

***Biodiversity Corridor Planning and
Implementation Program***

Cooperative Agreement No. LAG-A-00-99-00046-00

Annual Progress Report

For FY09: October 1, 2008 - September 30, 2009

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By Conservation International



List of Acronyms

CEF	Forest Service Bureau
CFL	Local forest control team
CI	Conservation International
CIREF	Regional Forest Service (Circonscription Régionale de l'Environnement et des Forêts)
CNFEREF	National Center for Training and Research in Environment and Forestry
COAP	Protected Area Code
COBA	Community-Based Institution
COPIL	Steering Committee
DPZ	German Primate Center (Deutsches Primatenzentrum)
DREF	Regional department in charge of the Environment
DWCT	The project Wildlife Conservation Trust
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
FY	Financial Year
GCF	Community transfer forest management contract
GCP	Global Conservation Program
GEF	Global Environmental Facility
GELOSE	Localized community transfer natural resource management contract
GIS	Geographic Information Systems
KBA	Key Biodiversity Area
LR	Legal Reserves
MCA	Millennium Challenge Account
MECIE	Environmental Impact Decree
MEF	Ministry in Charge of the Environment and Forests
MNP	Madagascar National Parks
MOMA	Monitoring and control protocols
MOU	Memorandum of Understanding
MRG	Menabe Research Group
NGO	Non-Governmental Organization
ONE	National Environment Bureau
OPCI	Inter-municipal committee
ORTM	Regional Tourism Bureau for Menabe
PGES	Social and Environmental Management Plan
PPA	Permanent Protection Area
PPP	Public-private partnership
PRPSE	Regional Social and Environmental Development Plan
REPAMS	Association of Owners of Private Natural Heritage Reserves
RPPN	Private Natural Heritage Reserve
SAHA	Sahan'Asa Hampandrosoana ny Ambanivohitra (Swiss Development Program)
SHP	Small hydroelectric plant
UPB	Upper Paraguay Basin
USAID	United States Agency for International Development
WWF	World Wide Fund for Nature

I. Summary of Activity Status and Progress

A. Introduction

This report covers activities for the period of October 1, 2008 - September 30, 2009 for the USAID Biodiversity Corridor Planning and Implementation Program (Corridor) Cooperative Agreement in Madagascar and Brazil. Under the USAID Leader with Associates Global Conservation Program (GCP), CI has implemented biodiversity corridors in two priority areas: the Menabe Biodiversity Corridor in Madagascar and the Cerrado/Pantanal region of south-western Brazil. The purpose of these programs is to establish functioning biodiversity corridors over the current five-year phase of the Agreement. This report provides an update on the progress of each of these programs. The Highlights section below summarizes some key activities and outcomes of each country program. The Activities section provides a summary of outcomes and activities for the country programs.

B. Highlights and Successes

1. Madagascar: Reaching the People of Marofandilia

Marofandilia is located in the center of the Menabe Central Region. This year a rural center was built to help bring information, trainings, and project activities closer to the communities living in the heart of the Protected Area. The building was constructed through funds leveraged by the project from different foundations and partners. USAID provided resources to make this center functional by bringing capacity building and organizational support for the different local actors. This center enables exchange and shared information on environment (ecosystems, endemic species, natural habitats, ecological processes) and provides quick response and support to communities managing natural resource plans and contracts. Its central location helps the project team bring trainings closer to the communities that are co-managing the Protected Area units. Now trainings on management, forest uses, regulations and forest control systems are provided in the center of the Protected Area and reach the most remote communities.

The project team has learned the reality of the rural context and provides communities with relevant information, tools and trainings reflecting real on the ground needs. As key partners in management communities are now able to fully understand their responsibilities and roles in the co-governance system of the Menabe-Antimena Protected Area set up by the project. These efforts will be continued with other existing and leveraged funds until the protected area has an effective management system in place.

2. Madagascar: People of Menabe Improve Their Quality of Life

The project promoted investments in high-potential revenue-generating activities that improve the quality of life of the people of Central Menabe while offering alternatives to unsustainable practices such as slash and burn agriculture. By building capacity of farmer associations to develop new markets for organic crops and build business relationships with the private sector, the project has secured long term revenues for the farmers.

Organic agriculture adds value to basic traditional products. By following international standards and techniques for biological production of products such as lentils and peanuts, farmers are now ready to acquire international organic labeling. In order to train farmers and

ensure production meets the high international standards CI's partner NGO FANAMBY developed a standard organic label for Madagascar called SAHANALA. This label was developed following standard international organic certification requirements and has taught farmers the techniques that will enable them to acquire international certification in the future.

The project helped 16 families living in the villages of Lambokely, Kirindy and Bekonazy develop organic agriculture. These families benefited from the production of 310 kg of Valencia peanuts and 10 additional families living in the Tsitakabasia village have received 337 kg of lentil seeds and working tools. In Bekonazy 33 families received 850 kg of peanut seeds. A total of 68 families in 6 villages (Bekonazy, Kiboy, Lambokely, Beroboka, Kirindy village and Marofandilia) received support in organic fertilizers (seeds and small material) for vegetable production. As a result, this year these farmers have obtained the SAHANALA label. We will work with other funding sources to help link the communities to international markets.

3. Brazil: Implementing a Biodiversity Corridor in an Agricultural Landscape

This project occurred in the Brazilian Cerrado Biome, which is considered the richest savanna in the world, especially due to its high concentration of species. Since 2000, CI-Brazil has been promoting the concept of biodiversity corridors in two regions of the Cerrado in order to conserve biodiversity within and outside protected areas. CI-Brazil and local NGO partners, including Oréades and the Bioeste Institute, worked with Bunge and Monsanto Company in the Emas-Taquari Biodiversity Corridor and the Jalapão-Western Bahia Biodiversity Corridor to engage local farmers in biodiversity conservation on private lands.

After identifying critical areas for the maintenance of populations of threatened and endemic species, CI engaged local farmers and ranchers in establishing corridors that include a network of protected areas in a wider biodiversity-friendly landscape. Farmers were invited to participate on a voluntary basis. CI's local partners supported such activities as property analysis, preparation of projects to resolve environmental problems (including failure to comply with legal requirements under the Forest Code) and dissemination of information about current environmental legislation, fauna and flora conservation and the role of protected areas in preserving biodiversity.

To complete the scenario, CI undertook a participatory planning process in each corridor to define plausible land use scenarios that address the needs of soy producers and conserve key species. The planning process set specific area targets for soy production as well as habitat targets for key native species. CI-Brazil has defined and delimited Key Biodiversity Areas (KBAs) in both corridors.

