

**Conservation International
Healthy Families, Healthy Forests: Combining
Reproductive Health with Biodiversity Protection for Effective Programming**

Year 3 (FY05) Semi-Annual Results Report

January – June 2005

Report date: August 31, 2005

**Associate Grant No. GPH-G-00-02-00010-00 under Leader
Associates Cooperative Agreement No. LAG-A-00-00-00046-00**

I. Introduction

This report covers the second half of Year Three (FY05) key results under the “Healthy Families, Healthy Forests: Combining Reproductive Health with Biodiversity Protection for Effective Programming” grant. Conservation International (CI) is in the final year of its grant to implement Population and Environment (PE) projects in three countries - the Philippines, Madagascar, and Cambodia. This grant expires on September 26, 2005.

The goal of this project is to engage communities living in and around biodiversity hotspots in activities that integrate biodiversity conservation with improved access to reproductive health (RH) and family planning (FP). The projects seek to help local communities and policy-makers understand the relationship between having smaller and healthier families with an improved stewardship of natural resources.

Although this grant no longer funds the Community Conservation Coalition (CCC), CI continued to exhibit leadership with this group during this reporting period. CI hosted the May 2005 CCC meeting featuring Chemonics Gender Strategy Development in Mexico through USAID/Mexico’s Rural Prosperity and Conservation Project. CI staff also participated in the CCC Gender Working Group to plan and initiate gender trainings in conservation NGOs and CI staff filled 100 requests for the CD of *Social Science Tools for Conservation Practitioners*.

The goal of the activities supported by this grant are to address the gaps that continue to separate the fields of conservation, population, and development, by promoting integrated approaches that recognize conservation as a social issue.

The Key Results table below summarizes some key activities and outcomes of each country program. The Discussion section provides a summary of outcomes and activities for the country programs, as well as CI’s DC based PE program.

Table of Key Results			
Activity Number	Key Result	Status of Key Result	Page Number for more Information
Philippines			
1.1	Continue to promote the shift to more effective family planning methods, as well as natural family planning methods	On-track	5
1.2	Promote more effective, localized delivery of RH/FP supplies and related services in the target area.	On-track	7
1.3	Conduct follow-up and/or monitoring and evaluation for the RH/FP activities implemented and integrate lessons learned into future implementation plans and Local Government Unit and partner's activities.	On-track	8
1.4	Continue IEC and awareness campaigns and informal education to build deeper understanding and support for biodiversity conservation.	On-track	9
2.1	Continue to provide technical assistance and support for the over all integration of Barangay Plans, Community Resource Management Frameworks (CRMFs of CBFMs), and Ancestral Domain Sustainable Development and Protection Plan (ADSDPP of CADC) with the Municipal Comprehensive Land-Use Plan (CLUP) of Baggao.	On-track	19
2.2	Continue capacity building of Peoples Organizations, indigenous people, and the Local Government Unit to effectively implement their development plans and enforce conservation policies and initiatives.	On-track	10
2.3	Continue to provide technical assistance for agroforestry and promote other biodiversity-compatible economic activities that will engage men, women, and youth within the covered barangays.	On-track	10
2.4	Work with the local communities and other key stakeholders (LGU, Department of Environment and Natural Resources, and National Commission on Indigenous People) to set up a community-based monitoring and evaluation system for a sustainable natural resources management and biodiversity protection.	On track	11

Madagascar			
Activity Number	Key Result	Status	Page Number for more Information
1.1	Continue and expand information, education and communication (IEC) campaign to improve understanding of RH/FP and its importance to healthy families and healthy environment	On-track/some delay	12
1.2	Continue the training course for community health promoters in basic RH/FP with linkages to environmental health. Conduct the course in all communities and priority site.	On-track	16
2.1	Work with communities to implement natural resource management (NRM) plans for subset of communities in the target areas and improve soil and NRM; conduct related trainings.	On-track	19
2.2	Implement alternatives livelihood and nutrition training (capacity building) to recruited Women's Nutritional Teams (EFEN)	On-track/some delay	20
2.3	Promote and Implement new agricultural practices	On-track	22
2.4	Monitoring and evaluation	On-track	22

Cambodia			
Activity Number	Key Result	Status	Page number for more information
1.1	Meet the demand for RH/FP services through improved supply and emergency referral service	On track	22
1.2	Augment and improve existing health services to increase access to RH/FP	On track	24
1.3	Identify and initiate livelihood strategies that will increase demand for RH/FP services, especially through women's participation and networking	On track	28
2.1	Facilitate Participatory Land Use Planning (PLUP), integrating community resource needs with conservation of Key Biodiversity Areas	On track	29
2.2	Facilitate the additions of the RH/FP component and conservation priorities into commune development plans.	On track	30

Activity Number	Cambodia Key Result	Status	Page number for more information
2.3	Strengthen the capacity of commune councils, particularly through increased women's participation, for Community Based Natural Resource Management (CBNRM)	On track	31
2.4	Build local support for biodiversity conservation needs for specific sites and species and increase understanding of linkage between RH/FP services and conservation.	On track	32
3.1	Threats to biodiversity conservation identified in Koh Kong and Pursat Provinces	Delayed	32
3.2	Population growth and demographic threat to biodiversity assessment initiated for the CCPF	Delayed	34
3.3	Work with provincial planners to develop a spatial model of natural population growth and migration projections based on existing incentives and current development trends	Delayed	34
3.4	Work with government and NGO stakeholders to expand the protected area network to include KBAs not covered under the current system	Delayed	34

CI-DC Technical Leadership and Support			
1.1	Provide technical support to field programs with PE projects	On-track	35

II. Discussion of Key Results in Country Programs

A. Philippines

i. Key Long-Term Program Objectives for the Philippines

With only 3 percent of original primary forest cover remaining, the Philippines are in critical danger of losing some of the world's most unique flora, fauna, and marine life. Rapid population growth due to high fertility rates and internal migration threatens both natural resources and the livelihood of rural Filipinos who depend on these resources. The goal of this project is to reduce population pressure on natural resources and improve the quality of life in communities surrounding key biodiversity areas within the Northeastern Protected Landscape and Seascape covered by the Sierra Madre Biodiversity Corridor (SMBC).

In the Sierra Madre of northern Luzon, the provinces of Cagayan and Isabela stand out as high-risk areas for population growth and increased degradation of the remaining forest. One of the key municipalities in this area is Baggao, where surveys have shown pressing needs for both increased access to reproductive health care and strengthening of community forest management and forest protection. CI and partners focus efforts on training for midwives, health promoters, school teachers in both elementary and high school, youth leaders and students and communities on reproductive health and family planning and environmental protection,

conservation and development, as well as mobilizing and strengthening community organizations to better manage community forest concessions.

ii. Discussion of Key Results for the Philippines

Objective 1: Encourage and enable target community residents of reproductive age (15-49) to adopt safe and appropriate RH/FP practices.

By enabling target communities to adopt safe and appropriate RH/FP practices, the project attempts to improve quality of life in communities living in key biodiversity areas, and to reduce population pressures on natural resource—the two major goals of this project. The key activities for accomplishing this objective were:

- Continuing to promote the shift to more effective family planning methods, as well as natural family planning methods;
- Promoting more effective, localized delivery of RH/FP supplies and related services in the target area;
- Conducting follow-up and/or monitoring and evaluation for the RH/FP activities implemented and integrate lessons learned into future implementation plans and Local Government Unit (LGU) and partner's activities; and,
- Continuing education awareness campaigns and informal education to build deeper understanding and support for biodiversity conservation.

Activity 1.1 Continue to promote the shift to more effective family planning methods, as well as natural family planning methods

From January to June 2005, CI Philippines (CIP), PROCESS Luzon and the Municipal Health Office (MHO) of Baggao, in collaboration with the Provincial and Regional health office, conducted a series of consultations among rural health workers. Immediately afterward, there was a massive awareness campaign on RH/FP interventions in support of the nationwide safe pregnancy program '*Ligtas Buntis 2005 Campaign* (LBC)" launched by the government through the Department of Health in response to the Cairo declaration on International Convention on Population and Development program (ICPD) 10 years ago. This ***Ligtas Buntis 2005 Campaign*** is a government response to address the needs of men, women and couples to plan their families which have not been met due to deficiencies in social structures and health care systems as well as problems on availability, accessibility and affordability of FP services.

As a result of the awareness campaign conducted, 319 prospective bilateral tubal ligation (BTL) and 7 non-scapel vasectomy (NSV) clients registered their interest. With this, CI Philippines, PROCESS Luzon, Municipal Health Office of LGUs (municipal and provincial), Regional Department of Health (DOH) and the Cagayan Valley Regional Medical Center organized five schedules to conduct free tubal ligation and vasectomy operations. CI Philippines and PROCESS-Luzon provided logistical support, including the transportation of the patients to the hospital where the operations were conducted. In addition, the DOH, municipal and provincial health office and the Cagayan Valley Regional Medical Center provided a medical team (20 doctors, nurses and attendants) and medical supplies needed in the operation. A total of 242 BTL and 4 NSV patients finally underwent permanent sterilization as shown in **Table 1**.

Table 1. Summary of BTL & NSV Acceptors as a Result of the Ligtas Buntis Campaign for the whole Municipality of Baggao, Cagayan and Within the 6-PE Barangays.

Schedule	Municipal Wide Patients			PE Covered Barangay Patients		
	BTL	NSV	TOTAL	BTL	NSV	TOTAL
March 31, 2005	55	1	56	14	1	15
April 15, 2005	63		63	5		5
April 22, 2005	56	3	59	13	2	15
April 29, 2005	43		43	7		7
May 3, 2005	25		25	5		5
TOTAL	242	4	246	44	3	47
Target Clients	319	7	326			
Actual (%)	76%	57%	75%			

To further strengthen the capacity of the rural health workers, three trainings and couples class reached 99 people, as shown in **Table 2** CI and partners sponsored on-the-job trainings in interpersonal communication skills for all the rural health workers in the barangays covered by the PE project to train them how to speak and build their confidence in a crowd. (Health workers performed outside of their barangays.) CI Philippines and PROCESS conducted these trainings in partnership with the municipal and provincial health office with the technical support from the Regional DOH.

Table 2. RH/FP Trainings Conducted, January to June 2005

Title of Training	Number and Type of Participants	Date Conducted
1. Gender Sensitive Health Services Training	49- Barangay Health Workers, Midwives, & Municipal Health Office staff	April 4-6, 2005
2. Interpersonal Communication Skills	24- Barangay Health Workers	May 23-25, 2005
3. Traditional Birth Attendant/ Hilot Training	19 - Existing untrained Traditional Birth Attendants	June 14-15, 2005
4. Couples' Class	7 - Couples in Brgy. Hacienda Intal, Baggao	January 25, 2005
Total Participants	99 participants	

To date, the number of current family planning users stands at 1,317, up by 42 Contraceptive Users (Cus) with a very minimal decrease in contraceptive prevalence rate by 1 percent compared to the December 2004 data, as shown in **Table 3**. The decrease was attributed by the greater number of new married couples of reproductive age than those married couples that have reached the maximum reproductive age. Pill acceptance is still on the rise with 60.52 percent, followed by IUD (16.40 percent) and BTL (12.76 percent). Acceptors for the other FP methods increased as well. However, there is a significant decrease of clients using Depo-provera methods due to the stoppage of contraceptive supplies.

