Determine what are the primary diseases in the region and stock medicine appropriately.
- ▶ Work to find a supplier to the local pharmacies so the communities can sustain the pharmacy on its own.
- ▶ Pharmacies are a responsibility and require attention, be sure that communities really want a pharmacy and are engaged in the process (don't impose this activity).

School Environmental Education Programs

Four projects supported environmental education programs in local schools. Projects undertook this activity to educate children about the environment, to encourage student transmission of project messages to parents, and because it is a general policy of the Ministry of Education.

Approaches:

- Amber works with nine schools and each year two teachers from each of the schools participate in environmental education training. Training topics are proposed by the project and teachers select the subjects they are most interested in learning about. Training last 4-5 days. Each year the schools undertake an environmental activity, this year they all selected to conduct reforestation activities, nine schools set up nurseries (four established successful plantations). Additionally, project staff distribute environmental education materials (developed by WWF) to the schools and occasionally sponsor "green classrooms" where they take the students and teachers into the park. The project also provides some infrastructure support to the schools including planks for buildings and tables, and tools for nurseries.
- Andohahela is working with twenty-four schools. Originally the project contacted the CISCO and explained the program. The project censused schools to determine the condition of buildings, number of pupils, how many children were in the community, and to ask teachers if they had concerns about undertaking environmental education. The CISCO and the project then decided to train teachers. The CISCO invited the teachers and the project conducted the training. Environmental education is not taught as a subject but rather is utilized as a tool to help teach other subjects (environmental examples are used to teach other subjects, e.g. mathematics - determine the growth rate of trees planted in the nursery). In some communities the schools also participate in field activities, the CISCO, parents association, project, and teachers select an activity for the students, and the parent association provides land. If a teacher needs help the project provides assistance or helps them contact the appropriate technical services. The project provides a set of environmental education books for each grade level (to the teacher) and materials for the field projects.
- Ranomafana works with five schools and sponsors an annual seminar about what is environmental education and methods that can be utilized to teach it. Teachers are educated in sustainable agricultural alternatives and they learn about what research is being done in the park and how research is undertaken. The project also sponsors occasional visits to the park. All five schools have gardens and two have nurseries. The project provides tools and seeds.
- At Zahamena the project works with every school in the peripheral zone. Originally the project contacted the CISCO and explained the program. The project censused schools to determine needs and define actions (currently they are developing a contract with CISCO and the parents association which outlines who will provide what and when). The CISCO and the project then decided to train teachers. The CISCO invited the teachers and the project conducted the training in environmental education and reforestation (five schools have nurseries). The project provides tools and seeds and sponsors a school beautification contest.

In total there are 38 schools (plus Zahamena) that undertake SAVEM funded environmental education programs. Ranomafana and Zahamena reported that their school program was going fine; they felt their teachers were becoming more confident and better skilled in transmitting an environmental message. Amber and Andohahela were disappointed with their school programs (Andohahela reported it as was one of their least successful activities). The projects said that teachers were not enthusiastic about participating in activities, felt it was an addition to their already busy schedule, were confused about the concepts, and reported that environmental education materials provided were not relevant to their region. Andohahela noted that while twenty-four schools participated in at least one of the environmental education activities only five schools undertook all of the activities outlined in the program. Other problems commonly included, a lack of attention given to field projects, (many of the field activities undertaken by the schools failed) and the common

occurrence of teacher transfer (no sooner would the project get a teacher trained than they would be moved to another school).

Respondents offered the following advice based on the lessons they have learned:

- ▶ Always work with the CISCO, to ensure sustainability of the program.
- ▶ Provide a copy of the official government convention to each teacher so they feel responsible to teach environmental education.
- ▶ Work with CISCO to obtain an agreement about keeping teachers in the same region after they are trained in environmental education.
- ▶ Support infrastructure improvements to schools, kids need enough space to work.
- ▶ When you start, focus your message on the school environment (what kids know) then expand to ideas about the protected areas.
- ▶ Organize visits to the protected area, conduct "green" classrooms.
- ▶ Give plants to kids to plant by their homes, this encourages information transfer between students and parents.
- ▶ Teach children about sustainable agricultural alternatives to help motivate their parents.
- ▶ Think twice about encouraging "rewards" for participation, ultimately this is not sustainable and students and teachers begin to expect rewards from the project to undertake an activity.