C. Table of Activity Status

Activity Number	Activity Title	Status	Page number for more information
Madagascar			
1.1	Support creation and performance of management structures for the new protected area	Completed	8
1.2	Support good governance to enhance communities capacity to manage natural resources	Completed	9
1.3	Build the capacity of communities to develop and to implement resource management plans for community area	Completed	9
1.4	Build the capacity of corridor resource managers in biodiversity management	Completed	N/A
1.5	Support to development structures performance as part of shared governance to enhance communities capacity to manage natural resources	Completed	N/A
2.1	Identify the causes of threatened species' decline to inform management	Completed	10
2.2	Evaluate the biodiversity and threats to mangroves	Completed	11
2.3	Develop and implement species monitoring protocols	Completed	12
2.4	Develop an agreed management plan for each management unit for the whole corridor	Completed	12
2.5	Develop and implement a corridor communications and environment outreach strategy	Completed	13
2.6	Refine learning system to ensure the effectiveness of conservation efforts throughout the corridor and conduct mid-term	Reoriented	14
3.1	Support the establishment of a long term forest control system	Completed	15

Activity Number	Activity Title	Status	Page number for more information
3.2	Develop participatory ecological monitoring	Completed	15
4.1	Implement the ecotourism development plan	Completed	17
4.2	Develop economic reforestation in the medium and long term	Completed	17
4.3	Support the development of conservation incentive mechanisms to engage local communities in active conservation measures	Completed	18
4.4	Seek long-term funding mechanisms for the new protected area	Completed	19
4.5	Promote investments in high-potential revenue-generating activities that offer alternatives to natural resources degradation in Central Menabe	Completed	19
Brazil			
1.1	Link the existing Cerrado-Pantanal corridor structure with the northeastern region, through a long-term learning and knowledge-transfer program driven by local stakeholders	Completed	21
1.2	Work with North-South alliance to build park management capacity in the North	Completed	21
1.3	Work with northeastern corridor stakeholders to create new public and private protected areas	Completed	23
2.1	Build support and assist in generating a long-term change of behavior in land use in the corridor using communication and EA	Mixed performance	22
2.2	Increase partner development capacity	Mixed performance	23
3.1	Ensure that key partners and community planners have the capacity to obtain and use corridor-scale monitoring data	Completed	23
3.2	Build the capacity of key agencies and partners to collaborate in planning and managing the corridor	Completed	24
3.3	Partner with local agencies and the private	Completed	N/A

Activity Number	Activity Title	Status	Page number for more information
	sector to create a program to financially sustain the corridor management structure		
4.1	Maintain Connectivity and Ecological Processes in the Serra de Maracaju – Negro Corridor by creating new private protected areas	Completed	24
4.3	Increase knowledge about Corridor threats and disseminate findings	Completed	25
4.4	Support land use planning and assistance for the Corridor municipalities located at the headwaters of the Rio Negro	Completed	26

II. Madagascar

A. Key Short- and Long-Term Program Objectives for the Site

To reduce biodiversity loss which is threatening the pristine habitats of the Menabe – Antimena Forest Corridor, CI and partner organizations along with local stakeholders, aimed to address threats through four strategic objectives. The program approached conservation by integrating the economic development needs of local stakeholders with strict conservation of core areas rich in biodiversity. Communities participated actively in management, research and control of natural resource use allowing them to value the resources and the services provided by the ecosystem and in turn helping to preserve natural habitats.

The four strategic objectives adopted to address the immediate and underlying causes of degradation and deforestation were the following:

- 1) Strengthen the capacity of communities and local and regional actors to manage sustainable use of natural resources;
- 2) Support establishment of an improved corridor management system;
- 3) Support a participatory and effective corridor enforcement system;
- 4) Reduce impacts of unsustainable activities and demonstrate benefits of conservation.

B. Summary of Progress for Site

The final year of the project program focused on consolidating the activities that will ensure sustainability of past achievements. This year also represented a fundamental shift from the previous five years of project implementation moving from a *creation* mode to a *management* mode for the Protected Area. Support continued to define tools (e.g., conservation management plan and protected area business plan, community-managed natural resource contracts) and strengthen partnerships to consolidate the protected area co-management structure and ensure sound management of the Menabe Antimena Protected Area.

However, the beginning of 2009 was impacted by a political crisis which led to a coup d'état, directly impacting the program's implementation. The US government withdrew financial

support to the Government of Madagascar until political stability is re-established and democratic elections take place. As a consequence, towards the end of FY08, the project was required to revise USAID-funded activities to exclude capacity support to government at all levels and only provide community support. In addition, all activities funded by the Millennium Challenge Corporation (MCC), which represented a substantial part of leveraged funding, were suspended. Consequently, considerable setbacks ensued.

However, capacity building efforts provided during the past five years have improved local governance, resulting in efficient management of the protected area even during the crisis. Although government officials are awaiting new appointments, local authorities continue to enforce forest controls and participate in management. In addition, past program efforts have successfully set in place the systems and tools which enable sustainability of the protected area leaving a strong foundation for sound co-management.

The approach to conservation adopted for Menabe Antimena was that of a productive landscape. The protected area integrates strict protection of main forest blocks and coastal mangroves with multiple use zones in the corridor connecting the main blocks and the peripheries of core zones. In these areas, local communities carry out productive activities compatible with the protected area objectives. A zoning and management scheme was developed for the protected area and is currently operational and has been integrated into the larger Menabe regional development plan. Based on a research and action approach to implementation, the project integrated lessons learned from the past years to adapt and apply best practices to the current year program.

The territory is now unified by a protected area status, with FANAMBY having overall management responsibility. Internal management is subdivided by units where public institutions, private land owners, research institutes, and development agencies supporting local communities have worked for many years. The project carried out activities in the landscape valuing local economies and making community development compatible with conservation. The collaborative and complementary action by the multiplicity of actors is the basis for the co-management structure of the protected area. The main challenge of the project has been to unify approaches and coordinate management in a single territorial based vision but it has been successful in setting up a strong foundation for sound landscape Protected Area management.

Objective 1: Strengthen the capacity of communities and local and regional actors to manage sustainable use of natural resources.

The Menabe Antimena protected area will succeed only if its natural resources are well managed. By the end of this fiscal year, CI and partners DWCT and FANAMBY built on five years of activities increasing participation of local communities and government institutions and improving the capacity to manage the new expanded protected area. By facilitating the creation of a protected area and supporting effective local management in the larger landscape, CI and its partners have facilitated community action that will counter expansionist agriculture and protect high priority biodiversity areas from hunting pressures.

Ongoing Activity 1.1: Support creation and performance of management structures for the new protected area

The project continued strengthening the protected area governance structure, focusing specifically on the steering committee (Comite de Pilotage –COPIL), the body responsible for making key management decisions. This is linked to finalizing the protected area management plan (see Activity 2.4).

In April 2009 the project re-oriented this activity to suspend direct support to the government institutions: village leaders, Fokontany, inter-municipal committees, regional authorities, and the regional platform. The funds available were reprogrammed to increase support to communities to develop and implement local management plans, thus building their capacity within the management units and promoting economic activities. In addition, the project provided support to participatory land use planning and local management planning, reforestation and agriculture activities.