Table 3. Current Users, Couples of Reproductive Ages and Contraceptive Prevalence Rate (CPR) in the Six (6) Barangays at Baggao, Cagayan (December 2004 to June 2005)

Type of FP Method Used	Acceptors as of December 2004		Acceptors as of June 2005		Increase (+) or Decrease (-)
	Number	Percent (%)	Number	Percent (%)	
Bilateral Tubal Ligation	133	10.43	168	12.76	35
Non-surgical Vasectomy	2	0.16	5	0.38	3
Pill	686	53.80	797	60.52	111
IUD	208	16.31	216	16.40	8
Depo-Provera	168	13.18	62	4.71	(106)
Natural Family Planning	73	5.73	61	4.63	(12)
Condom	5	0.39	8	0.61	3
Total Current Users	1,275	100.00	1,317	100.00	42
Couples of Reproductive Ages	1,953		2,044		91
CPR (%)	65		64		(1)

With the barangay-to-barangay Ligtas Buntis 2005 Campaign and joint medical mission in Baggao, the Itinerant Team of the Department of Health Regional Office recorded Baggao as the top achiever in terms of total number of BTL & NSV acceptors (246) within the region and probably nationwide. This is an indication that community residents are now becoming more aware not only of the benefits of having smaller family sizes but also of the negative effects on the environment.

Activity 1.2 Promote more effective localized delivery of RH & FP supplies and related services in the target area.

One challenge in the delivery of RH/FP services in the upland communities is the lack of trained health workers and limited municipal government resources. Our intention is to reinforce and sustain the RH/FP services in the upland communities by providing the necessary RH/FP supplies and services needed by the target communities. The PE Project and the municipality of Baggao, through the Barangay Health Workers (BHWs) and midwives, are continuously providing services on site particularly on contraceptive supplies based on the agreed plan. During the period January to June 2005, a total of 3,338 cycles of TRUST pills were delivered to the various health stations and were dispensed by the BHWs. RH/FP supplies and services now reach up to the remotest communities covered by the PE project. Logistical materials like raincoats and rain boots (49 sets) were provided to the BHWs & midwives for their use during visits particularly in upland villages. Other basic health station supplies and materials like RH/FP record forms, envelopes, bond paper, folder, fasteners, & ball pens were also provided to better support record keeping.

The acceptance of localized RH/FP services delivery remains high as manifested by increasing number of RH/FP users and maternal care services (pre-natal and post-natal care check up), vaccination (BCG, tetanus toxoid, DPT, and OPV), and measles shots provided jointly as a team by the midwives and BHWs in their target areas. In recognition of the project's accomplishments, the PE Project in Baggao was chosen as one of the model sites for "NGO and LGU Partnership." On June 9 2005, 21 FP champion-participants implementing the USAID-funded Social Acceptance Project in other parts of the Philippines visited the PE project site during their Observation Study Tour. At present, the regional Population Commission office nominated Baggao for the annual Gawad Galing Pook 2005 under the Population & Development award category.

Activity 1.3 Conduct follow-up and/or monitoring and evaluation for the RH/FP activities implemented and integrate lessons learned into future implementation plans and LGU and partner's activities.

CIP, in partnership with PROCESS Luzon, continued to assess the project accomplishments and to draw lessons for updating and adjusting plans and strategies when necessary. A Project Review and Planning Workshop was conducted on April 6, 2005, attended by most of the BHWs, midwives, and municipal health staff at the Baggao PE Field Office. For RH/FP and NRM integration, field staff-partners from the Department of Environment and Natural Resources (DENR) also attended this workshop. The RH/FP indicators developed during the series of workshops conducted are now currently used by the rural health workers (i.e., contraceptive prevalence rate, number of births, deaths, in-migrants, out-migrants, current and new contraceptives users, etc.) as major barometers in determining changes and/or future impact of the project. These indicators were incorporated in the Performance Monitoring Plan (PMP) for the new CI PE project and the respective results chain. Based on the monitoring results, the implementation of project activities continuously provided positive impacts in promoting RH/FP practices in the project sites. The strong partnership and collaboration among major players such as the Department of Health (both at the regional and provincial levels), NGOs, other government agencies and LGU Baggao contributed to these positive impacts in the project.

Activity 1.4 Continue IEC awareness campaigns and informal education to build deeper understanding and support for biodiversity conservation.

During this reporting period, the trained Dalaw Turo team, composed of community leaders, women's group, and youth groups, reached more than 100 community residents with the project site. Trained health workers who are also members of the Dalaw Turo Team did their part in reaching out to local people in the remote barangays during the Ligtas Buntis 2005 awareness campaign by interjecting population, health and environment issues during the barangay-to-barangay sorties. From February to early May 2005, CI and partners conducted an intensive awareness campaign, including the production and distribution of several IEC materials including 370 T-shirts depicting RH/FP and environment scenarios.

To further intensify the awareness campaign activities, CIP, in partnership with DENR Regional Office, and First Philippine Conservation, Inc. (FPCI), conducted a three-day Youth Training on Non-Formal Environmental Education- Dalaw Turo Approach from June 10-12, 2005. This training was attended by 25 youth participants from Baggao. Approximately 38 secondary and elementary science teachers from within and adjacent to the six PE-covered barangays attended a three-day Teachers Training on Environmental Education, cosponsored by the Department of Education (DepEd). Reference materials like brochures, pamphlets, and books were provided for each school for reference of the teachers and students.

Utilizing another communication medium, the PE project also regularly tackled relevant Population, Health and Environment (PHE) issues during the weekly local radio station program, entitled: "*Sigaw ng Kalikasan*". This program is sponsored by CIP in partnership with the DENR, and Radyo ng Bayan (DWPE). Likewise, CIP staff was also regularly invited together with the Regional Population Executive Board to participate in a local cable TV network (RBC Channel) in Tuguegarao City to discuss the PE project and PHE issues.

As a result of the continuing community awareness campaign involving the different sectors (youth, schools, POs, rural health workers, local leaders, & women), community residents are now receptive to the population and environment program as evidenced by the increasing number of couples practicing family planning not only within the six PE barangays but also in the adjacent areas. Demonstrated project impacts include: the observed reduction of families engaged in slash-and-burn farming within the natural forest; active community participation in tree

planting and agro-forestry activities; and the increasing attitude of the local people of reporting illegal activities in their areas.

Objective 2: Build the capacity of target communities to effectively manage the identified Community Based Forest Management (CBFM) and Certificate of Ancestral Domain Claim (CADC) Projects.

A major goal of this project is to improve the management of community forest concessions in key biodiversity areas by building the capacity of target communities who are responsible in managing the Community-Based Forest Management (CBFM) areas and lands under the Certificate of Ancestral Domain Claim (CADC).

Key activities for accomplishing this objective were:

- Continuing to provide technical assistance and support for the overall integration of Barangay Plans, Community Resource Management Frameworks (CRMFs of CBFMs), and Ancestral Domain Sustainable Development and Protection Plan (ADSDPP of CADC) with the Municipal Comprehensive Land-Use Plan (CLUP) of Baggao;
- Continuing capacity building of Peoples Organizations, indigenous people, and the Local Government Unit to effectively implement development plans and enforce conservation policies and initiatives;
- Continuing to provide technical assistance for agro-forestry and promote other biodiversity-compatible economic activities that will engage men, women, and youth within the covered barangays; and
- Working with the local communities and other key stakeholders (LGU, Department of Environment and Natural Resources, and National Commission on Indigenous People) to set up a community-based monitoring and evaluation system for a sustainable natural resources management and biodiversity protection.

Activity 2.1: Continue to provide technical assistance and support for the over all integration of Barangay Plans, Community Resource Management Frameworks (CRMFs of CBFMs), and Ancestral Domain Sustainable Development and Protection Plan (ADSDPP of CADC) with the Municipal Comprehensive Land-Use Plan (CLUP) of Baggao.

With facilitation of CIP and PROCESS, three CBFM POs covered by the PE project completed the updating of their Community Resource Management Frameworks with the affirmation of the DENR through the Community Environment Natural Resources Office on March 2005. However, due to the recent amendment of the implementing guidelines of DENR Administrative Order DAO 2004-29, the plan will be revised to conform to the guidelines. CI Philippines and PROCESS-Luzon immediately responded by sponsoring a two-day Writeshop for the preparation of the POs' 5-Year Workplans from June 14-15, 2005 as newly required. The 5-Year Workplans of the three CBFM POs are now being finalized.

On the other hand, CI Philippines continued providing technical assistance to the Municipal Planning and Development Office of Baggao specifically on GIS mapping on the updating of their Comprehensive Land Use Plan (CLUP). This is in support of the overall integration of CBFM plans to the CLUP of the municipality. Currently two staff of the municipal planning office are undergoing on-the-job training at the CI-SMBC office as part of the capacity building efforts of the municipality towards rational land use and land use planning with the aid of GIS. With the approach of participatory planning process in forest management, the CBFM POs and local officials have designated different management zones (i.e., strict protection zones, eco-tourism zone, multiple use zone, & production forest zones) as their guide for the effective management and to gain optimum benefits of their forest.

Activity 2.2 Continuing capacity building of Peoples Organizations, indigenous people, and the Local Government Unit (LGU) to effectively implement their development plans and enforce conservation policies and initiatives.

The PE project continued providing technical and logistical support for the capacity building efforts of the local stakeholders and the law enforcement activities of the DENR in collaboration with the three CBFM POs, indigenous people (Agtas) and LGU. The capacity building activities include the series of CBFM PO's enhancement training and orientations conducted in partnership with the EWWI, CAVAPPED, PROCESS and DENR. This is the response to the training needs assessment conducted for the CBFM POs to effectively manage their projects. One major activity conducted during this period was the CBFM PO General Assembly and Policy Forum from March 30-31, 2005, attended by 29 participants composed of representatives from peoples organizations, DENR, assisting NGOs, Department of Agriculture staff, and Mines and Geoscience Bureau of the DENR to tackle several project implementation issues such as: the ineffective management of project; poor organizational management, conflicts within the organization and many more. Other PO meetings were also conducted with the support from the UN Development Program (UNDP) to formulate small-scale project proposals for livelihood for possible funding of UNDP small grant program.

The continuing capacity building activities increased the participation of the local community in forest protection and conservation activities. A joint team of DENR, LGU staff, CBFM officers, and Philippine Army conducted actual field investigation on slash-and-burn farming covering 2 hectares within the Three Damonds CBFM area and the case was filed against the perpetrators for violation of forestry law.

Activity 2.3 Continue to provide technical assistance for agroforestry and promote other biodiversity-compatible economic activities that will engage men, women, and youth within the covered barangays.