Adult Literacy Programs

Two projects provided adult literacy and community library programs. Andohahela reported that studies they had undertaken showed that illiteracy was one of the handicaps to transmitting a conservation message. Both projects hoped to increase knowledge level and began their programs in 1994.

Approaches:

- - Thirteen communities were selected at Andohahela for adult literacy programs (given priority according to the level of community pressure on the protected area and level of interest). The project organized a community meeting and proposed the activity and the community members chose one person to survey the community. The survey identified the number of people above 15, rate of literacy and number of people interested. The local volunteer was brought into the WWF office where they were trained for one week in how to run an adult literacy program (with assistance from Population Services). Teachers are provided with pens, notebooks, chalk and chalk board, a whistle to call students, an attendance book, one copy of student workbook and photocopies of paragraphs from WWF booklets. The volunteer organizes meetings, but classes can't meet more than three times per week. Groups meet for two hours per class, at the school or at a person's home. Students are provided, in the first year, with chalk and chalk boards, lined papers and pencils. The second year, they receive notebook paper, pens and pencils. First year students are taught the Malagasy alphabet, numbers 1-100, and taught to link letters. Second year students make sentences, read paragraphs (about conservation and protection), basic math operations and measurements. In the third year, the community library is started. Project staff monitors programs and libraries.
- At Ranomafana 28 communities were selected. The project organized community meetings and proposed the activity and the community chose one person who could read and write to volunteer. This person was trained by Population Services in how to run an adult literacy program. Teachers are provided with pens, notebooks, chalk and chalk board, and a student workbook. The volunteer organizes classes, students are provided with chalk, lined paper and pencils.

At Andohahela the adult literacy program is seen as a success, 1000 people are involved in 13 communities and about 70% can now read and write. The local community teachers are taking on new students with out prompting from the Project. At Ranomafana approximately 10% of the students have learned to read. The project cites a lack of motivation. Both projects reported that students get frustrated working on ABC's, and that the work requires a lot of patience.

Respondents offered the following advice based on the lessons they have learned:

- ▶ Understand why you want to undertake activity, and how it relates to project goals.
- ▶ Be patient, if students get discouraged keep working on awareness, make them understand they are not doing it to win a diploma but in order to read and write.
- ▶ Make sure students don't loose their knowledge - operate community libraries to keep interest in reading high.

Community Libraries

Two projects undertook community libraries as a tangential activity to their adult literacy program. Community participants requested more reading information and the projects sought to encourage literacy and information distribution.

Approaches:

- Andohahela determined that to obtain a library a community must be requesting more reading materials, have an adult literacy program, and be on a major route or stopping place. Five communities were selected for libraries. The project organized a meeting in the town (to make sure everyone agreed to the activity) and asked the community to provide a special house to become the library (some communities built a house, others used an existing house). Communities chose someone to be the librarian. During the first year, books (primarily booklets--about conservation and agriculture) are provided by project. Librarians were trained on how to manage the library. To help encourage reading the librarians hold discussion groups, (particularly for those books not being checked out). Field agents are trained to replace the librarian if she or he can't do a scheduled lesson. Anyone can be a member of the library, but one must pay a subscription fee which is used to repair books, and to buy new ones. The community library must have rules of operation regarding the duration of borrowing, how much it costs to take a book out (library member 100 fmg, non member 500 fmg) how much the fine is if the book is spoiled (2500 fmg), and how much it will cost the person if they loose it (5000 fmg).
- Eight communities were selected for libraries at Ranomafana. The project organized a meeting in the town and asked the community to select a librarian and provide a room for the library. Eighty books (primarily booklets on conservation and agriculture) are provided by the project. Librarians were trained on how to manage the library by Population Services. To help encourage reading the librarian holds discussion groups. Anyone can be a member of the library, but one must pay a subscription fee of 500 fmg. The community library must have rules of operation which are monitored by the project.

Overall, community libraries were considered a successful activity. Respondents reported difficulties in obtaining books that were relevant to rural community life, in specific regions of the country, and voiced concerns about finding book supply sources with whom the communities could deal with directly (to make the program sustainable).

Respondents offered the following advice based on the lessons they have learned:

- ▶ Select books which will interest local readers, things which deal with their every day life (not just entertainment).
- ▶ Keep in mind the readers knowledge level when selecting books.
- ▶ Train librarians in animation techniques (getting people to read different types of books).
- ▶ Make the libraries attractive put posters and things outside to attract people to building.
- ▶ Add books as you go.
- ▶ Work with public services to sustain this activity.