At the level of each management unit within the protected area, specific agreements were negotiated with each unit manager. These agreements should officially mark the start of the working partnership between the protected area management structure and the individual managers. This activity was delayed due to conflicts by the opposing decrees issued by the government regarding the endorsement of management over forest blocks. The CNFEREF who manages the Kirindy forest, of high biodiversity importance and key in terms of connectivity, has received an opposing decree from the Ministry of Environment and Forests (MEF) to retain management rights in spite of the official endorsement to FANAMBAY over the overall Protected Area landscape. A similar situation has occurred with Madagascar National Parks (MNP) who manages the Andromena Forest. However, by integrating both CNFEREF and MNP managers in project activities, the management vision is evolving towards stronger cooperation.

The project also focused on promoting the articles specific to the environment contained in the village-level *Dina* (customary law now integrated in formal regional legislation). These environment regulations were adopted in previous years with support from the project.

Although the definitive protected area status and the technical regulations on participatory governance of protected areas have been conditioned by political instability, the local protected area management units are currently functional. Consequently, there is active control and monitoring by local communities of the natural ecosystem and a strong foundation for an overall protected area co-management structure.

The inter-municipal body (OPCI) Alokaina representing the management unit for the mangrove area, and the inter-municipal body of Agnalamaitso, which leads the management unit of the dry forest and wetlands, play a key role in the implementation of the management plans by unit. To develop capacity of the village associations (COBA) that integrate the management unit of the mangrove area, a technical service was set up in the OPCI of Alokaina. These communities have legal rights (transfer contracts) over the management of mangroves. The OPCI has also extended responsibilities, through workshops and trainings, to other local community associations. Trainings have raised awareness on how to apply regulations on natural resource use and control of the mangrove units that are not regulated by community transfer contracts.

Ongoing Activity 1.2: Support good governance to enhance communities; capacity to manage natural resources

An evaluation of the results of the 2007 and 2008 good governance training was carried out for 10 local communities (COBA) and 2 inter-municipal committees (OPCI) in the protected area. The evaluation determined that the COBA and OPCI were successfully applying principles of good governance. Other encouraging signs were that the COBAs were able to produce written reports of their activities; be accountable for their respective roles and responsibilities; and work in an integrative manner with the OPCI.

Recommendations have been drafted and will be submitted to communities and to the protected area managers. Some of the key recommendations and lessons learned include the following:

- Good governance would be improved by increasing literacy among COBA and OPCI members, so that they are better able to understand and carry out good governance techniques. This recommendation will be shared with the Ministry of Education to work together and develop an adult literacy program as in other project managed by Durrell Wildlife Conservation Trust (DWCT).
- More frequent and inclusive workshops are needed to reinforce good governance and allow more open discussion and transparency among COBAs. After a recent workshop, three COBA changed their governing bodies to be more reflective of the views of the association members, rather than the self-serving interests of their presidents.
- NGOs assisting COBAs in good governance should be realistic and patient when initiating training with new associations. Participant turnout in meetings and workshops for a new project may initially be low, and this reflects the high level of poverty and need for villagers to continue their daily work. Participation improves during subsequent meetings as people begin to see the positive results of the training and their involvement in programs.
- Providing a modest monetary compensation or meals to people that participate in fieldwork or in ecological monitoring, which encourages active participation.
- There are villages within the protected area that want to form COBA, receive training in good governance, and take part in ecological monitoring. However these villages either have no forest to manage, or the remaining forest is too degraded to provide adequate resources. One recommendation is to provide them with a small parcel of forest to manage on a trial basis. Another recommendation is that these villages at least be included in all regular workshops and meetings so that they become aware of the idea of sustainable resource management.
- Enforcement of local and regional laws is generally poor, which is discouraging to associations. This is a reality that needs to be considered and addressed when motivating COBA members.

Ongoing Activity 1.3: Build the capacity of communities to develop and implement resource management plans for community areas

This activity has been carried out as part of ongoing community work to support village associations and their management contracts. New contracts have yet to be formalized, and are subject to the government progress in developing regulatory decrees based on the amended Protected Area Code (COAP).

Community meetings were held in 2008 in April-May of 2009 at the four villages on the periphery of the lake to discuss the potential for local village associations for sustainable management of the lake's resources. We solicited their opinions regarding the feasibility of transferring management of Lake Kimanaomby to local associations for the sustainable management of resources. The transfer of management to local communities was endorsed during these meetings by the four communities, and the main obstacle toward sustainable management was identified as the non-respect of traditional fishing rules by the hundreds of immigrant fishermen camped on the edge of the lake.

Objective 2: Support establishment of an improved corridor management system.

An effective management plan is essential to the sustainability of any conservation strategy. Therefore, this objective has focused on producing the final foundational scientific data and the necessary data management system for effective monitoring. It has been complemented by providing necessary training to ensure that the work can be carried out by Malagasy staff after the end of this program. Lastly, the success of any protected area needs the support of local communities. Therefore, our ongoing communications efforts this year were designed to support this outcome.

Ongoing Activity 2.1: Identify the causes of threatened species decline to inform management

Progress was made in updating the forest habitat mapping for Menabe in collaboration with DPZ in Germany (Figure 1). This cover map will still require further ground truthing and interpretation by the project staff experienced with the area before it can be applied within the protected area management plan. This ground truthing activity could not be completed this year because field visits were less frequent for security reasons during the political crisis.

Some of the key initial interpretations from this map include the following:

- The darkest green northern block of Ambadira is the most important site for biodiversity and is particularly important for *Kapidolo*, *Vositse* and lemurs. However, it is also the most impacted by logging for *pirogues* (canoes) and construction wood as it contains the best remaining forest with the largest trees. Cutting is mainly carried out by two communities (Tsimafana and Antanandava) from outside the protected area, making management and enforcement challenging.
- The light green block to the east of Beroboka that fragments the northern (Ambadira) and southern (Kirindy) areas of denser dark green forest is a private concession. It is vital that this area be reforested to provide a corridor between Ambadira and Kirindy in the south. The complication is that this area is used by people who are not yet members of associations sustainably managing their resources. These villages continue to rely on maize and rice cultivation for their livelihoods.
- The forest is heavily fragmented, but this fragmentation is both natural and anthropogenic. Streams are acting as barriers to ground dwelling animals such as jumping rats and flat tailed tortoise, with vegetation being a lighter color within the stream valleys. During the wet season, large areas near the stream valleys are heavily flooded and this will impact terrestrial species' movement and status. Key endemics like *Vositse* and *Kapidolo* will not be able to colonize these seasonally flooded areas.
- Over the longer term, it is vital that we reconnect the three main fragmented corridors that have been created primarily by manmade factors but exacerbated by natural waterways. These include; 1) the corridor to the east of the village of Ampataka, 2)

the major corridor of destroyed forest to the east of Beroboka and Ankilimanintsy and 3) the corridor northeast of Morafeno.

Ongoing Activity 2.2: Produce species monitoring tools and protocols

We completed field research on forest birds and insectivores, as well as a survey on the status of flat tailed tortoise in the Special Reserve of Andranomena. Data has been analyzed and preliminary reports have been prepared for each of these surveys.

Data on the distribution of *Agolonala* or White-breasted Mesite *Mesitornis variegata* was analyzed from July-December 2008. Although not abundant, *Agolonala* were evenly distributed throughout the forest of Menabe.