Based on the results of the community planning conducted in the six barangays, the communities identified conservation-friendly livelihood activities, including agro-forestry; eco-tourism; tree planting and collection of non-wood forest products like rattan and bamban for small-scale cottage industries. With this, a two-hectare pilot agro-forestry project was established planted with fruit trees (Mangoes and Citrus interplanted with coffee) within the Three Diamonds CBFM area. A plan for a five-hectare expansion of the agro-forestry farms was completed for the PO members of New Lands Resources Developers Cooperative (NELARDECO) and Inta Awallan Asinga Via Multipurpose Cooperative, Inc. (IAAVMPCI). Planting of fruit trees and tree species will start at the on-set of the rainy season this year. This ongoing initiative was augmented by the project supported by UNDP through PROCESS Luzon by providing seedlings to CBFM POs as shown in **Table 4.**

Table 4. Distribution of Agroforestry Farm Seedlings among the 3 CBFM POs in PE Baggao Project Site

Type of seedlings	Distribution Sites			
	IAAVMPCI in Sitio Hotspring	TDMPCI in Sitio Blue Waters	IAAVMPCI in Sitio Nalbo	Total
Coffee	1,500	0	1,500	3,000
Cacao	300	400	300	1000
Dao	400	400	0	800
Lanzones	40	40	60	140
Rambutan	25	25	20	70
Acacia	0	0	600	600
TOTAL	2,265	865	2,480	5,610

On other projects, CIP, PROCESS, and the Department of Tourism assisted the LGU of Baggao establishing the Hotspring and Caves as one of the community-based sustainable ecotourism sites to support the economic activities in the area. Local employment has been created as selected local residents were trained as guides to local and foreign tourists. The ecotourism management is now collecting entrance fees for the further development and maintenance of the eco-tourism area. CIP also provided support to the LGU in hosting the five-day National Caving Congress held from April 13-17, 2005, highlighting the two main ecotourism sites within the CBFM areas: the Blue Water Caves in Sta. Margarita; and in Hotspring and Caves in Asinga Via in Baggao.

Consistent with the POs' updated long term management plans of the forest and natural resources within their CBFM areas, the communities have started to recognize non-extractive livelihood exemplified by ecotourism-based projects as an alternative to the destructive logging or harvesting of trees from their natural forests. Agro-forestry is increasingly being adopted among upland farmers as means for soil and water conservation, and productivity in upland open areas.

Activity 2.4. Working with the local communities and other key stakeholders (LGU, Department of Environment and Natural Resources, and National Commission on Indigenous People) to set up a community-based monitoring and evaluation system for a sustainable natural resources management and biodiversity protection.

CI Philippines and PROCESS Luzon facilitated workshops with CBFMA POs, DENR, NCIP and LGU for the formulation of community-based Monitoring and Evaluation (M&E) system. This community-based M&E system was already incorporated in the CBFMs POs Community Resource Management Frameworks (CRMFs). To integrate the RH/FP and NRM monitoring indicators, a workshop on the preparation of PE Project Performance Monitoring Plan (PMP) was conducted from April 26-27, 2005, attended by more than 26 representatives from CBFM POs, midwives, LGU and DENR/CENRO staff.

B) Madagascar

i. Key Long-Term Program Objectives for Madagascar

The overall goal of the Madagascar PE project is to contribute to biodiversity conservation and to stabilize the population growth rate around and in important high biodiversity areas, with community involvement, in the Mantadia-Zahamena Biological Corridor in eastern Madagascar. To achieve this goal, two specific objectives are defined:

- Increase local capacity in child and maternal health and improve access to quality reproductive healthcare and family planning services in the Mantadia-Zahamena Biological Corridor; and,
- Enable corridor communities to manage their forest resources more effectively for both sustainable livelihood and biodiversity conservation.

CI continues to work with two local NGOs, ASOS and MATEZA, who have a tradition of working on health and environment projects at the grassroots level. ASOS is working in the southern part of the corridor, and MATEZA is working in the northern part of the corridor. This report presents results from activities in Madagascar conducted from January to June 2005 for the project, community based integration of Population, Health and Environment (PHE) for biodiversity conservation and sustainable natural resource management in the communes of Didy (Ambatondrazaka), Ambohibary, Lakato (Moramanga) and Maroseranana (Brickaville), Antanandava, Mamakambahiny Est (Ambatondrazaka), Miarinarivo, Ambodimangavalo (Vavatenina). In our target sites, the project achieved an overall increase in contraceptive and vaccination coverage rates despite significant logistical challenges. The communities have worked hard this period to construct latrines and waste pits, and their efforts have received great recognition from local officials in many villages.

In the intervention sites managed by ASOS in the southern part of the corridor, the communities and local partners helped CI develop an identity or new name for the project, in order to better convey our project goals and objectives to the general public. The new name in Malagasy is "FITIAVANA: Fahasalamana lombonana, Tontolo lainana Voakajy, Antoky ny Ampitso", which translates in to English as, "Health for all, environmental conservation and protection, guaranteeing our future." This has helped to highlight our work in the field and better underscore our messages at the community level.

ii. Discussion of Key Results for Madagascar

Objective 1: Increase local capacity in and improve access to reproductive healthcare and family planning in the Mantadia-Zahamena corridor

Activity 1.1 Continue and expand information, education and communication (IEC) campaign to improve understanding of RH/FP and its importance to healthy families and healthy environment

From January to June 2005, ASOS and its team completed 235 health visits across four communes: 37 visits for the commune of Maroseranana; 67 for the commune of Lakato; 76 for the commune of Ambohibary; and 55 for the commune of Didy. The ASOS team consisted of two animateurs or outreach workers for each commune who were skilled in conveying integrated health and environmental messages. On average, each visit lasted on average from two to three days.

During these visits, the team completed the following tasks:

- Performed IEC sessions centered on health promotion for women and children (including vaccinations, family planning, health care at home in the case of malaria, diarrhea and other diseases), environmental conservation (reforestation, management of forest fires), and basic hygiene (using latrines and waste pits).
- Ensured follow up with the community based extension agents in family planning, malaria treatment with chloroquine, and malaria prevention through treatment of mosquito nets with insecticides in the intervention sites.
- Ensured training and performance of folklorique groups, which are partners in the community based education component highlighting different PHE themes.
- Supported local associations or groups in their efforts to be legally and officially recognized as community based organizations.
- Analyzed the health, conservation and hygiene problems with the community.
- Distributed seeds for the group members involved in the agricultural component of the project.

As a result of these visits the team raised awareness among local authorities and traditional leaders, more than 3,900 people attended a total of 189 outreach and awareness raising sessions during this period. Refer to **Table 5** for details. There were two types of community-based agents: community supported agents called ASBC; and volunteers called VAM, or Voamieran'ny Ala Mpanentana. They completed IEC and awareness raising sessions using diverse techniques such as using new and creative visual aides to illustrate messages, targeted face-to-face communication during home visits, village theater sessions, theater sessions with marionnettes, and traditional songs and folklorique dances. The target groups for these IEC sessions were: mothers with children 5 years old and under; community organizations; women of reproductive age; commune officials and leaders and other local authorities, such as administrative and traditional leaders.

Three different themes were discussed during these educational sessions were:

- Improving health outcomes: Support the health improvement and outreach strategies including vaccinations and FP (injectibles); nutrition education with mothers and pregnant women; and reinforcing marketing of community based agents.
- Improving hygiene: promoting construction and use of latrines, waste pits, and composts; and protecting potable water.
- Promoting environmental protection: Encouraging reforestation; addressing population pressure on natural resources, such as slash-and-burn or tavy prevention; training groups in family gardening and other alternative agricultural production activities.

Table 5. Number of ASOS IEC Visits and Participants, January to June 2005

Commune	Site	Number of info sessions	Number of attendees
Ambohibary	Tanambao Sahambilo	06	135
	Marovitsika	06	116
	Besariaka	09	175
	Farizana	10	187
	Ampahitra	11	262
	Andoharanovelona	08	145
	Mangabe	10	178
Subtotal		60	1198
Lakato	Ambodivarongy	04	66
	Ambatomasina	05	107
	Tsaratampona	04	63
	Ampasinambo	05	133
	Ampasimbola	07	135
	Ambodigavo	08	156
	Manasamena	06	112
Subtotal		80	772
Didy	Ambohijanahary	07	159
	Ambodifany	06	140
	Anjohibe	07	153
	Ambohibe	08	162
	Antsevabe	06	114
	Ambodivato	08	157
	Bedabo	06	105
Subtotal		53	990
Maroseranana	Ambodivoangibe	07	185
	A Manandriana	06	163
	Fanjahirana	08	166
	Bezono	05	86
	Tanambao	04	156
	Bekitrana	05	109
	Bemandotra	07	156
Subtotal		64	1022
TOTAL		189	3982

In the southern part of the corridor, CI and ASOS have been working to strengthen implementation of community based health services. In total, 28 community based health centers or SBC (Service à Base Communautaire) are now in place, with 7 in each commune. The products distributed at these health centers include contraceptives (oral contraceptives and condoms), Chloroquine, and Paracétamol. The placement of these centers is critical to ensuring access for the community to needed medicines, particularly the mothers of families in need of primary health care for their infants in the case of malaria and fevers. Making the medicines

accessible and available in their villages is an important step toward improving health outcomes. This is also true for RH/FP supplies, since two common challenges to women continuing family planning are the distance to the health centers along with a lack of knowledge.

Table 6 shows a constant level of family planning users in the ASOS intervention sites during this reporting period.

Table 6. Family Planning Utilization Rates among Women of Reproductive Age in ASOS Intervention Sites, January to June 2005

Commune	Site	No women age 15-49	JUNE 2004		DECEMBER 2004		JUNE 2005	
			No UR	TCC (%)	No UR	TCC (%)	No UR	TCC (%)
Ambohibary	Tanambao Sahambilo	40	-	-	05	12.5	05	12.5
	Marovitsika	23	06	26.08	08	34.78	08	34.78
	Besariaka	106	14	13.20	21	19.81	25	23.58
	Farizana	104	07	6.73	12	11.53	15	14.42
	Ampahitra	95	-	-	14	14.73	13	13.68
	Andoharanovelona	85	-	-	09	10.58	10	11.76
	Mangabe	73	19	26.02	27	36.98	27	36.98
Subtotal		526	46	13.33 %	96	18.25 %	103	19.58
Lakato	Ambodivarongy	134	08	06.10	17	12.68	32	23.88
	Ambatomasina	203	12	05.91	18	08.86	36	17.73
	Tsaratampona	42	02	04.82	08	19.04	18	42.85
	Ampasinambo	45	-	-	-	-	09	20.00
	Ampasimbola	51	06	11.76	11	21.56	30	58.82
	Ambodigavo	157	04	02.56	09	05.73	25	15.92
	Manasamena	44	07	15.90	13	29.54	28	54.90
Subtotal		676	39	06.22 %	76	11.24 %	178	26.33
Didy	Ambohijanahary	715	21	29.11	21	29.11	25	3.49
	Ambodifany	41	-	-	-	-	-	-
	Anjohibe	113	11	09.27	30	26.54	32	28.31
	Ambohibe	339	40	11.59	56	16.51	58	17.10
	Antsevabe	492	36	07.27	66	13.41	78	15.85
	Ambodivato	133	09	06.74	18	13.53	19	14.28
	Bedabo	24	-	-	-	-	03	12.50
Subtotal		1877	256	14.08 %	191	10.17 %	215	11.45
Maroseranana	Ambodivoangibe	92	07	04.82	08	08.69	12	13.04
	A Manandriana	80	06	04.13	07	08.75	13	16.25
	Fanjahirana	66	03	04.54	08	12.12	08	12.12
	Bezono	43	03	02.29	07	16.27	10	23.25
	Tanambao	36	0	0	-	-	06	16.66
	Bekitrana	78	02		05	06.41	09	11.53
	Bemandotra	20	0	0	-	-	03	15.00
Subtotal		415	21	05 %	35	08.43 %	51	12.28

In all intervention sites, CI and partners support the health centers to increase vaccination coverage in infants from ages 0 to 5 years old in the five antigens, (in close collaboration with the community based health agents linked with each commune in the intervention areas). The community based agents (ASBC, VAM) also support and work with the ASOS animateurs to carry out the awareness raising campaigns highlighting the importance of children receiving all 5 antigens.