Youth Associations

Two projects targeted young people (primarily young men ages 15-25+) and created youth associations. Andohahela sought an avenue to work with young men who put pressure on the protected area (young men are responsible for cattle grazing and brush burning). Ranomafana wanted to reach out to youths to teach them to appreciate nature and increase their knowledge about biodiversity.

Approaches:

Both projects choose to set up soccer associations as a way to get this age group involved with the project:

- Andohahela organized a meeting for young men in three communities. They told them that if they agreed to undertake some environmental activities each Thursday, the project would provide the club with soccer ball. The young men agreed and established a formal club with a president (who keeps the ball). Each Thursday the club works with the project agent on differing activities like working on nurseries, cleaning up the village, etc. The clubs have made a rule (and stick by it) -if you don't work on Thursday then you can't participate in the weekly game. Everyone participates. Andohahela does not have an age limit for the club and older men often participate.
- Seven youth associations have been set up at Ranomafana. Prior to providing the soccer ball the project asked that each club undertake an activity together (e.g. clean up the village). Project personnel visit the clubs about every other month they often bring slides on nature or agricultural related subjects and take the groups into the nearby park (on average about half of the club membership shows up at the meeting). Peace Corps assists in working with the youths.

Both projects found youth associations to be a very successful undertaking. Andohahela reported that they felt that this activity reached a potential pressure group who otherwise might not participate in activities. The project felt that the associations were so well liked in the communities that the local mayors would continue to maintain them. Ranomafana reported that they felt that this youth groups were a good approach to helping change peoples attitudes about nature, at an early age.

Respondents offered the following advice based on the lessons they have learned:

- ▶ When the project undertakes activities try not to discriminate by age, remember that while decisions may be set by elders, manpower is provided by youth.
- ▶ Try an activity (like soccer) that catches peoples attention, its a good avenue to be able teach them about the environment.
- ▶ Follow the agricultural calendar when setting up club activities.
- ▶ Provide participants very practical alternatives and information, tailor your message to fit their reality.

DEAP Activities

Four projects participated in the DEAP program (management of visitor entrance fee returns). Projects reported that DEAP funds help increase public awareness of the ecological value of the park and provide income to local communities from ecotourism.

Approaches:

- Three projects set up Community Management Committees to handle DEAP funds:

At Amber 33 fokotany participate in the management of DEAP funds. During 1994-95 money was split equally between the fokotany, each were asked to propose a project (which does not threaten the protected area in any manner) and provide a match to the funds through manpower and materials. The fokotany is not provided any additional DEAP funds until the proposed project is completed. Amber found that fokotany tended to select large projects which were difficult for communities to match and difficult to finish, therefore, in 1996, Amber requested the 33 fokotany merge into 12 committees so they could successfully undertake larger activities. Nine committees proposed projects for the year. In total 55,804,110 fmg have been distributed to communities through the DEAP program (approximately \$14,000).

Participants at an Annual Community Workshop at Andohahela set up a committee (the KFA) to manage DEAP funds, the committee has had one meeting to discuss what should be done with DEAP funds, but at the time of data collection the committee had not finalized projects or distributed funds.

In 1993, project agents at Ranomafana visited communities to discuss what kinds of activities they would like to undertake with DEAP funds, communities produced a list of needs. The project then asked communities to establish a DEAP association, who submitted an official proposal to the project. Representatives from these communities were also asked to attend a meeting to set up a management committee for DEAP, 12 members were elected to the committee. The management committee, studied each of the proposals submitted (along with the project DEAP representative and the Head of the Conservation Department). If the proposal was contradictory to project goals it was dismissed, remaining proposals were prioritized (priority given to those communities who exert the highest pressure on the protected area). About 200 proposals were submitted. Forty proposals were sent to ANGAP for approval in 1994, and 14 were approved, ten received financing in 1994, four others revised their proposal and received financing in 1995.

In 1995, the project strategy changed to cover all 96 communities within the peripheral zone. A DEAP project selection committee was established (with 7 elected members) to review and prioritize proposals submitted by communities. This list is then submitted to the Community Management Committee (composed of 12 members, two elected from each fivandorna). Proposals selected by the Community Management Committee (and the project) are sent to ANGAP for review and request for financing. In 1995, the Community Management Committee decided to distribute DEAP equally to 24 fokotany for financing each proposal submitted. Fokotany who don't appropriately use their money will not receive any additional funds. In total, 132,641,641 fmg have been distributed to communities through the DEAP program (approximately \$33,000).