Several observations regarding methodology were noted:

- One difficulty encountered was the likely under representation of “camouflaged” species within the sampling method.
- Field researchers are relatively new to bird identification by calls and since the forest is so dense, visual identification is difficult. One species may have several different calls, making identification more challenging. This will become less of a problem over time as field staff become more experienced with identifying birds by call.
- The methodology worked well for the target species as they are large, terrestrial, and their calls are distinct. Preliminary analysis and comparison with data from 2003 and 2008 suggest that Mesite populations are stable and evenly distributed throughout Menabe. Mesite are not commonly targeted by hunters and their status is not as much of a concern as larger species such as Coua.

Two preliminary studies were carried out in early 2009 to determine the conservation status of insectivores in Menabe. A pitfall study was initiated to determine status and abundance and diversity of insectivores. Three species were recorded (*Microgale brevicaudata*, *Setifer setosus* and *Suncus madagascariensis*), with *M. brevicaudata* being most common. The methodology was considered preliminary and effort will need to be increased in future research to provide comparable results. Capture rate was quite low and the timing of research may also need to be changed to coincide with periods of higher precipitation.

Also, a village questionnaire was carried out in early 2009 to monitor the impact of the hunting of *Tenrec ecaudatus* within the protected area. Preliminary results suggest that *Tenrec* populations have decreased throughout Menabe over the last five years.

Several methodologies for ecological monitoring related to different taxa have been developed and gathered into a manual. The nearly completed monitoring manual will be finished in 2009. Work has continued on production of an illustrated field guide to key species in Menabe. This includes all the project target species such as Giant Jumping Rat, Bokiboky Lemur, and the Flat Tailed Tortoise.

The database of monitoring data has been useful for our ecological monitoring efforts and is ready to be incorporated in to the protected area database so that it can be used for management decision making.

Ongoing Activity 2.3: Facilitate orientation of research in support of protected area management planning

Due to the political crisis, holding workshops and meetings was difficult, so the meeting of the Menabe research group did not occur this year. The MOU between the Menabe Research Group and the protected area manager will be treated during the upcoming meeting as soon as the political crisis is over.

A new monitoring technique was tested – geophoto monitoring technology designed and implemented in the Baobab Alley. It slightly differs from the ecological monitoring system based on village competitions. However, this system is also community based with a strong quasi permanent presence by the project. Communities were trained to use practical monitoring tools (GPS, Logger, digital cameras, clismetre, and ruban dendrometrique). This method will serve as a pilot experience to be compared with the system developed by DWCT. This methodology will be adapted and replicated in the dry forest and mangrove areas.

A feasibility study and a database on biodiversity specific to Menabe Antimena were initiated in partnership with CNFEREF. The database format should follow national standards developed by the National Office of the Environment (ONE). Due to time conflicts between the CNFEREF and the ONE, this activity was not completed. It will be revitalizing as soon as the political situation normalizes.

Ongoing activity 2.4: Develop a management plan for each corridor management unit

The permanent decree that formalizes the protection status was subject to the amendment of the COAP. This law was amended and adopted by the Government at the end of 2008. The project team provided technical support to the government to develop the content based on extensive field experience in Menabe and other sites. The amendment defines the new co-management types for protected areas, integrating communities as an eligible actor for protected area management and allowing for the formalization of the co-management structure that is being piloted by the project. Subsequently, the government must develop the regulating decree to legalize the different procedures contained in the management plan specific to Menabe-Antimena. Given the current crisis, the drafting and approval of this decree, which delegates permanent status, was delayed.

In this regard, CI and its partners achieved progress towards obtaining permanent status by completing the management plan required to solicit the permanent decree. Drafting the regulating decree requires the development and adoption of conventions which refer to community management, and these depend on the participation and active intervention of multiple stakeholders, including local government (village leaders, OPCI, regional authorities, steering committee members).

The plan requires an Environment and Social Impact Assessment (ESIA) and a Social and Environmental Management Plan (PGES). The latter includes social safeguard measures for local people for the opportunity costs of conservation due to the creation of the protected area. The project finalized the Environment Impact Assessment (EIA) and is in compliance with the national environmental impact, MECIE.

The 10 villages have updated management plans, and zoning of strict preservation areas and productive use zones, and evaluations have been carried out to assess their performance

during the trial period. However, communities are still waiting for official renewal and validation by the MEFT. Although these laws are temporarily outdated it is considered legal and both communities and authorities abide by its regulations.

Due to the interruption of collaboration with the government (forest service) in the current political crisis, some management planning activities were slowed. In the village territories, only the management plans of the Kirindy and Lambokely forests have been fully developed and updated (through CI NODE funding). The plans for the remaining villages are in the process of being finalized. The implementation of this plan focuses on alternative economic activities, mainly emphasizing the value of activities which can be carried out on the degraded lands with the object of reducing the dependence on forest resources by local people. These alternatives include establishing a sustainable agriculture system. This land management plan has been established to benefit local populations integrating needs assessments and local perceptions and balancing interests of the different territorial management units.

The prospection of 15 mangrove villages has been completed, which serves as a first step in the process of zoning. The project carried out assessment to identify the key species and threats based on identifying degraded areas to inform the management plan; however mangroves are a difficult terrain and assessments must be done during rainy season when the abundance of species is at its height. Weather conditions and difficult terrain caused a delay in the identifying key species, forcing the project to postpone the activity to next year's rainy season.

To develop the core zones in the mangrove management unit, communities of 15 Fokontany (municipalities) were consulted. The project also raised awareness on their responsibilities over the transferred forests outside the core zones in terms of regulations and sustainable usage. Awareness was also raised amongst local authorities on the existing degradation and the need for sustainable use, and the importance of developing management plan. The final management plan is underway and will be developed (with leveraged funds) based on high resolution satellite imagery combined with the information compiled during these consultations.

Ongoing Activity 2.5: Develop and implement a corridor communications and environmental outreach strategy

Communication activities were improved by using a series of tools such as Radio spots. The implementation of a common communication strategy amongst partners has helped consolidate efforts to promote ownership over the protected area. Some illustrative actions have been the start up of the Baobab Alley website and disseminating information about the Alley through signs in the handicraft village of Marofandilia (a project financed by the USAID Ecotourism project). This has helped publicize information on the Protected Area as a whole. In addition, the project actively participated in the regional festivities where new messages regarding the Protected Area were shared. Messages included information on the management structure, the Protected Area management strategy including an outlook on how this integrates regional development, Protected Area limits, zoning, and accomplishments in the different phases of creation of the Protected Area. In addition, posters and brochures were developed and shared.

The rural information center of Marofandilia was opened. USAID contributed to making this

center operational by bringing technical assistance for meetings and trainings for the benefit of local actors. This center helps exchange and share information on environment (ecosystems, endemic species, natural habitats, ecological processes) amongst local communities, tourists and partners. The information also builds the capacity of managers by informing on the different areas of the Protected Area, and other management domains (rules, regulations, forest control system).