Table 7 below shows an overall increase in the vaccination coverage in the ASOS intervention zones from January to June 2005. A significant challenge to increasing vaccination rates was the disruption of the cold chain (required refrigeration) for vaccinations in our intervention zones during this reporting period. Without adequate refrigeration at all time, vaccinations can spoil and are not usable. In Maroseranana, vaccination activities were delayed because of a problem with the cold chain due to lack of gas to deliver the vaccination services on time and the problem was not resolved until recently.

Table 7. Vaccination Rates in ASOS Intervention Sites for Children 0 to 5 Years Old, January to June 2005

Commune	Site	No. Total Population	No. Infants 0-5 Years	No. vaccination Dec 04	No. vaccination June 05	Percent Covered
Ambohibary	Tanambao Sahambilo	189	37	32	36	97.29
	Marovitsika	105	21	21	21	100
	Besariaka	500	98	53	94	95.91
	Farizana	513	91	42	85	93.40
	Ampahitra	329	159	27	60	37.73
	Andoharanovelona	230	69	18	55	79.71
	Mangabe	334	62	37	59	95.16
Subtotal		2200	537	230	410	76.35
Lakato	Ambodivarongy	612	119	56	56	47.05
	Ambatomasina	978	189	57	57	30.15
	Tsaratampona	210	41	25	25	60.27
	Ampasinambo	660	60	15	15	25.00
	Ampasimbola	299	54	31	50	92.59
	Ambodigavo	650	129	62	82	63.56
	Manasamena	210	65	43	62	95.38
Subtotal		3619	657	289	347	52.81
Didy	Ambohijanahary	2463	561	232	303	54.01
	Ambodifany	169	15	-	11	73.33
	Anjohibe	1268	168	101	113	67.26
	Ambohibe	1642	247	38	59	23.88
	Antsevabe	1924	467	76	90	19.27
	Ambodivato	1009	106	53	60	56.60
	Bedabo	126	13	-	06	46.15
Subtotal		7801	1577	500	642	40.71
Maroseranana	Ambodivoangibe	438	82	-n/a	--n/a	--n/a
	A Manandriana	298	67	-n/a	--n/a	--n/a
	Fanjahirana	295	58	-n/a	--n/a	--n/a
	Bezono	302	37	-n/a	--n/a	--n/a
	Tanambao	216	42	-n/a	--n/a	--n/a
	Bekitrana	425	79	-n/a	--n/a	--n/a
	Bemandotra	123	27	-n/a	--n/a	--n/a
Subtotal		2097	392	-n/a	--n/a	--n/a
TOTAL		15717	3163	1019	1399	44.23

In the northern part of the corridor, MATEZA continues to manage and deliver IEC campaigns in order to increase family planning and reproductive health knowledge and use of services. The objective of this activity is to inform the opinion leaders and different actors at the community level about reproductive health and family planning in order to improve coverage. The communication strategies used during this reporting period were:

- Meetings with local political authorities and traditional leaders with the project technicians about challenges in maintaining vaccination coverage rates. These meetings also ensured support for the community structures and education of the population.
- Involvement of the women's nutrition groups, EFEN, in the awareness raising activities about health and environment in the process of weighing infants or working in community or family gardens in the villages. Each of the groups developed a well defined plan of action.
- Performances by the marionette groups to reinforce the population's awareness of PHE at local celebration and festivals.

During this reporting period, MATEZA continued to introduce the "champion community" approach in four villages: Ambodivoangy; Antenimay; Andranomalaza Nord; and Antanandava. Each village has a committee called the Community Health Action Committee which is responsible for monitoring the community's chosen objectives. The evaluation of progress towards these objectives is done at the end of the month of July and results are celebrated with a festival towards the second half of August.

Activity 1.2 Continue the training course for community health promoters in basic RH/FP with linkages to environmental health. Conduct the course in all communities and priority sites

CI and ASOS continued to respond to community PHE priorities through improvements in hygiene. This activity links the outreach and education messages being delivered at the community level with improvements in environmental health, such as improved sanitation and waste disposal. In total the number of new latrines built by the project during this reporting period is 236; 100 in the commune of Maroseranana, 69 in the commune of Lakato, 48 in the commune of Didy, and 31 in the commune of Ambohibary. For the construction of waste pits and compost, the commune of Maroseranana led the way with 127 constructions. In total there were 307 constructed in 28 sites. **Table 8** shows the progress to date.

Table 8. Construction of Latrines, Waste Pits and Composts in ASOS Sites, January to June 2005

Commune	Site	December 2004		June 2005	
		Construction of latrines	Construction of waste pits + compost	Construction of latrines (new)	Construction of waste pits + compost (new)
Ambohibary	Tanambao Sahambilo	03	08	06	06
	Marovitsika	07	08	05	05
	Besariaka	13	05	03	06
	Farizana	04	14	07	06
	Ampahitra	02	01	05	06
	Andoharanovelona	01	02	04	05
	Mangabe	11	13	04	04
Subtotal		41	51	31	36
Lakato	Ambodivarongy	33	15	08	04
	Ambatomasina	25	34	10	06
	Tsaratampona	08	06	04	06
	Ampasinambo	02	02	14	06
	Ampasimbola	25	24	12	08
	Ambodigavo	31	28	14	09
	Manasamena	28	30	07	10
Subtotal		152	139	69	49
Didy	Ambohijanahary	19	09	09	15
	Ambodifany	03	03	05	05
	Anjohibe	45	06	07	21
	Ambohibe	22	17	08	14
	Antsevabe	26	25	06	21
	Ambodivato	13	13	07	12
	Bedabo	02	03	06	06
Subtotal		131	76	48	94
Maroseranana	Ambodivoangibe	05	12	14	25
	A Manandriana	17	18	24	34
	Fanjahirana	04	10	11	15
	Bezono	16	08	24	20
	Tanambao	02	02	07	07
	Bekitrana	07	09	14	20
	Bemandotra	02	03	06	06
Subtotal		52	62	100	127
TOTAL		376	328	236	307

In addition, ASOS continued to work with communities to foster and support existing community based organizations. In all, 66 organizations were formed this period; and there are 908 members in these groups. **Table 9** shows the growth of the organizations in each village for the reporting period.

Table 9. Formation of Community Association and Membership in ASOS Intervention Sites, January to June 2005.

COMMUNE	VILLAGES	Put in place in December 2004		Put in place from Jan – June 2005	
		No. Groups	No. members	No. Groups	No. members
AMBOHIBARY	Tanambao Sahambilo	07	72	01	12
	Marovitsika	02	40	02	40
	Besariaka	04	40	04	40
	Farizana	04	60	04	60
	Ampahitra	02	21	02	21
	Andoharanovelona	02	18	02	18
	Mangabe	04	36	04	36
Subtotal		23	287	17	227
LAKATO	Ambodivarongy	01	10	02	20
	Ambatomasina	01	08	02	22
	Tsaratampona	01	12	02	24
	Ampasinambo	01	11	03	37
	Ampasimbola	02	22	03	34
	Ambodigavo	02	36	03	47
	Manasamena	01	22	02	34
Subtotal		09	121	17	218
DIDY	Ambohijanahary	02	14	04	31
	Ambodifany	01	09	01	09
	Anjohibe	02	16	03	24
	Ambohibe	01	07	03	22
	Antsevabe	02	14	04	30
	Ambodivato	01	09	01	09
	Bedabo	02	17	02	17
Subtotal		11	86	18	142
MAROSERANANA	Ambodivoangibe	02	57	02	57
	A Manandriana	02	57	02	57
	Fanjahirana	02	44	02	44
	Bezono	02	45	02	45
	Tanambao	02	34	02	34
	Bekitrana	02	57	02	57
	Bemandotra	02	27	02	27
Subtotal		14	321	14	321
TOTAL		59	792	66	908

During this reporting period, MATEZA worked to reinforce the capacity of community agents or promoters of health and environment. The integrated approach of health and environment touches on the basis of human wellbeing, of biodiversity, and of their environment. These agents or promoters are identified at the community level (EFEN, ASBC, marionnettistes) and at the NGO level. On-the-job trainings for the ASBC were conducted for the identified agents. Following the evaluation of the animateurs, the trainings were structured with ten local animateurs (responsible for the village level) and four zone animateurs (responsible for the commune level). The team approach was also completed with two health assistants, an accountant/secretary and an environmental person.

Objective 2: Enable Corridor communities to better manage their forest resources for both sustainable livelihood and biodiversity conservation, in order to reduce forest cover loss and biodiversity.

Activity 2.1 Work with communities to implement natural resource management (NRM) plans for subset of communities in the target areas and improve soil and NRM; conduct related trainings.

As part of ASOS's work, community based agents continued to provide support for the implementation of the community based action plans. An annual, three-stage plan of action for the community was elaborated in each village, throughout all of ASOS intervention sites. This plan includes activities to manage health and population interventions as well as conservation and environmental protection. The "triple A approach " (Appreciation, Analysis, Action) was adopted to foster increased community participation. After the community better understood their PHE problems, the community of each village with an existing team of ASOS animateurs proceeded to analyze the causes of the problems and began to identify plans and activities to address the problems. This strategy was adopted in order to increase responsibility among the local population in implementation of activities.

At the same time, ASOS introduced a new method and approach: Ecole Flambeau (or Flaming Schools or Sekoly Fanilo). This approach targeted children because they play an important role in the transmission of messages and in the implementation of activities within the community. For this reason the participation of schools in different activities was included in our work. The knowledge and understanding acquired by students creates an impact at a certain level within the family, in the community and in the neighboring areas. Refer to **Table 10** for information on the school activities.