- On one project, DEAP is dealt with in a similar manner as other project funds - project direction determine how money will be budgeted and select appropriate activities. Through 1995, 187,367,250 fmg have been distributed to communities through the DEAP program (approximately \$47,000).

Overall projects reported that DEAP was a successful activity. Respondents reported that community recipients understand where revenues are generated and therefore in general, they appreciate the park. DEAP funds are most commonly spent on establishing community granaries but additionally they have supported a wide variety of projects including: dams, community schools, health posts and other buildings, fish ponds, roads, a bridge, and a community run campground, to name a few.

Problems were commonly reported regarding the type of proposal submitted, communities tended to select large projects which (in the end) they had trouble providing sufficient manpower or materials for the match and therefore had difficulties finishing the projects. Communities were also resistant to collaborating with other nearby communities, preferring instead, to spend the money locally.

Respondents offered the following advice based on the lessons they have learned:

- ▶ - Encourage communities to select activities which are small enough to be easily completed.
- ▶ Encourage communities to join together when they want to undertake larger activities.

Appendix 2

Survey Instruments

Introduction to the Interview

As you are aware, The ICDP operators and the SAVEM Steering Committee for Lessons Learned are conducting a participatory inquiry of the six SAVEM ICDP. This discussion will be useful not only to capture ideas about what has been learned from past experiences, but it also will help us focus on how we can apply what we have learned to the future of protected area management in Madagascar.

You have been selected as one of a small number of people to complete an in-depth interview about what you have learned in working with the ICDP's. Your opinions are important to obtaining a practical understanding of the lessons learned by the participants.

You may be assured of complete confidentiality. Your name will never be placed on the questionnaire or linked to your responses, and so we ask that you be completely open and candid in answering questions.

The results of the research will be made available after the first of the year. Your organization will receive a copy of this report, along with the other ICDP's, ANGAP, DEF, PACT and USAID.

Shall we begin?

Project Employee Interview Form / Related Authority Interview Form

Project employees were asked to respond based on their experience within their specific ICDP while related authorities responded about the ICDP program in general.

Demographic Information

1. Title:
2. Length of time with project (in this position):
3. Prior to this position have you held another job in this project
(or on another Mad. ICDP), what- for how long?
4. Age:
5. Gender:
6. Educational Background:

Planning (part 1):

7. What do you see as the major purpose(s) of the PAT process?
8. Are the PAT's an effective management tool, why or why not?
9. Are there ways the PAT process could be improved or streamlined?

Maintaining and Conserving Biological Diversity

10. What do you see as the prime threats to maintaining biodiversity within the protected area(s)?
11. How would you define biodiversity conservation? (*what is biodiversity conservation*)
12. Do you think the project intervention enhanced the conservation of biodiversity, why or why not?
13. Do you think that maintaining / conserving biological diversity was an appropriate focus (central theme) for the SAVEM projects?

Planning (part 2):

14. What do you see as the major purpose of pressure analysis?
15. Was the pressure analysis an effective management tool, why or why not?
16. What is "integrated" conservation and development?
17. In your opinion should conservation and development activities be integrated, why or why not?
18. From your experience, what are the project activities that you feel are the most successful, and why?
19. From your experience, what are the project activities that you feel are the least successful, and why?
20. Has the design and implementation of the ICDP's occurred at the right pace, why or why not?

Recognizing that ICDP's are a relatively new concept and thus are not based on a body of tested knowledge the SAVEM project sought to monitor project outcomes to test the hypothesis that "local populations will alter destructive behavior if they see a relationship between their economic and social well-being to the conserved area and if they are empowered to make the right kinds of decisions".

21. Do you think that testing the hypothesis was an appropriate focus (central theme) for the SAVEM project, why or why not?
22. Has your opinion of the hypothesis changed over the duration of SAVEM, if so why?
23. The projects were asked to develop key strategies (or sub-hypotheses) linking conservation and development as a tool to help focus project activities, was this a useful approach? Why or why not?

Institutional Relationships and Communication

24. Please describe how you perceive the primary responsibilities of the following organizations:
a. ANGAP: b. DEF: c. PACT: d. USAID: e. ICDP:
25. Do you think these roles and responsibilities have been clearly delineated, why or why not?
26. What would you like to see done (if anything) to improve relationships and communication between these organizations?