The Baobab Alley is the main entrance to the Protected Area. An information and welcome center was set up (funded by the USAID Ecotourism Project) in the Baobab Alley. As it is the main entrance to the Menabe Antimena Protected Area, it serves as an entry point to convey information on the activities taking place in the whole Protected Area and provide environment specific information to raise awareness of communities, tourists and managers (as in the Marofandilia center).

Ongoing activity 2.6: Refine learning system to ensure the effectiveness of conservation efforts throughout the corridor

A national-level exchange workshop on governance and co-management was planned to be supported by the project. The project approach is based on a participatory approach, where communities, local public authorities and project managers are involved in developing management plans and activities. Therefore, lessons have been recorded through quarterly field reports and notes from public consultation processes. The project has adjusted to integrate the different views throughout the years of implementation.

The USAID Madagascar Mission organized a closing workshop for the Environment and Rural Development projects in June 2009 in Antananarivo. All implementing partners of USAID funded projects participated in this workshop, including partners from the GCP Menabe project. This workshop allowed sharing lessons learned in ten years implementation of USAID funded projects in Madagascar. Topics highlighted included protected area network establishment and management, food security and livelihoods, sustainable financing mechanism for protected areas system, and climate change.

In addition, a workshop was held in December 2008 to assess the participatory ecological monitoring model developed by the project, in conjunction with similar experiences in the country and internationally in other tropical countries, which enabled to draw lessons and improve project methods. This provided substantial information on CI's experience in Menabe. Lessons were drawn on Menabe's experience in different themes: sustainable financing mechanisms, co-management structures for new protected areas, incentives for conservation, direct benefits to communities, participatory ecological monitoring, development of landscape protected areas (benefits and constraints), and multiple partner implementation schemes.

Objective 3: Support a participatory and effective corridor enforcement strategy.

Sustainable conservation needs not only a solid management plan and staff, and local community support, but also adequate enforcement. Therefore the project completed training of the local forest control teams on key issues and finalized a proposed participatory ecological monitoring system.

Ongoing activity 3.1: Support the establishment of a long-term forest control system

A traceability system was planned in collaboration with CFL and the regional forest service (DREFT) in view of mapping illicit exploitation, a monitoring tool that could later be used by regional authorities. Although the activity was initiated, the complexity of the local political context delayed further progress.

Ten teams made up of the local forest control committees from 10 villages (Marofandilia, Ampataka, Beroboka, Mandroatsy, Anketrevo, Lambokely, Kiboy, Tsitakabasia, and Tsianaloka) were trained at the Rural Information Center of Marofandilia. The content of the training was focused on the protected area management strategy, the monitoring and forest control system in the forests managed by villagers and the core Protected Area zone, in addition to the procedures to be followed in case of infractions. The trainings were followed by field visits to put the methods learned in practice.

The wood traceability system was discussed with MNP and CNFEREF but no agreement was signed. This system is new to the country and does not have a formal legal framework that would enable its application.

Ongoing Activity 3.2: Develop participatory ecological monitoring

The project continued a unique study on different approaches to local forest monitoring and control protocols (MOMA). This involved comparing the results from participatory village patrols to more rigorous scientific transect surveys carried out by project staff. There was no significant difference in the level of pressure and threats recorded between the two methods, although village patrols see more biodiversity. The methods produced comparable results on recording levels of biodiversity. A US Forest Service team participated in MOMA to learn our methods. These techniques may be incorporated into USFS recommendations to govern village logging concessions supported by USAID in other tropical countries.

With funding from Jersey Wildlife, results in Menabe were compared with similar methods employed in Tanzania, Nicaragua, Philippines and Ghana. Although the different countries are employing different methods, none was found to be simpler or better at detecting changes than the methods currently being employed by the project. Also, ten COBAs participated in ecological monitoring in dry deciduous forest in Menabe Antimena in 2008-2009, while four COBA monitored the ecology of mangrove forests.

A two day training workshop was held to train all the CFL to carry out participatory ecological monitoring in the ten villages in the dense dry forest of Menabe Antimena. Fifty-six CFL took part in the workshop, and the meetings were also well attended. All patrol teams were also presented with uniforms and as of January 2009, all patrol teams will be provided with regular meals on days when they carry out their patrols.

The results of the participatory ecological monitoring data from 2008 were analyzed in early 2009 and showed positive results including an increase in Giant Jumping Bat burrows and regeneration of Hazomalany native tree species; an improvement in the control of illegal cutting of large trees for construction and making of *pirogues* (canoes); and reduced hunting, without a single lemur trap found in 2008.

A draft report on the final recommendations of participatory ecological management was submitted to Protected Area managers. Some of the key recommendations and lessons learned include:

- Support to participatory ecological monitoring should be continued over the long term in conjunction with the environmental competitions. It is currently a proven method for encouraging sustainable use of forest resources in Menabe Antimena.
- Monitoring must be regular and flexible. As of 2009, participatory ecological monitoring is carried out by communities 3 times per month, and this has been found to be effective in identifying and controlling threats. A flexible system is recommended that can either increase the level of monitoring when threats are perceived to be increasing, either in certain localities or at certain times of the year, but be reduced in other areas where threats are not as severe.
- Threats to the forest vary seasonally, with the dry season being the worst period for illegal burning and cutting of wood. The wet season is a period of increased hunting within the forest (lemurs, tenrecs). Increased human presence for non-hunting activities (honey collection, root crop collection) during the wet season also leads to an increase in pressure on wildlife as people and their dogs hunt for food while in the forest.
- Communities can effectively undertake monitoring, although there is a minor problem with illiteracy as some monitors are unable to write down what they see. The current system of control developed by the project works very well. Communities remain motivated because they are provided with regular meals on days when they carry out the monitoring work. Local people are also motivated to carry out monitoring as they associate the monitoring with the environmental competition, which has direct socioeconomic benefits for their communities.
- Participatory monitoring should be geographically expanded so that communities can be encouraged to expand their responsibilities and become involved in monitoring areas of core forest outside of their own management areas.
- Participatory ecological monitoring results in better identification of threats but lack of follow-up government enforcement hampers these efforts. Illegal activity is identified as it happens but there is little follow up in terms of sanctions or penalties by enforcement agencies.
- Larger, more inclusive meetings including school children and adults together are successful venues.
- Participatory ecological monitoring in mangroves needs to be more effectively developed and criteria need to be redefined. Mangrove monitoring is currently not cost-effective and requires a large amount of time.

Objective 4: Reduce impacts of unsustainable practices and demonstrate benefits of conservation.

Objective 4 focuses on the issue of sustainability of local people's livelihoods (e.g., development issues) as well as of the protected area (e.g., sustainable financing issues). Ecotourism has become an important sector for the region, and the project worked in collaboration with the USAID-funded project "Increasing the Competitiveness of Micro and Small Enterprises in the Tourism Industry in Madagascar". In addition, the project continued to cultivate and strengthen partnerships with development actors such as SAHA.