Table 10. Creation of Primary School Materials for the Child Community Approach, January to June 2005

Commune	Primary School	Brouette	Arrosoir	Angady
Ambohibary	Besariaka	-	02	02
	Ampahitra	-	02	02
	Mangabe	-	02	02
Subtotal		00	06	06
Lakato	Ambatomasina	-	02	02
	Ampasimbola	-	02	02
	Ambodigavo	-	02	02
Subtotal		00	06	06
Didy		-	02	02
		-	02	02
		-	02	02
Subtotal		00	06	06
Maroseranana	A Manandriana	-	02	02
	Bezono	-	02	02
	Bekitrana	-	02	02
Subtotal			06	06
TOTAL		00	24	24

At the same time, MATEZA worked with the community to implement Natural Resource Management Plans in order to improve resource management and conserve biodiversity. The community is the primary beneficiary as well as an actor in the program of action to ensure sustainability of activities. The identification of problems and elaboration of action plans were implemented, stemming from a Participatory Rural Appraisal activity (MARP in French) beforehand. Updating of these plans was accomplished at different levels. The 11 action plans

were revised and put in place at the commune scale including the villages of Ambodivoangy, Manakambahiny I and Ambodimangavalo. These plans were presented and validated by the authorities of the commune of Ambodimangavalo (neighborhood chief, mayor). For the remaining eight remaining villages, the validation at the commune level, will be accomplished in the month of July 2005.

Concerning reforestation, we worked with the communities to identify appropriate species of fruit trees (such as orange, tangerine, pomme-cannelle corossol papaye, bibas, and Jacques.). The nursery sites were prepared by the women's EFEN organizations in Ambodivoangy, and 80 viable plants and 380 grains of mixed species were sowed. Refer to **Table 11** for more information. In Antanandava, the villagers planted 126 plants in demonstration or pilot sites. The data for the other sites are not yet available. Concerning the soil conservation techniques, a site-based training was completed for the women's EFEN groups and for the pilot sites in the themes of construction of compost and use of cow manure in fertilization.

Table 11. Reforestation in ASOS Intervention Sites, January to June 2005

Commune	Site	Orange	Mandari ne	Cœur of bœuf	Litchis	Cerise
Ambohibary	Tanambao Sahambilo	10	07	13	17	09
	Marovitsika	07	10	13	17	09
	Besariaka	10	07	13	17	09
	Farizana	10	10	06	22	06
	Ampahitra	10	09	08	18	06
	PK 18 - Ampahitra	02	06	-	07	02
	Andoharanovelona	11	11	06	22	08
	Mangabe	10	10	10	20	12
Subtotal		70	70	69	140	61
Lakato	Ambodivarongy	10	10	10	20	08
	Ambatomasina	10	10	10	20	08
	Tsaratompona	10	10	10	20	08
	Ampasinambo	10	10	10	20	08
	Ampasimbola	10	10	10	20	10
	Ambodigavo	10	10	10	20	10
	Manasamena	10	10	10	20	08
Subtotal		70	70	70	140	60
Maroseranana	Ambodivoangibe	27	27	-	-	-
	A Manandriana	27	27	-	-	-
	Fanjahirana	28	27	-	-	-
	Bezono	27	28	-	-	-
	Tanambao	27	27	-	-	-
	Bekitrana	27	27	-	-	-
	Bemandotra	27	27	-	-	-
Subtotal		190	190	00	00	00
TOTAL		330	330	139	280	121

Activity 2.2 Implement alternatives livelihood and nutrition training (capacity building) to recruited Women's Nutritional Teams (EFEN)

During this period, ASOS and MATEZA both trained organizations and individuals in agricultural production and alternative agricultural practices. These trainings centered on:

- Building awareness and skills for management of organizations in improved market gardening agricultural practices;
- Introducing cropping practices to increase yields, such as intercropping;

- For the school sites, implementation of types of gardens which serve as demonstration and learning sites for the neighboring farmers.

In total 87 parcels of school gardens and 724 other parcels of land were listed in the intervention site inventory. More than 356 packets of vegetable seeds with 10 varieties were distributed to all the demonstration sites. The following table shows the situation in each village concerning the agricultural component.

Table 12. Distribution of Seeds by Type in ASOS Intervention Sites, January to June 2005

Commune	Site	No PE	No PA /JF	Bre ofs	Cho ux	Hari cot s vert	Tiss -am	Car o-tte	Ana m-alao	To ma-te	Ang i-vy	Bre ofs cha uofs	Auber gine
Ambohibary	Tanambao Sahambilo	02	15	03	03	01	01	03	01	01	01	01	01
	Marovitsika	03	10	02	02	01	01	01	01	01	01	01	01
	Besariaka	02	17	03	03	01	01	02	01	01	02	01	01
	Farizana	02	20	03	03	02	01	02	01	01	01	01	01
	Ampahitra	03	30	04	04	03	01	02	02	01	01	01	01
	Andoharanovelona	01	16	03	03	02	01	02	01	01	01	01	01
	Mangabe	02	19	04	04	03	01	02	01	01	03	02	02
Subtotal		13	127	22	22	13	07	13	07	07	10	08	08
Lakato	Ambodivarongy	08	91	03	-	-	-	02	01	01	01	01	-
	Ambatomasina	12	104	05	01	01	-	02	01	02	02	01	02
	Tsaratanpona	04	19	02	-	-	01	01	01	-	01	01	-
	Ampasinambo	06	24	03	01	-	-	01	01	-	02	01	02
	Ampasimbola	06	73	04	02	01	-	01	02	01	-	01	03
	Ambodigavo	12	101	06	02	01	01	03	02	01	03	01	04
	Manasamena	07	72	03	-	-	01	02	02	-	02	01	03
	Subtotal		55	430	24	06	03	03	12	10	05	11	07
Didy	Ambohijanahary	03	30	03	03	02	02	02	-	-	-	-	06
	Ambodifany	01	09	03	03	02	02	02	-	-	-	-	06
	Anjohibe	02	24	03	03	02	02	02	-	-	-	-	06
	Ambohibe	02	17	03	03	02	02	02	-	-	-	-	06
	Antsevabe	02	27	03	03	02	02	02	-	-	-	-	06
	Ambodivato	01	11	03	03	02	02	02	-	-	-	-	06
	Bedabo	01	06	03	03	02	02	02	-	-	-	-	06
	Subtotal		12	124	21	21	14	14	14	00	00	00	00
Maroseranana	Ambodivoangibe	01	10	02	-	-	-	02	01	-	-	-	01
	A Manandriana	01	14	01	01	-	01	01	01	-	-	-	01
	Fanjahirana	01	08	01	-	-	-	02	01	01	-	-	01
	Bezono	01	05	01	01	-	01	01	01	01	-	-	01
	Tanambao	01	-	01	01	-	01	01	01	01	-	-	-
	Bekitrana	01	-	01	02	-	01	01	-	-	-	-	01
	Bemandotra	01	06	01	-	-	-	01	02	01	-	-	01
Subtotal		07	43	08	05	-	04	09	07	04	-	-	06
TOTAL		87	724	75	54	30	03	48	24	16	21	15	70

Note: PE is School plot or parcelle école

Activity 2.3 Promote and implement new alternative agricultural practices

In MATEZA intervention sites, community based agents helped to implement agricultural production alternatives and reinforce the capacity for sustainability of activities. In general, the alternative agricultural activities follow a well-defined workplan and calendar, and farmers are learning and implementing the techniques acquired. The opinion poll of yield, completed in the month of May or harvest period, (période of récolte) produced 4 tons/ha. The marketing gardening production is in the stage of the second cycle, with other varieties. The training continues in beekeeping and fish farming which have been adopted by the community.

Activity 2.4 Monitoring and Evaluation

The monitoring and evaluation activities were conducted regularly in the intervention sites. The final evaluation of the project will be effected at the month of September 2005 with the help of Voahary Salama. The methodology will be implemented according to the following plan:

- First phase: review of project documents and progress reports, in order to frame the final evaluation.
- Second phase: Conduct field visits to see first hand the results in the documents and results achieved by each NGO in Fenerive-Est (Mateza) et Brickaville (ASOS).
- Third phase: Conduct field visits to verify the results in person
- Fourth phase: Collection of analysis of results from different preceding steps.
- Fifth phase: Write up and dissemination of results.

C. Cambodia

i) Key Long-Term Objectives for Cambodia

The goal of the project is to reduce population pressures on biodiversity in the Cardamoms Conservation Landscape (CCL). To achieve the project goal, CI, CARE Cambodia, and Save Cambodia's Wildlife (SCW) are collaborating on implementing a reproductive health and family planning (RH/FP) component that is integrated with existing regional conservation and development strategies in the CCL. Reducing population pressures on the CCL will reduce the number of people that must rely on illegal use of the natural resources that exist within protected areas.

ii) Discussion of Key Results for Cambodia

Objective 1: Enable target communities to adopt safe RH/FP practices, to improve access to quality RH/FP services and thereby mitigate population pressure on KBAs.

Activity 1.1 Meet the demand for RH/FP services through improved supply and emergency referral service

The key components of this activity include: (i) Health Post constructed, staffed and providing health services; (ii) Community health volunteers hired in each commune; (iii) Comprehensive data collection system in place at health post; (iv) Health volunteers trained and supervised; (v) Emergency referral system in place.

The Thma Bang health post (in Roussey Chrum commune) officially opened in October 2004 and has operated since then with significant visitation rates. On average, there have been 273 visits per month to the Health Post. The health post consists of two rooms: a consultation room (3x4 meters) and a Maternal and Child Health (MCH) room (3x4 meters); a latrine (2x3 meters) and one wooden building for mother waiting house (4x5 meters). The building is now fully furnished

and equipped with medical and non-medical supply and equipment. Health staff has installed a radio communication system at the health post in order to respond to medical emergencies.

The ten health volunteers who were recruited and trained from July to December 2004, participated in further training and workshops to strengthen their skills and knowledge. In collaboration with the Government Operational District, four of the volunteers were selected as "floating staff" for the health post, now enabling full time staffing and compensation in the form of per diems. The other six volunteers assist with community mobilization and outreach services in their more remote communes.

The health post staff and commune volunteers completed a series of basic training courses during this reporting period. The courses covered the following topics: immunizations, antenatal and postnatal care, birth spacing, RH/FP and sexually transmitted infection (STI) prevention, drug management and utilization, control of (childhood) diarrheal disease (CDD), tuberculosis, acute respiratory infection (ARI), first aid, wound dressing, breastfeeding and normal delivery. The knowledge and skills are being utilized on a daily basis, as the volunteers provide ongoing services at the health post, respond to emergencies, and conduct routine vaccinations.

To respond to the demand at the health post and to further build staff capacity in providing services, additional training courses were provided to the four floating staff during this reporting period. The following topics were covered: community Detection of Tuberculosis (DOTS), including sputum specimen collection and smear preparation, STI and HIV/AIDS, and MPA module VIII (health center management).

Since these activities began, the local population has substantially utilized the health post's services. Awareness of availability of services at health post increased drastically and a total of 2,461 client visits were served during the period from October 2004 to June 2005 (average of 1.6 visits per person per year. People from Reussey Chrum commune use the services primarily, since more remote villages are unable to reach the health post. The outreach services are thus mainly for people from the four most remote communes; up to two days walk away in the wet season.

During the period January to June 2005, CARE built on previous success in reaching a high proportion of households for vaccinations of mothers and children, as well as extending knowledge to increase people's awareness of RH/FP services. **Table 13** describes the health service delivery accomplishments between October 2004 and June 2005.

In addition to the services provided by CARE, there has been ongoing cooperation with the Provincial Health Department and other NGOs, especially Partners for Development (PfD). PfD is supporting community-based distribution centers (CBDs) in Thma Bang District, which complement the RH/FP services delivered by CARE through the Health Post and outreach. The PE project is coordinating with PfD to create a strong link between the CBDs and the Health Post. The coordination activities include sharing reports and collaborating on education and training.