-
27. How has ANGAP's operations affected project activities? (*organizational structure and mandate*)
 28. What can be done to further strengthen ANGAP as it takes on the management of protected areas?
 29. How do you feel about the relationship between expatriate Technical Assistants and Malagasy Nationals?
 30. What would you like to see done (if anything) to improve the relationships and communication between expatriates and Nationals?
 31. Overall, was the technical assistance provided to your ICDP useful, why or why not?
 32. What are the advantages and disadvantages of having the project implemented by an international NGO?
 33. How should NGO performance be judged?
 34. The basic SAVEM structure regarding technical assistance was to fund NGO technical assistance at the project level, provide long term and short term technical assistance to ANGAP, and contracting with PACT to manage grant funds. Do you think this was an effective structure to providing technical assistance? Why or why not?

Financial Structure:

35. Each ICDP received a budget of several million dollars over the course of the project. Do you think this was an appropriate amount for accomplishing SAVEM project goals, why or why not?
36. How do you feel about the spending priorities on your project?

Personnel:

37. Within your project there are x number of people in the following positions, given project objectives, do you feel this is an appropriate level of staffing? If not, what would you change?
38. Is personnel turnover a problem on your project, if so why do you think people leave?

Training:

39. Have you participated in any additional training while being an employee of this project, if so what? (list all)
40. Overall how relevant do you feel the training you have received has been to carrying out your responsibilities?
41. Do you think that project personnel are getting enough training to be able to assume management responsibilities into the future?
42. In your opinion, has there been a transfer of competency between the technical advisors and the local staff? (explain)

Increasing Public Awareness and Community Participation

43. How do you feel about the approach the project has taken to community participation?
44. How do you think local communities feel about the project?
45. Would you do anything differently next time (concerning communities), if so what?

Capacity Building

46. In your opinion, how effective (or ineffective) were project efforts to build the capacity of local Malagasy structures?
47. What recommendations would you make for strengthening this collaboration and cooperation?
48. Do you think local NGO's (or other partners) will be able carry on activities if project support is withdrawn?
49. Do you think that building institutional capacity of local Malagasy structures was an appropriate focus for the SAVEM project, why or why not

MISC.

50. If you could change one thing about the project what would it be?
51. In your opinion, what will be the key issues for park management over the next five years (on your project) ?
52. In your opinion, what will be the key development issues over the next five years?
53. Are there any other key lessons that you have learned while working on the project?
54. Other comments?

Questions for Small Group Discussion - General Staff Session

1. On Project XXX there appears to be several approaches to working with local communities (Groupements, Pilot Farmers, Demonstration Sites, Community Meetings, and personal informal contacts). From your experience what do you think is the most effective approach for working with villagers?
2. One of the major goals of all six SAVEM ICDP's is to maintain and conserve Madagascar's biological diversity. Do you think the project intervention enhanced the conservation of biodiversity, why or why not?
3. Based on your experience in working with the project do you believe that conservation and development should be integrated, why or why not?
4. In your opinion, what will be the key issues for park management over the next five years (on your project) ?
5. In your opinion, what will be the key development issues over the next five years?
6. If you could change one thing about the project what would it be?
7. Are there any key lessons that you have learned while working on the project?
8. Other comments?

Chief of Sector - Written Questionnaire

1. Title:
2. Length of time with project (in this position):
3. Prior to this position have you held another job in this project (or on another Mad. ICDP), what- for how long?:
4. Age:
5. Gender:
6. Educational Background:
7. Have you participated in any additional training while being an employee of this project, if so what? (list all)
8. Overall how relevant do you feel the training you have received has been to carrying out your responsibilities?
9. Do you think that project personnel are getting enough training to be able to assume management responsibilities into the future?
10. If you could change one thing about the project what would it be?
11. In your own words describe the overall purpose of the Project.

Questions for Facilitated Discussion with Chief of Sectors:

1. On Project xxx there appears to be several approaches to working with local communities (Groupements, Pilot Farmers, Demonstration Sites, Community Meetings, and personal informal contacts). From your experience what do you think is the most effective approach for working with villagers?
2. From your experience, what are the project activities that you feel are the most successful, and why?
3. From your experience, what are the project activities that you feel are the least successful, and why?
4. Do you think community participants will carry on the activities if project support is withdrawn?
5. In your opinion, what will be the key issues for park management over the next five years (on your project) ?
6. In your opinion, what will be the key development issues over the next five years?
7. Are there any key lessons that you have learned while working on the project?
8. Other comments?