Ongoing activity 4.1: Implement the ecotourism development plan

Certain externalities delayed progress to develop a tourism plan. The government issued opposing decrees regarding management of the protected area, which has caused confusion and prevented the MNP and the CNFEREF from reaching agreement on the entrance fee for the protected area. Therefore, we adapted the activity and approached the Regional Tourism Office of Menabe (ORTM) to engage private tourism operators such as Baobab Café, Palissandre Cote Ouest, Chez Maggie, and Renala in partnerships. Private operators were consulted to integrate their views and experience into the Protected Area tourism strategy. In addition, trainings by the local partner NGO FORMA on maintenance of park infrastructure and services (food and beverage) were provided both to private operators and members of the surrounding communities. The strategy attempts to consolidate relationships between local communities and tourism operators to develop revenues for park maintenance and community livelihoods. FANAMBY is confident MNP and CNFEREF will have incentives to participate in PPP once the benefits from improved tourism are made tangible. Given the current constraints to management this seems the only viable strategy.

In addition, potential sites for tourism activities were identified in the Lake Bedo, the village managed forest Lambokely (under community management) and Marofandilia. Lastly, trainings on three themes were carried out to promote capacity of the Boabob Alley Protected Area guides (through USAID-funded project “Increasing the competitiveness of micro and small enterprises in tourism industry in Madagascar”.): a) knowledge and understanding of a Protected Area; b) financial mechanism and opportunities for funding sources for Protected Areas; and c) awareness of important role guides play in the Menabe area.

Ongoing activity 4.2: Develop economic reforestation in the medium and long-term

Since the forest has a very low natural regeneration rate, restoration enables connectivity. This activity focused on finalizing a five year restoration plan for degraded areas and planting trees produced in the Marofandilia tree nursery in collaboration with the local community competitions described above. Production of seedlings in the nursery will continue at the same level as in past years. Planting will conform to the technical specifications developed by CNFEREF for native species. The five year action plan for corridor restoration activities aimed to reconnect the two main dry forest blocks. Restoration should be carried out following an updated planning scheme. Community members of Mandroatsy were interviewed to assess the level of ownership and involvement in conservation actions. This will help define the strategy to implement restoration activities with their full compliance.

Native species were planted such as the *Dalbergia sp*, and the *Hazomalania voyroni*. Activities also included the production of 5,000 young seedlings in the Marofandilia nursery of 4 distinct species: *Commiphora*, *Colvillea racemosa*, *Gyrocarpus americanus*, *Alleanthus greveanu*. A total of 4,600 seedlings were planted in the corridor. In addition, to enable natural regeneration, the project restored the clearings produced by land cleared by fires in order to increase the density of the forest, over a total of two hectares. The program also rehabilitated 3,074 m of fire breaks.

The FUZION project set up the Bekonazy nursery, which enabled communities to engage actively in reforestation and/or restoration projects. FUZION is a French based company that markets traditional handicrafts and provides 1 EURO per item sold which is reinvested in

reforestation. This has broadened the local vision on how to provision communities in construction and fuel wood.

Ongoing Activity 4.3: Support the development of conservation incentive mechanism to engage local communities in active conservation measures

There have been significant improvements in forest conservation by communities over the life of the competition. For the first time, in 2009 comparative results from communities bordering mangrove forests were obtained.

Evaluations carried out in the context of PhD research by a student from the University of London, assessed to what extent the competition is changing attitudes toward the forests and wetlands and to what extent the development prizes are changing lives. The PhD thesis is scheduled to be published at the end of 2009.

Since 2004, the project has organized an Environmental Competition at Menabe. In 2008-2009 the competition included 10 villages managing dry forest and 4 responsible for mangrove forest. The results of the environmental competition for dry forest were announced and prizes distributed. First prize was given to the village of Tsitakabasia and funds will be used to construct a school. Second prize went to Kiboy and was used to buy equipment for processing rice. The data from the environmental competition for mangrove communities in Menabe were also analyzed, and first prize was awarded to the village of Bevava.

The draft report on the evaluation of the role that environmental competitions have played in the changing of attitudes and livelihoods of participants will be submitted to protected area managers at the end of 2009. We already have some of the key recommendations and lessons learned:

- Prizes are changing people's lives in small ways. Villages have chosen prizes that benefit the community as a whole, like items which improve agricultural yield or make growing food easier.
- This system may be integrated into the Protected Area management plan and budgeted within the overall operational costs which cover monitoring and control activities. This system is also complementary to sustainable livelihoods development which has a long term perspective.
- As it is difficult during the wet season to find food, people still need to enter the forest to hunt and gather items such as root crops, but they are also likely to be less destructive while in the forest than before the initiation of the environmental prizes.
- It is critical that the environmental competition be made part of permanent policy as it is the only method currently helping communities protect the forest of Menabe.
- It is recommended that a monitoring system be implemented to follow the results of prizes and their relative benefits to the community.
- Awareness building for young people during school visits and village festivals may be as effective over the long-term in changing attitudes and complementary to the short-term changes in the adult population from the environmental competition.
- As 2008-2009 was the first year of the competition for mangroves, criteria will likely need to be evaluated and improved. More villages may be added for 2009-2010.

Ongoing activity 4.4: Seek long-term funding mechanisms for the new protected area

The sustainable financing proposal to manage the Protected Area in the long term has been set up. However, the business plan has encountered several obstacles and has not been completed. One of these obstacles has been the lack of agreement and harmonization of approaches by park managers on how to unify the protected area tourist entrance fee. In addition, due to the political crisis the protected area has seen a significant decrease in tourist visits, creating further disincentives to unify fees.

In addition to tourism revenues, the sustainable financing mechanism is based on organic agricultural products (which are successfully being produced by local farmers), carbon contracts, a compensation mechanism with oil operators, and a participatory tax system with economic operators working in the area.

The project has helped bring together mining companies, policy makers, and communities. The project promoted the integration of controlled mining into the COAP (in IUCN category V/VI protected areas), negotiated with Madagascar Oil to integrate local communities into the dialogue on potential mining sites within the forests, and had a workshop where Madagascar Oil discussed these issues with local communities. This provided communities with understanding and stronger negotiating power with the private companies and methods to formulate demands to state services. In addition, the project was successful in integrating stronger responsibility by oil companies into national legislation through the amended COAP law. This includes requiring mining and oil companies to adhere to specific rules and regulations before initiating any exploration within protected areas, and a complete prohibition on these extractive activities within the core protection zone of protected areas.

Ongoing activity 4.5: Promote investments in high-potential revenue-generating activities that offer alternatives to natural resources degradation in Central Menabe

Organic products add value to agriculture products produced in and around the Protected Area creating higher revenues for farmers. This year 16 families living in the villages of Lambokely, Kirindy and Bekonazy benefited from the production of Valencia peanuts. With 310 kg of seeds for peanuts Valencia, production of 1.846 kg was recorded, with an additional income around 80.368 ariary per household. Lambokely benefitted from the equivalent of 595.700 Ariary; Kirindy, 425.600 Ariary; and Bekonay, 264.600 Ariary. An additional 10 families in the Tsitakabasia community management association have received 337 kg for an amount of 505.500 Ariary of lentil seeds and working tools (plow): equivalent to 3.335.200 Ariary. Communities received training on biological production systems and quality standards.