Table 13: PE RH/FP Project Targets and Results, October to June 2005

Indicators	Estimated Target* (100%)	Results** (Oct, 04-June, 05)	Coverage (%)
Percent and number of children under 1 year who received full vaccination	54	33	61%
Percent and number of children under 5 years who received VAC	263	256	97%
Percent and number of pregnant women who received at least two ANC	58	54	93%
Percent and number of postpartum women less than 8 weeks received Vitamin A	58	48	83%
Percent and number of postpartum women less than 8 weeks received 42 tablets of iron	58	40	69%
Percent and number of currently married women who are using modern contraceptive method	281	111	40%
Number of deliveries at Health Post	-	6	-
Number of deliveries at home (with TBAs)	-	34	-
Number of complicated deliveries referred to RH	-	7	-
Percent and number of reported deliveries	58	47	81%

* The estimated target is based on the national target population estimates, as issued by the Ministry of Health in 2004. Since the population is small, the actual size of the target groups may vary considerably from these estimates.

** Data collected from Health Information System (HIS) for Thmar Bang District, managed collaboratively by CARE and Government.

Activity 1.2 Augment and improve existing health services to increase access to RH/FP

This activity includes: (i) establishment of an outreach system to remote communities; (ii) RH/FP extension as well as child and maternal vaccinations have been provided to all remote villages; (iii) Village health volunteers and Traditional Birth Attendants (TBAs) trained to provide RH/FP services.

CARE realized that the assignment of a trained midwife to provide "standard delivery services" for people in the remote areas of Thma Bang District was a challenge. Hence, in order to improve access to clean delivery, 14 TBAs have been selected from all target communes in the district (3 TBAs per commune) and trained in safe delivery. The training included: recognition of danger signs, care for post partum women, breastfeeding, birth spacing and immunizations.

The 14 trained TBAs have attended quarterly meetings at the health post to report problems, receive feedback and plan for their next interventions at the commune level. There have been 7 emergency referrals since the TBAs were trained (which corresponds to the expected rate of birth complications, 8 percent). A total of 34 home deliveries were attended during the period from October 2004 to June 2005. This means that over 70 percent of all deliveries in Thma Bang District were attended by a TBA, supported through the PE project. This is significant coverage, given the remoteness of the area and the fact that health services have been operational for less than one year.

Throughout this reporting period, monthly outreach services have been delivered in all five communes by the health post staff, assisted by the CARE Koh Kong team. These outreach services were regularly supervised and assisted by the Operational District (Government health unit) integrated supervision team, every month for five days per month. During the supervision visits, health post staff were provided with capacity building and technical assistance. For data on distribution of RH/FP commodities, as well as other outreach services, please see **Table 14**, which contains monitoring data presented in the format developed by the MEASURE EVALUATION team in January 2005.

Finally, CARE recruited an additional 15 volunteers from 12 villages in the target area to form Village Health Support Groups (VHSGs). The VHSGs will be consolidated over the final months of this project, particularly through basic training. The training will cover: introduction to MPA, immunization, antenatal and postnatal care, birth spacing, tuberculosis, breastfeeding, STI/HIV/AIDS and health education, to be implemented over the final phase of the PE project to September 2005.

The VHSGs will help to overcome the problems of remoteness and barriers to communication in the target area. Although the health post has excellent radio communications with the Provincial Hospital in Koh Kong, there are still sometimes difficulties reaching remote communes, especially caused by lack of electricity and weather interference. Most of the time, the radio network can now be used to deal with most health emergencies, especially complicated pregnancies. Project staff are also improving coordination with the Forestry Administration (Cardamom Conservation Program) to ensure access to CI infrastructure and transport in the area, as an integral part of the emergency referral system for cases when patients have to be transported.

Table 14

**CONSERVATION INTERNATIONAL POPULATION-ENVIRONMENT PROJECT
DATA RECORD SHEET 2004-2005**

REPORTING PARTNER: CARE-Cambodia

Report submission deadline	Period covered in report
July 31, 2004	Feb 15 to June 30, 2004
January 31, 2005	July 1-December 31, 2004
July 31, 2005	January 1-March 30 .2005
January 31, 2006	July 1-December 31, 2005

DATE OF THIS REPORT:	July,28,2005
PERIOD COVERED IN REPORT:	October 1, 2004 to June 30, 2005

NOTE DATA SOURCE HERE:	Facility Record (HC1)
NAME OF PERSON FILLING OUT REPORT:	Prum Than

DEFINITION OF DATA TO BE RECORDED					
Definition of data:	The contraceptive commodities are the number of pills cycles, condoms, and depo shots given/distributed to target community in and outside of Thma Bang health post during the reporting period.	"Fully vaccinated" means that a child has been immunized against measles, the final vaccine a child receives in a series of full vaccination. This is the number of children receiving measles vaccines during the reporting period.	This is the number of pregnant women who received 2 or more Tetanus vaccinations before delivery.	This includes other four communes in Thmar Bang district, except Roussey Chrum, where the health post is located. These visits/sessions are to provide vaccinations for children and women, ante and post natal care for women and birth spacing services, the reporting period. The sessions were regularly implemented as planned and none missed.	"Trained" means recognizing danger signs requiring and being able to activate emergency referral system. This is the number of traditional birth attendants trained during the reporting period.
TOTAL: (for all communes)	Contraceptive commodities distributed: - Pills : 218 - Injection: 109 - Condom: 552 Current Users 113 - Pills : 38 - Injection: 60 - Condom: 13 CYP 46	33 children under one fully immunized at health post and outreach.	12 of pregnant women who received 2 or more Tetanus vaccinations before delivery	80 health outreach visits/sessions regularly implemented.	14 TBAs trained on clean delivery, recognition of danger signs and referral, care for post partum.

Tatai Leu commune (90 families)	New Clients: - Pill :16 - Inj :13 - Con :6 Returned Clients: - Pill :24 - Inj :11 - Con :4	-Fully Immunized 5	-TT2 + = 5	Monthly outreach implemented in Kandal and Tropeang Khnar villages. Two sessions regularly conducted per month since November 2004.	1TBA trained, Sok Chhoung, from Kandal Village
Chumnoab commune (45 families)	New Clients: - Pill :0 - Inj :7 - Con :0 Returned Clients: - Pill :1 - Inj :5 - Con :0	-Fully Immunized 1	-TT2 + = 4	Monthly outreach implemented in Chrok Reusey and Chum Neab villages. Two sessions regularly conducted each month since November 2004.	1TBA trained, Yong Sok from Chum Neap village
Roussey Chrum commune (130 families)	New Clients: - Pill :17 - Inj :31 - Con :4 Returned Clients: - Pill :29 - Inj :25 - Con :2	-Fully Immunized 15	-TT2 + = 11	No outreach implemented in Roussey Chrum commune where the health post is situated. However, at the health post, two in-reach vaccination sessions regularly implemented per month, one for Cheu Traw and one for Koki Chrum. Children are mobilized for the vaccination.	5TBAs trained: - Sor Sino from Kokichrum - Phann Peou from Kokichrum - Chong Hut, from Kokichrum - Mao Sarie from Kokichrum - Kok Sav, from Cheu Trav
Prolay commune (75 families)	New Clients: - Pill :3 - Inj :5 - Con :2 Returned Clients: - Pill :4 - Inj :2 - Con :4	-Fully Immunized 9	-TT2 = 9	Monthly outreach implemented in Chamna, Samrong, Prolay and Tangel villages. Four sessions regularly conducted per month since November 2004.	4 TBAs trained: - Em Honn from Chamna - Pao Hoeun from Samrong - Chhorn Top from Prolay - Doung Chret from Prolay
Thmar Don Peuv commune (75 families)	New Clients: - Pill :2 - Inj :5 - Con :1 Returned Clients: - Pill :2 - Inj :5 - Con :1	-Fully Immunized 5	TT2 = 4	Monthly outreach implemented in Prek Svay and Koh villages. Two sessions regularly conducted each month since November 2004.	3TBAs trained: - Sorma from - Kong Pheu from Praek Svay - Vang Chea from Koh.

Activity 1.3 Identify and initiate livelihood strategies that will increase demand for RH/FP services, especially through women's participation and networking.

In the latter half of FY05 this activity has included: (i) formation and consolidation of Women's Associations, (ii) identification and creation of new livelihoods opportunities for women, (iii) implementation of new livelihood opportunities.

At the outset of FY05, the CI team worked closely with local NGO Save Cambodia's Wildlife (SCW) to develop a twelve-month work plan for their IEC and livelihood development activities under the PE project. In this activity, the SCW team has worked closely with the local Chief of Women's Affairs, who has attended many meetings, providing key inputs and support. The creation of livelihood opportunities has also enabled greater collaboration with local authorities – a key component in achieving lasting conservation outcomes.

The Women's Associations (WAs) have become a key component to supporting livelihoods for local communities, addressing poverty and enhancing conservation efforts. Having completed the livelihoods assessment in the first half of FY05, the SCW team has now started piloting several new livelihood activities, implemented through the women's associations. These have included chili and ginger cash crops (where appropriate), as well as pig banks. These activities are based around the home, where women spend most of their time.

The Women's Associations are now fully operational in Tatai Leu and Chumnoab Communes. In April 2005, the WA regulations were submitted to the District Department of Women Affairs in Thma Bang for recommendations and approval. The SCW team then assisted in preparing and producing a book of regulations for distribution to WA members, village chiefs, commune chiefs, and other stakeholders. A program of meetings then followed to raise awareness and explain about the role and purpose of the Women's Associations, including their rules and regulations.

The following achievements have been made in livelihoods, through the women's associations:

- The SCW project team has assisted the Chumnoab Commune Women Association (WA) to set up a pig bank, of 26 piglets. Prior to the creation of the pig bank, SCW conducted a training workshop in pig raising/animal health, attended by 28 women. Medical treatment for piglets over the first 3 months was also organized. The Women's Association is now responsible for management of the pig bank. They have developed rules and regulations, elected a chief and deputy, and will manage all finances. This process should, over time, increase women's confidence and capacity to organize themselves, access information and engage in new livelihood activities.
- Volunteers selected by the WAs in three communes attended a training course for Village Livestock Agents. The training was through the Provincial Department of Rural Development and Agriculture. Village livestock agents are now able to care for animals in the pig and buffalo banks, as well as (private) household stock. This is a significant resource for all local residents.
- Home Garden pilot projects have been initiated in two communes. Crops have included long beans, eggplant, tomato, lufar and chilli. This season, most of the yield was consumed by the participating family or nearby villagers, some yield was sold (where road / market access was available) and a small portion was kept for seed stock to be planted next season.
- The SCW team members assisted families in growing of vegetables / home gardening with ongoing technical advice and monitoring. For example, the SCW team cooperated with the WAs and Commune Councils to select participants for a training course in vegetable planting techniques.
- On March 8, 2005, CI and partners sponsored a celebration for International Women's Day in Thma Bang District. The ceremony took place at the pagoda, supported by PFD and facilitated by the Director of the Department for Women Affairs of Koh Kong province. WA committee members of Tatei Leu and Reusei Chrum participated. They learned about the differences in gender roles in work between men and women.