Data -Implementation Worksheet

1. NAME OF TECHNIQUE / ACTIVITY:
2. DEPARTMENT IMPLEMENTING TECHNIQUE:
3. WHY DID YOU DECIDE TO USE THIS TECHNIQUE? (GOAL)
4. HOW LONG HAVE YOU BEEN USING THIS TECHNIQUE?:
5. DESCRIBE HOW YOU IMPLEMENTED THIS TECHNIQUE. How did you work with villagers, Did your strategy change?
6. HOW DO COMMUNITY PARTICIPANTS FEEL ABOUT THIS TECHNIQUE? What evidence do you have to support your conclusion?
7. DID YOU COLLABORATE WITH ANOTHER ORGANIZATION, NGO, OR PROJECT DEPARTMENT ON THIS TECHNIQUE?
8. HOW SUCCESSFUL WAS THIS TECHNIQUE, AND WHY? What evidence do you have to support your conclusion?
9. HOW EFFECTIVE DO YOU THINK THIS TECHNIQUE WAS IN REDUCING PRESSURE ON THE PROTECTED AREA? Why? Are there any specific results that show how effective (on ineffective) this technique was?
10. DO YOU THINK COMMUNITY PARTICIPANTS WILL CARRY ON THIS ACTIVITY IF PROJECT SUPPORT IS WITHDRAWN?
11. WHAT ADVICE WOULD OFFER ANOTHER PROJECT JUST STARTING THIS ACTIVITY

Field Agent Written Questionnaire:

The SAVEM Committee for Lessons Learned (composed of representative from each of the ICDP's, ANGAP, PACT, and USAID) are collecting ideas from a variety of people at the ICDP's to see what has been learned over the past few years. The knowledge you have gained is very important and the committee would like to ask you to share your ideas on the following questions. Please return this form (in the envelope provided) to the Chef Sector, as quickly as possible. Thank you!

1. Title:
2. Length of time with project (in this position):
3. Prior to this position have you held another job in this project (or on another Mad. ICDP), what- for how long?
4. Age:
5. Gender:
6. Educational Background:
7. Have you participated in any additional training while being an employee of this project, if so what? (list all)
8. Overall how relevant do you feel the training your have received has been to carrying out your responsibilities?
9. From your experience, what are the project activities that you feel are the most successful, and why?
10. From your experience, what are the project activities that you feel are the least successful, and why?
11. The project appears to have several approaches to working with local communities (groupements, pilot farmers, demonstration sites, community meetings, informal personal contacts, etc.) From your experience, what do you think is the most effective approach for working with villagers?
12. If you could change one thing about the project what would it be?
13. In your own words describe the overall purpose of the Project:

DEF Field Agent Questionnaire:

The SAVEM Committee for Lessons Learned (composed of representative from each of the ICDP's, ANGAP, PACT, and USAID) are collecting ideas from a variety of people to see what has been learned over the past few years. The knowledge you have gained is very important and the committee would like to ask you to share your ideas on the following questions. Please return this form (in the envelope provided) to the Project's Chef Sector, as quickly as possible. Thank you!

1. Title:
2. Length of time (in this position):
3. Age:
4. Gender:
5. Educational Background:
6. In your own words describe how your job relates to Project xxx.
7. If you could change one thing about the project what would it be?
8. In your own words describe the overall purpose of the Project.

PROJECT DESCRIPTION

I. PROJECT BACKGROUND

History

Why site was selected
Designation of protected area
key activities leading to start of project

Geographic and Social Structure

Location and size
Population
Tribal structures

II. INSTITUTIONAL STRUCTURE

NGO's Mission Statement

Project Philosophy

Goals:

Objectives:

(Note changes between goals in proposal and goals in PAT 1996)

Organigram

Personnel

Position, #,planned, Current, # leaving, Reasons given for leaving

Training

What is the project philosophy regarding training?

For personnel was there any type of training plan which identified training activities to close the gap between the terms of reference in a job and missing competencies of the employee?

Financial : Budget

Annual Budget .% actually spent during year

Amt. spent on project to date (through 1996):

Actual:

Proposal: \$ (US dollars)

Where did money go if not expended in current year

Describe the process you used to identify spending priorities:

In you opinion what ill be the level of financing necessary to manage the park in the future?

Hypothesis Testing

SAVEM sought to test the hypothesis that "local populations will alter destructive behavior if they see a relationship between their economic well being to the conserved area and if they are empowered to make the right kinds of decisions" Was your project structured to accommodate this hypothesis, if so how?