We have developed a standard organic label, SAHANALA, which follows international standards. Local farmers have been trained to reach these standards in their agriculture production and have consequently obtained the SAHANALA label. This has enabled farmers to learn and carry out production to acquire international certification in the future, which will considerably increase the value of their produce. No new contracts have been signed with partners because of the political situation.

III. Brazil

A. Key Short- and Long-Term Program Objectives for the Site

Since 2000, CI-Brazil has been promoting the concept of biodiversity corridors in two regions of the Cerrado in order to conserve biodiversity within and outside protected areas. CI-Brazil and local NGO partners, including Oréades and the Bioeste Institute, are working with Bunge and Monsanto Company in the Emas-Taquari Biodiversity Corridor and the Jalapão-Western Bahia Biodiversity Corridor to engage local farmers in biodiversity conservation on private lands. After identifying critical areas for the maintenance of populations of threatened and endemic species, CI engages local farmers and ranchers in establishing corridors that include a network of protected areas in a wider biodiversity-friendly landscape. Farmers are invited to participate on a voluntary basis. To complete the positive scenario CI undertook a participatory planning process in each corridor to define plausible land use scenarios that address the needs of soy producers and conserve key species.

CI and partner organizations aimed to address threats to biodiversity in corridors through four strategic objectives:

- 1) Foster alliances between southern and northern Cerrado organizations to design and begin implementation of a Biodiversity Corridor in the Cerrado's agricultural frontier;
- 2) Build local support for the Northeastern Corridor;
- 3) Facilitate and encourage efforts by Cerrado-Pantanal Corridor members to finish implementing the Emas nucleus of the Cerrado-Pantanal Corridor;
- 4) Expand Cerrado-Pantanal Corridor protected areas in the Pantanal basin and consolidate ownership of the corridor management system to local partners and stakeholders.

B. Summary of Progress for Site

The following list summarizes key outcomes of, and progress in, this project over the past year:

- Supported the creation of a new Private Natural Heritage Reserve (RPPN) in the Upper Paraguay Basin (UPB), and supported the implementation and consolidation of existent RPPNs. This activity has increased the area under legal protection in UPB and has improved management in several areas by means of the Pantanal's Private Reserve Incentive Program. The Program is developed by the Association of Owners of Private Natural Heritage Reserves in Mato Grosso do Sul state (REPAMS). CI-Brazil has helped the REPAMS to build a permanent fund to support new actions and sustainability in associated private reserves;
- Trained partner staff in developing and effectively implementing communication tools;
- Supported Jalapão State Park and Serra Geral Ecologica Station in Jalapão West Bahia Corridor to create a protected area mosaic;
- Mapped forest remnants in the Upper Paraguay Basin and started a monitoring system with other key organizations;
- Monitored Emas Taquari Corridor land use change and shared information among local authorities;

- Supported launch of a carbon offset project to implement land restoration in Emas Taquari Corridor;
- Continued restoration of permanent protection areas in the region of Córrego do Café basin, in the Rio Negro headwaters, where ESALQ-USP had concluded mapping of forest remnants;

Objective 1: Foster alliances between southern and northern Cerrado organizations to design and begin implementation of a Biodiversity Corridor in the Cerrado's agricultural frontier.

Despite the geographical and biological differences, the conservation challenges and goals are very similar among biodiversity corridors in the Cerrado. Experiences and lessons learned from major challenges must be exchanged among actors in each corridor, ensuring maximum efficiency in conservation. With that in mind, during GCP II a plan for an exchange of knowledge and information was implemented among CI corridors. Under this Objective, CI consolidated experiences with an exchange program between Emas-Taquari and Jalapão West Bahia to support more effective collaboration among corridors.

Ongoing activity 1.1: Link the existing Cerrado-Pantanal corridor structure with the northeastern region, through a long-term learning and knowledge-transfer program driven by local stakeholders

For the last ten years, CI and its partners have been working on the implementation of biodiversity corridors. This period has been a time of learning under a continuous process of evaluation and improvement. This accumulated experience is partially reported in the annual reports and evaluations of the program. Thus, the Oréades and Bunge Foundation, a local partner, has listed all the activities and projects related to the implementation of the Cerrado-Pantanal Corridor and the people directly involved in these activities. There is a list of 157 activities and the involvement of 76 people. Oréades selected 50 testimonials of people who were directly involved in the activities to come up with a document as a record of the program. Researchers, teachers, environmentalists and governmental technicians were invited to report their personal experiences with the project, their motivations and the results reached. These materials are in the final stages of development and will be ready by the end of November 2009.

Ongoing activity 1.2: Work with North-South alliance to build park management capacity in the North

The effort to create the mosaic of protected areas in the Jalapão region continued with the work of Onça d' Água Association. There is currently an intense debate among conservationists about the creation of protected area mosaics, which was one of the themes in the last Brazilian Conference for Protected Areas held in September of 2009. At the meeting, the lack of technical parameters for assessing the viability to create the mosaics was discussed. The definition of the eligibility and parameters criteria for the creation of the mosaics is expected in the coming months. Although the mosaic did not attain acknowledgement by the Ministry of the Environment, there are practical actions to integrate the protected areas, especially among the Jalapão State Park and the Ecological Station of Serra Geral in Tocantins. There is an integrated plan for these two reserves regarding control and prevention of fire in the region of Mateiros, where both protected areas are closer.

During this reporting year, the expected transfer did not take place with the Onça d' Água Association. As of July of 2009, the accountability of the FY08 agreement had not been carried out and terminated in January of 2009. This accountability was delivered in August of 2009, with no time for a new agreement for the FY09.

Ongoing activity 1.3: Work with northeastern corridor stakeholders to create new public and private protected areas

The Bioeste Institute is still waiting for the assessment of the three proposals tendered to the state environmental agency for the creation of private reserves in the region of Western Bahia. According to the state environmental agency, there are no human and financial resources for the field surveys required. While these processes are still on hold, CI and Bioeste worked on two other fronts to ensure the maintenance of the native vegetation areas enclosed in private properties. The first alternative was to create the first area of state forest easement. This type of protection is similar to the conservation easement in the US. In this case, the HSBC bank is donating monthly to the owners' part of its insurance policy collection, thereby holding the owners responsible for the preservation of the area. This mechanism brings the possibility of avoiding deforestation in the region, without the need for governmental interference, thus making the process go faster.

Another strategy for protecting vegetation on private lands is the project conducted in partnership with Monsanto, also in the region of Western Bahia. Following the successful model carried out in the Cerrado Pantanal corridor by Oréades, the Bioeste Institute worked on the regularization of native vegetation reserves required by the Forest Code. The region is required to maintain at least 20% of the native vegetation, in addition to protecting the river banks and the springs.

Objective 2: Build local support for Northeastern Corridor

Local support for biodiversity corridors depends on three major tasks: providing support to local governments for protection of natural resources; engaging landowners to achieve better results in reconciling the impacts of economic activities with the need for conservation; and improving awareness of local communities by providing good quality information. This year CI continued concentrating our efforts on significantly increasing local support for the Jalapão West Bahia Corridor. We continued our work with the Jalapão municipalities, and worked more closely with landowners.