Objective 2: Support effective integration of RH/FP services into local government planning and to build local capacities for natural resource management and biodiversity conservation.

Activity 2.1 Facilitate Participatory Land Use Planning (PLUP), integrating community resource needs with conservation of Key Biodiversity Areas

This activity includes: (i) approval of land use plans in two communes; (ii) conservation areas zoned in remaining three communes; (iii) PLUP process underway in remaining three communes; (iv) lessons learned report produced.

The latter part of FY05 has enabled the PLUP results to be consolidated, but it has also presented a number of challenges relating to governance in Cambodia. The PLUP process has now been completed in two communes (Chumnoab and Tatai Leu); is well underway in a third commune (Roussey Chrum); and has been initiated in a fourth (Thmar Dan Peuv). Through this achievement, CI's PLUP work is recognized a leading example in Cambodia, providing the first land use planning maps for Koh Kong Province. In particular, the last six months has seen significant liaison and information sharing with the Provincial Government and bilateral projects. CI has provided ongoing advice and input about its experience with PLUP and natural resource management in areas of Forest Estate.

The participatory process has continued to achieve excellent attendance and participation from the target communities, although some communes have been less direct than others. Achieving meaningful participation in Cambodia is challenging due to cultural norms, political forces and the post-conflict situation. In one commune, participation has been deeply affected by the presence of powerful businessmen and their patrons, political parties and a military battalion that was formerly stationed in the area. Therefore, it is an ongoing challenge to build relationships and achieve sustained results at the commune level. In this "operating context" CI's achievements in the PLUP process have been truly remarkable, although somewhat delayed with respect to original commitments in the FY05 work plan.

The production of maps has continued, with detailed land use maps now available for three communes. These maps have been very powerful for: (i) villagers to plan land use; (ii) CI to monitor land clearing in the protected forest; (iii) as a visual tool for advocacy and stakeholder communication; and (iv) as a tool for overlaying biological data onto current land use regimes. The incorporation of biological data into the PLUP process has been a key achievement in the last 6 months, with special management areas negotiated and designated for critically endangered species, such as the Siamese crocodile and dragon fish.

The record of PLUP activities is captured in the table below. These data do not reflect the time spent in logistics (broken motorbikes, washed out bridges, broken radios etc), nor the unpredictability of dealing with Cambodian authorities. A great deal of local knowledge, time and effort is required to initiate and hold meetings successfully.

Table 15. PLUP Meetings and Attendance, January - June 2005

Commune	Type of meeting, Number of Participants	Number of Days
Chumnoab	<ul style="list-style-type: none"> • Developing and defining the role of the commune NRM committee • Drafting of Rules and Regulations for Natural Resource Management (multiple visits and drafts over 6 months) • Final copy of Rules and Regulations produced, distributed 	<ul style="list-style-type: none"> • 5 days • 20 days • 2 days
Tatai Leu	<ul style="list-style-type: none"> • Drafting of Rules and Regulations for Natural Resource Management (multiple visits and drafts over 6 months) • Final copy of Rules and Regulations produced, distributed 	<ul style="list-style-type: none"> • 20 days • 5 days
Roussey Chrum	<ul style="list-style-type: none"> • Launch PLUP process (District authorities) • PLUP first meeting (71 people) • Participatory Rural Appraisal (23 - 67 people each day) • Transect walks / mapping (10 – 20 people daily) • Creation of maps and database • Feedback of maps to community (40 people) • Ongoing meetings with District Authorities (two times / month) 	<ul style="list-style-type: none"> • 1 day • 1 day • 6 days • 10 days • 1 week • 2 days • 12 days
Thmar Dan Peuv	<ul style="list-style-type: none"> • Meeting with District Authorities (multiple) • Participatory Rural Appraisal 	<ul style="list-style-type: none"> • 5 days • 3 days
Estimated Totals	144 to 198 participants	93 days

Activity 2.2 Facilitate the additions of the RH/FP component and conservation priorities into commune development plans.

This activity includes: (i) integration of land use plans into commune development plans, (ii) gathering and analysis of commune data, so as to inform development planning; (iii) commune development plans completed and shared with stakeholders in Government, as well as NGO and private sectors.

The Commune Development Planning process for Cambodia began in July 2004 under its national decentralization program. Although there has been enormous donor support and attention, Cambodian Government processes are not well defined, nor transparent. This has presented a significant challenge for CI in influencing the content, direction and implementation of Commune Development plans.

In this reporting period, the CI-Communities' team has continued to engage with Village Chiefs, Commune Chiefs, District officials and Government officers, all responsible and involved in the commune development planning process. Meetings with these stakeholders have occurred at least monthly, which has enabled improved information sharing and relationships. Due to the Government planning cycle, the period from January to June 2005 has been relatively quiet, as last year's development plans have already been implemented, leaving no funds for the remainder of the year.

The next District Planning Workshop for all commune councils will occur in October 2005. Through CI's activities over the last 6 months, this will be another opportunity to influence local development planning. This time we will have much greater local knowledge, access to information, as well as ideas and analysis to contribute to the process. The regional planning activity (3.1 – 3.4) will also be a significant input that was not available last year.

CI staff have been able to participate in a number of Government-led workshops and trainings. This has deepened their understanding of the development process and enabled improved relationships. For example, the CI team has attended the following workshops, along with community members and local authorities:

- (i) National Decentralization Forum (January 2005) – CI team and 2 community members
- (ii) Indigenous land title registration forum (February 2005) – CI team and 5 community members
- (iii) NREM mainstreaming into Commune Development planning workshop (June 2005) – CI team and all 5 commune chiefs.

Activity 2.3 Strengthen the capacity of commune councils, particularly through increased women's participation, for Community Based Natural Resource Management (CBNRM)

This activity includes: (i) livelihoods diversification projects for target communes initiated; (ii) women's associations and commune councils participate in design of projects; (iii) ongoing capacity building for local institutions in design, implementation and monitoring of livelihoods projects.

During this reporting period, both CI and SCW have made significant progress in delivering livelihoods support to target areas. In the case of CI, this has also included making explicit links between livelihoods assistance and conservation outcomes, through the employment of "conservation incentives agreements". Building upon Participatory Rural Appraisal (PRA) assessments and dialogue in the first part of FY05, it was established that rice production is the highest priority for local communities, followed by other income generating activities such as cash crops and animal husbandry. In the latter part of FY05, both CI and SCW have attempted to respond to this demand.

SCW's livelihoods work has primarily responded to demand for cash crops / crop diversification and animal husbandry in target communities. Over the last 6 months, SCW has made the following achievements:

- "Volunteer farming groups" have been formed where local farmers try new crops in demonstration plots. This should help livelihoods in two ways: (i) by increasing the diversity of food available, thus improving local nutrition, and (ii) enabling villagers to sell produce for cash income. An evaluation from pilot families will ultimately test this hypothesis.

There have been four pilot families participating in this activity. They have been trained in planting techniques, seed production and keeping records / monitoring of garden production and labor efforts. The trainings were held in May 2005, with a total of 56 participants across two communes. In particular, the results of pilot families' monitoring should determine future support for this kind of livelihood activity.

- Village Livestock Agents (VLAs) have been trained in animal husbandry and veterinary practices. After the training, each VLA has a duty to assist his/her commune with veterinary advice and treatment. A total of 3 VLAs were trained, over forty days in April 2005.

CI's support to local livelihoods has focused entirely upon improving local rice production, thus increasing food security and local land-use efficiency. The following achievements have been made in the last 6 months:

- Some rice paddy areas that have been fallow for 30 years (due to the civil war) have been restored with the use of a tractor. This was necessary because buffalo were not able to till land that had been unused for so long. In Chumnoab, 25 hectares of old paddy were deep ploughed. This was a major logistical challenge, but a huge success for local families.
- Buffalo banks have been established in two communes (Tatai Leu and Chumnoab), where large areas of unused rice paddy exist, but lie fallow due to lack of draught power. It has now been relatively straightforward to negotiate for new land clearing to cease in exchange for the introduction of buffalo banks. The buffalo banks are managed by the Commune NRM Committee, created during the PLUP process. This has been an excellent capacity building exercise in developing rules and regulations, decision-making processes etc. for management of the buffalo bank.
- In Roussey Chrum commune, some of the poorest families cultivated 7 hectares of rice. This year, good cooperation was achieved with District Authorities and Commune Councils, who have taken full responsibility for achieving rice production results. CI provided the mechanical mule for use (now the third year running). At the end of this harvest, in November 2005, lessons learned from this site will be captured and applied to new areas.

Activity 2.4 Build local support for biodiversity conservation needs for specific sites and species and increase understanding of linkage between RH/FP services and conservation.

The SCW IEC team has continued to lead this activity in the latter part of FY05, including the following activities: (i) IEC curriculum tailored to the site and incorporates biological research; (ii) production of quarterly newsletter; (iii) IEC events and community theatre; (iv) publication of story book for distribution in schools.

Since January 2005, two editions of the Population Environment newsletter, the "Cardamom Green Post" have been produced and distributed. The newsletter reports on activities completed in each quarter and it aims to establish a sense of identity for the target area. More than 100 copies of each newsletter have been printed in Khmer language and have been circulated through schools and pagodas, the Department of Women's Affairs in Koh Kong, Provincial Government, Forestry Administration rangers and other local partners in the target area. To assist circulation in more remote areas, five post boxes were set up (one in each commune).

The IEC activities completed by SCW in this reporting period also include:

- (i) Creation of Children's clubs: There are now 17 students in the Tatai Leu Children's Club, and 22 students in the Roussey Chrum students club. In the first week of February 2005 the project team started with the preparation for a specific manual to assist teachers in setting up children clubs in Tatai Leu and Korkei Chrum primary schools. The students' clubs participated actively in the celebrations and performances for World Environment Day.
- (ii) World Environment Day Event: On June 12th 2005, SCW prepared the World/National Environment Day celebration in cooperation with CI, CARE, FA and Department of Environment of Koh Kong province at Koki Chrum pagoda. This event aimed to promote sustainable use of forest and reduction of wildlife hunting. The Deputy of Provincial governor of Koh Kong attended, as well as numerous local authorities and stakeholders, and hundreds of local community members.

A "population environment" Tshirt was designed for this event and distributed locally. After the official speeches and ceremony, participants planted trees and students cleaned the pagoda surrounding and the primary school area from all plastic bags. Two hundred trees were planted around the pagoda - some for construction and some fruit trees. During the evening program, the SCW team facilitated an Environment and Wildlife quiz. The quiz winners got TShirts, and the event ended with music and dance.

On June 14th, a day-time program for World Environment Day was held in another commune. Another tree planting ceremony was held at the pagoda, with one hundred trees being planted.

- (iii) The story book for "gender, population and environment" has now been completed and published. It will be distributed in conjunction with an education program through schools over the next three months, until the closure of this grant in September 2005.