PATS

Normally about what percentage of the activities planned for within the PAT were realized? - What did you do about activities?

Pressure Analysis

Priority Pressures:

Causes: (list)

Describe the process you used to define pressures:

Describe the process you used to identify principle causes of those pressures:

What information was available to help you identify pressures and causes?:

Are annual project activities linked to pressure analysis, if so how?

SAVEM Objectives

What is the status of demarcation of boundaries and designation of core and buffer zones in the protected area?

Have you developed an eco tourism plan?

List park infrastructure improvements that have been made: (trails, gites, etc.)

What village improvements have been made in infrastructures, i.e. hospitals, roads, schools etc.

How did you choose what to monitor?

Was the monitoring and evaluation system beneficial to project management, why or why not?

Of the things you monitor which items do you feel ARE particularly relevant and useful to the project?

Of the things you monitor are there any items which you feel are NOT particularly relevant & useful? (please list)

What research activities other than normal M and E activities were conducted on the project?

How were these activities managed and by whom?

Overall were the research activities useful in meeting project goals?

Beyond working in villages has the project undertaken any other activities to improve public awareness?

Approaches to Transfer of knowledge and skills in Communities

Groupements:.

Demonstration Sites:

Pilot Farmers:

Community Meetings:

Personal Contacts:

All agents and chief of sectors live in field

Major Field Agent Activities:

APPROACH TO INTEGRATION ACTIVITIES

What is the general approach to integrating activities?

How do departments communicate with one another (internal communication structure)

Are there any problems with internal communication

Approach to Local Community Participation

General approach:

What was done to identify community needs:

Have local populations participated in conservation and development planning, if so how:

Examples of means of participation:

How were activities selected:

How are activities managed and by whom:

Did the project incorporate local traditional structures? (how)

Did the project incorporate official structures? (how)

What approach to empowerment did the project take:

Capacity Building

What strategies for working with Malagasy NGO's (or similar structures) have been developed within your ICDP?
(see also collaboration of activities)

Biodiversity

What has been done to obtain information on the status of biodiversity (i.e. plant inventories, identification of indicator species)

What tools other than information collection did the project use to maintain and conserve biodiversity (list techniques, technologies, approaches, etc.)

Which ones worked particularly well?

Do you have any evidence of what the trends are, if so what (anything from your own observations to specific data results)

Future Direction of Project

ANGAP

OTHER

Community Interviews

Meeting with fokotany, tangalamana and officials (explain purpose, ask permission)

1. When was village established
2. How many families
3. How many people
4. Distance from protected area (hrs walking)
5. Are there other projects working within this community (other than ICDP) Who, what when.
6. How long has the ICDP been working in the community?
7. Why is the project working in your community?
8. What activities are being done with the project in your community?
9. Who determined which activities to do?
10. Why is it important to protect the xxx RNI?
11. How often do you see an agent of the project?
12. What do they do when they are here? (what are their responsibilities)?
13. How do you feel about the project?
14. If you could change one thing about the project what would it be?
15. What do you like or appreciate the most?
16. Are there any problems, what do you dislike?
17. Are you aware of the organization called (NGO)? If yes what are their responsibilities?
18. Are you aware of the organization called ANGAP? If yes what are their responsibilities?
19. Are you aware of the organization called DEF? If yes what are their responsibilities?
20. Other comments?

Community with no activities (fokotany)

1. When was community established
 2. How many families
 3. How many people
 4. Distance from protected area
 5. Have you heard of (name of project)? if yes, do you know what the project is about?
 6. Are there other projects working within the community (other than ICDP) Who, what when.
 7. Do you know of a reason why the project isn't working here?
 8. Are you aware of the organization called (NGO)? If yes what are their responsibilities?
 9. Are you aware of the organization called ANGAP? If yes what are their responsibilities?
 10. Are you aware of the organization called DEF? If yes what are their responsibilities?
- Other comments?