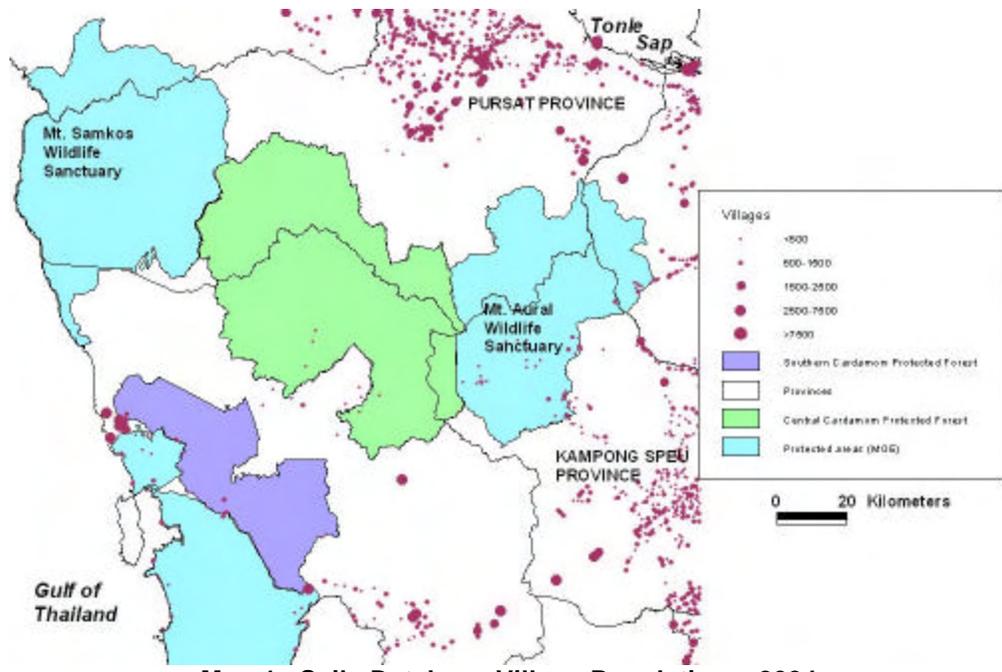
Finally, CI drafted a simple knowledge, Attitudes and Practices (KAP) survey in December 2004, in preparation for the visit of the MEASURE/EVALUATION in January 2005. The KAP survey has not yet been conducted, but should be used as a baseline to measure the impact of ongoing IEC activities beyond FY05. The monitoring and evaluation protocols developed by MEASURE/EVALUATION were initiated in April 2005, with only two sets of quantitative data now available. The KAP survey should complement this data with more qualitative information on community awareness about "population and environment".

Objective 3: Improve regional planning for conservation and development in the CCL through demographic analyses and threat mitigation strategies.

Activity 3.1 Threats to biodiversity conservation identified in Koh Kong and Pursat Provinces

During this reporting period, CI and partners have built a village-level socio-economic database for 298 villages across the CCL. This data were extracted from databases for all of Cambodia's 13,000 villages produced by Seila, the multi-donor supported national decentralization program, for 2002, 2003, and 2004. Using a unique

code for each village, we linked the socio-economic database to an existing village GIS database to create a comprehensive village-level database for the CCL. **Map 1** shows the villages for all of southwest Cambodia in the Seila database in 2004. Note the density of villages in the irrigated rice growing areas of Pursat and Kampong Speu Provinces and the almost complete absence of settlements inside the CCPF and large parts of the Mt. Samkos Wildlife Sanctuary.



Map 1. Seila Database Village Populations, 2004

For each village, the Seila database has 105 fields. For each of the 298 villages of interest, we used these fields to create the following 112 indicators that have a direct link to health, demographic, and livelihood conditions. Please see **Table 16** for more details.

Table 16, Select Socio-economic Indicators for the CCL, Cambodia

INDICATOR	DESCRIPTION
POPGR	Population growth between 2002 and 2004 as a % of 2002 population
FAMGR	Growth in the number of families between 2002 and 2004 as a % of 2002 families
FAMSIZ	Average family size in 2004
MIGDIF	Number of migrants arriving between 2002 and 2004 based on an assumed 2.5 percent/year natural rural population growth rate.
MIGRAT	Assumed migration rate as a percent of POPGR
ZINCTHA	Ratio between the number of zinc roofs to thatched roofs in 2004 (an indicator of wealth)
COWFAM	Percent of families that own a cow in 2004 (an indicator of wealth)
MOTOFAM	Percent of families that own a motorbike in 2004 (an indicator of wealth and market access)
MIDWIFAM	Number of midwives as a percent of the number of families in 2004
IRRIFAM	Percent of families with access to irrigated rice in 2004 (an indicator of food security)
FEMHH	Percent of families that are headed by women in 2004
FEMILL	Percent of women older than 15 who are illiterate

These indicators were calculated using Excel and then converted to DBF format for inclusion in an ArcView GIS. We are in the process of mapping these indicators to assess patterns across the CCL. Several indicators (e.g., MIGRAT, IRRIFAM) are directly related to threats to biodiversity. High migration rates imply rapid population growth, increased market access, and increasingly heterogeneous communities that may be reluctant to participate in community-based planning processes. Similarly, little or no access to irrigated rice implies high

food insecurity and increased dependence on forest resources, particularly wildlife. It also implies a dependence on dry rice cultivation, which in turn requires periodic forest clearing (shifting cultivation).

We have also acquired GIS data on economic concessions. These concessions were allocated in secret to the army and other powerful interests for pulp and paper plantations, quarrying, resorts, and other extractive activities. These deals, which have never been made public, threaten fish breeding grounds, community forests, and other natural assets on which the poor depend disproportionately. As of February 2003, the Council of Ministers had approved 40 land concessions covering over 800,000 hectares. We are in the process of integrating these two data layers to complete the threats analysis, which will be completed in September 2005.

Activity 3.2 Demographic trends analyzed in Koh Kong and Pursat Provinces

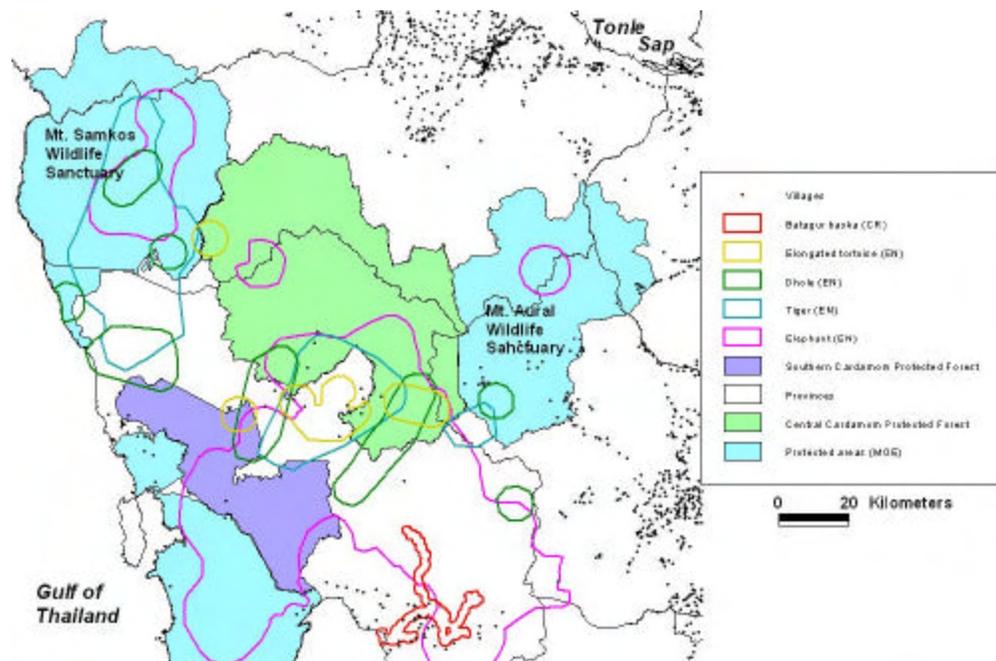
The village-level database includes data on population growth that we will use to infer natural population growth and immigration. While not precise because it assumes the same natural population growth rate for each village (which is in turn based on the national annual population growth rate) it is indicative of villages receiving or losing migrants. The results of this analysis will be included in the final synthesis report, also due in September 2005.

Activity 3.3 Spatial population trends estimated in Koh Kong and Pursat Provinces

We have compiled the data needed to estimate population trends at the village, district, and provincial levels and will include this analysis in our synthesis report, mentioned above.

Activity 3.4 KBAs in the CCL expanded

We contributed to the development of KBAs for the CCL as part of a national level biodiversity mapping process. We will use these to identify priority areas across the CCL. **Map 2** shows the raw data for five key species, one defined as critically endangered (CR) by IUCN and the others as endangered (EN). We will integrate these layers to create a composite biological significance layer. The results of this analysis will be included in the final synthesis report.



Map 2. KBAs for the CCL

iii. Discussion of Key Results for CI-DC PE Program

A. CI-DC Technical Leadership and Support

Objective 1: Improve knowledge and capacity of CI staff and partners on the links between population and conservation, by providing direct technical support and training

Activity 1.1 Provide technical support to field programs with PE projects

Throughout this reporting period, PE director Janet Edmond continued to provide technical support and assistance to PE field program staff and to disseminate key messages about PE accomplishments across CI and among partners. Several key activities included:

- Participating in the Packard Foundation's PE portfolio review by providing background documents and discussing lessons learned today with consultants in February 2005;
- Preparing seven to ten lessons learned documents for publication by September 2005, and sharing these with PAI for inclusion in their PE field guide;
- Collaborating with WWF on their PE learning panel, and sharing CI's PE results chains and other information;
- Hosting the May 2005 CCC meeting featuring Chemonics Gender Strategy Development in Mexico through USAID/Mexico's Rural Prosperity and Conservation Project. CI staff also participated in the CCC Gender Working Group to plan and initiate gender trainings in conservation NGOs and CI staff filled 100 requests for the CD of *Social Science Tools for Conservation Practitioners*.
- Through the CCC migration working group, collaborating with WWF to produce a draft document on human migration and impacts on conservation, leveraging funds from the Gordon and Betty Moore Foundation;
- Refining PE conceptual frameworks developed by PE field staff at the Bangkok November 2004 workshop;
- Assisting CI staff with the formulation of a human welfare initiative, using examples and lessons learned from CI's PE projects;

One of the most important accomplishments of this reporting period was the synthesizing and production of lessons learned within the PE portfolio. PE staff, with the help of University of Michigan Minority Student Intern Katie Fisher, produced seven lessons learned documents on themes such as working with communities, partnerships, indigenous people's roles in conservation, promoting alternative livelihoods, and gender in conservation. These documents will be published in September 2005, and serve as final evaluation pieces for the grant. In the follow on grant, we will use these lessons learned to improve our work and expected results.

In an effort to bolster CI's global leadership in PE, CI Cambodia staff Sarah Milne presented results from the PE program at the Wilson Center on May 9, 2005. More than 40 people attended the presentation, which highlighted CI's success in delivering health services for the first time in the Cardamom Mountains in collaboration with CARE International. This sparked interest in USAID Cambodia staff to include PE in their new five year strategy and to discuss mission support for these activities in FY06.