Member Groupement

1. Gender
 2. How long have you lived in this community? why did you come here?
 3. Age
 4. Main source of revenue
 5. Main source of food/subsistence
 6. What groupement do you belong to?
 7. When was the group established?
 8. Why was the groupement established (who decided there should be a groupement)?
 9. Why did you join?
 10. How many members are there?
 11. Who can join the group (is membership restricted)?
 12. What are the activities of the groupement?
 13. How did you determine which activities to do?
 14. How does the project assist these activities?
 15. Are there activities that the group does without the assistance of the project?
 16. What other activities is the project involved in within the community?
 17. What have you learned from the project that you didn't know before?
 18. What do you think is the goal of the project?
 19. What do you appreciate most about the project?
 20. Are there any problems, What do you dislike?
 21. If you could change one thing about the project what would it be?
 22. How often do you see and agent of the project?
 23. What do they do when they are here? (what are their responsibilities)?
 24. Is it important to have natural forest? Why or why not?
 25. Are there any threats to losing the remaining forest? (what)
 26. What can you do to help protect the forest?
 27. Are there any community guidelines about using of the forest? (not official rules)
 28. Tavy is a major agricultural technique for your community, are there any problems associated with tavy?
 29. Are you aware of the organization called (NGO)? If yes what are their responsibilities?
 30. Are you aware of the organization called ANGAP? If yes what are their responsibilities?
 31. Are you aware of the organization called DEF? If yes what are their responsibilities?
 32. Why is it important to protect the (park)?
- Other comments?

Other Involved Individual (pilot farmers...)

1. Gender
 2. How long have you lived in this community? why did you come here?
 3. Age
 4. Main source of revenue
 5. Main source of food/subsistence
 6. What activities are you doing with the project?
 7. How long have you been doing this activity?
 8. How was this activity selected?
 9. Why did you begin to work with the project?
 10. How does the project assist these activities?
 11. What other activities is the project involved in within the community?
 12. What have you learned from the project that you didn't know before?
 13. What do you think is the goal of the project?
 14. What do you appreciate most about the project?
 15. Are there any problems, What do you dislike?
 16. If you could change one thing about the project what would it be?
 17. How often do you see an agent of the project?
 18. What do they do when they are here? (what are their responsibilities)?
 19. Is it important to have natural forest? Why or why not?
 20. Are there any threats to losing the remaining forest? (what)
 21. What can you do to help protect the forest?
 22. Are there any community guidelines about using of the forest? (not official rules)
 23. Tavy is a major agricultural technique for your community, are there any problems associated with tavy?
 24. Are you aware of the organization called (NGO)? If yes what are their responsibilities?
 25. Are you aware of the organization called ANGAP? If yes what are their responsibilities?
 26. Are you aware of the organization called DEF? If yes what are their responsibilities?
 27. Why is it important to protect the (park)?
- Other comments?

Non participants in active village

1. Gender
 - 2.. How long have you lived in this village why did you come here?
 3. Age
 4. Main source of revenue
 5. Main source of food/subsistence
 6. Have you heard of Project xxx
 7. What activities is the project involved in within the community?
 - 8 Are you involved in any of these activities? if yes what and how
if no, is there a reason you are not working on an activity within the project?
 9. Why does the project support activities in this community?
 10. How often do you see an agent of the project?
 11. What do they do when they are here?
 12. What do you think is the goal of the project?
 13. Is it important to have natural forest? Why or why not?
 14. Are there any threats to losing the remaining forest? (what)
 15. What can you do to help protect the forest?
 16. Tavy is a major agricultural technique for your community, are there any problems associated with tavy?
 17. Are there any community guidelines about using of the forest? (not official rules)
 18. What do you appreciate most about the project?
 19. Are there any problems, what do you dislike?
 20. If you could change one thing about the project what would it be?
 21. Why is it important to protect the RNI?
 22. Are you aware of the organization called (NGO)? If yes what are their responsibilities?
 23. Are you aware of the organization called ANGAP? If yes what are their responsibilities?
 24. Are you aware of the organization called DEF? If yes what are their responsibilities?
- Other comments?

Individual in Community with no activities

1. gender
 2. How long have you lived in this village why did you come here?
 3. Age.
 4. Main source of revenue
 5. Main source of food/subsistence
 6. Have you heard of (name of project)? if yes, do you know what the project is about?
 7. Do you know of a reason why the project isn't working here?
 8. Is it important to have natural forest? Why or why not?
 9. Are there any threats to losing the remaining forest? (what)
 10. What can you do to help protect the forest?
 11. Tavy is a major agricultural technique for your community, are there any problems associated with tavy?
 12. Are there any community guidelines about using of the forest? (not official rules)
 13. Are you aware of the organization called (NGO)? If yes what are their responsibilities?
 14. Are you aware of the organization called ANGAP? If yes what are their responsibilities?
 15. Are you aware of the organization called DEF? If yes what are their responsibilities?
- Other comments?