Ongoing activity 2.1: Build support and assist in generating a long-term change of behavior in land use in the corridor using communication and environmental education

In 2008 CI-Brazil facilitated a course on radio journalism for the Bioeste team as well as for volunteers in Formosa do Rio Preto. As a result, Bioeste started to produce the radio program Fala, Cerrado, which is aired by the local station Barreiras AM every Saturday, featuring news concerning environmental issues as well as target-behavior change. In 2009, CI-Brazil introduced to Bioeste the participatory-video tool, conducting a workshop on the use of video to produce information on environmental local issues.

After a photo expedition in the Jalapão-Western Bahia Corridor, which took place in June 2007, the intent was to produce an itinerant photo exhibit in the region. The goal of the photo exhibit is to provide local populations with information in text and images on the biodiversity

of the area and the main threats to it. However, the photo exhibit has been delayed until 2010 and will be fully funded by Monsanto.

Ongoing activity 2.2: Increase partner development capacity

There were many difficulties to deal with in the Jalapão region this fiscal year. Despite the progress achieved with the formation of the mosaic of protected areas, other activities did not achieve success. The proposal to create a protected area in São Felix in Tocantins will not be continued, mainly due to the city's priority modifications. At the same time the city no longer shows interest in the proposal, the environmental agency of Tocantins; Naturatins, is undergoing a substantial crisis, with personnel cuts and corruption complaints. Such institutional instability has impaired project activity that depended on the interaction with public power.

Considering the situation described above, our building efforts have turned to our other partner, Bioeste, in the region of Western Bahia. Unlike the situation in Tocantins, the institutional situation in Bahia is somewhat more stable and has enabled significant advances. In addition to communications training and actions, we have a technical team in Bioeste capable of meeting various topics, such as management of water resources, biodiversity protection and environmental adaptation in private farms.

Objective 3: Facilitate and encourage efforts by Cerrado-Pantanal Corridor members to finish implementing the Emas nucleus of the Cerrado-Pantanal Corridor.

At the beginning of this reporting period, the Emas Taquari Corridor was already in advanced stages of implementation, with protected areas in the process of consolidation, representative councils organized, and surveillance and monitoring programs operational. However, improved monitoring activities were essential, as the expansion of sugar cane and potential soybean plantations could drastically change land-use patterns, increase pressure on Cerrado remnants, and increase stress on hydrological resources.

Ongoing activity 3.1: Ensure that key partners and community planners have the capacity to obtain and use corridor-scale monitoring data

As a way to positively interfere in the environmental adaptation process of rural properties in the region, CI and Oréades have started a pilot project to use carbon credits in the environmental recovery actions. Eight areas were selected, which total nearly 600 hectares, thus guaranteeing reforestation and subsequently carbon sequestration for 30 years. The documentation is being prepared for the validation and certification of the amounts of carbon to be sequestered. By the beginning of 2010, the credits will be available for trading. This is the first initiative of its kind in the region and the second in all of the Cerrado. It is expected that the credits generated will be sufficient to cover the costs of new projects, thus gradually increasing the area recovered.

The fifth monitoring of land use and vegetation cover of the Emas-Taquari biodiversity corridor was completed. CBERS and LANDSAT images of the second semester of 2008 were used, with treatments already defined in previous technical discussions. This initiative directly involves students of forestry and agronomy, developing capacity building for studies in remote sensing. The new results showed the expansion of sugar cane is mainly over cropland (60%), planted pasture (32%), and natural areas (8%). These data follow the

tendency observed in other CI large in a large scale work: the expansions of sugarcane are not occurring only on degraded land, but are impacting food production and provoking deforestation. A national effort for zoning sugarcane production was just launched, and now at least half of Emas Taquari corridor is not allowed to produce sugarcane.

Ongoing activity 3.2: Build the capacity of key agencies and partners to collaborate in planning and managing the corridor

Oréades organized the biodiversity regional data and together with CI defined the Key Biodiversity Areas (KBAs) in the Cerrado Pantanal corridor. Data was compiled on the threatened and endemic fauna of terrestrial vertebrates, fish, and endemic plants. In all, there were 23 endemic species and 24 threatened species, with confirmed occurrence in the region. The occurrences of these species were cross referenced with the boundaries of the drainage basins to demarcate the KBAS. A total of 10 areas were defined that are located entirely within the limits of the corridor and six more peripheral areas, which partially overlap with the corridor area. For each defined area, a detailed study of the progress for land use was conducted by identifying the areas that are most at risk. This study, in digital form, was distributed among the local stakeholders according to the work plan.

Regarding the availability of online data, CI's Information Technology team worked to unify the presentation of KBAS throughout Brazil, enabling public consultation and cross referring with different levels of information, such as the demarcation of the corridors. Part of the data, specifically the occurrence of endemic plants, is already available at:

<http://www.plantasraras.org.br/localizar.php>.

Objective 4: Expand Cerrado-Pantanal corridor protected areas in the Pantanal basin and consolidate ownership of the corridor management system to local partners and stakeholders.

During FY09 we continued our work in the Maracaju-Negro Corridor, focusing on promoting the creation of new private reserves; monitoring the major threats to biodiversity in the region; and restoring degraded areas in critical regions, such as headwaters of the Rio Negro Basin. We concentrated on the region where there are key areas of the headwaters of Rio Negro Basin, which is a very important river flowing into the Pantanal plain. These actions collectively will contribute to the effective implementation of the Corridor. It is very important to keep – and even enhance – the network of partners to guarantee the long-term sustainability of the project.

Ongoing activity 4.1: Maintain Connectivity and Ecological Processes in the Serra de Maracaju – Negro Corridor by creating new private protected areas

In May of 2009, the Fazenda Rio Negro was officially recognized as a Ramsar site, becoming the second private area in the Pantanal to achieve this status and the first in the Maracaju-Negro Corridor. This title is a recognition of the importance of the area, which is characterized by the abundant presence of freshwater or alkaline lakes ('baías' and 'salinas', respectively), as well as permanent and intermittent rivers. The site hosts more than 400 species of plants, 350 of birds and 70 of mammals. Among them are threatened species, such as the Giant Otter, Marsh deer, and Hyacinth Macaw. Migratory bird species are also present in the site, e.g. *Tringa melanoleuca*, *Himantopus melanurus*, *Tachybaptus dominicus*,

Dendrocygna viduata and *Coscoroba coscoroba*. Cattle farming is related to two of the main threats to the site: uncontrolled fires caused by neighboring ranches and the introduction of exotic herbs. Hunting and fishing are legally banned in the area. The management plan was dispatched to the state agency for the environment and is currently under revision.

Another important result regarding the creation and management of protected areas was the conclusion of the third statute of support for private reserves, performed in partnership with the Association of Owners of Private Natural Heritage Reserves in the State of Mato Grosso do Sul (REPAMS). The third request for proposals supported the REPAMS in the Paraguay River Basin, especially to protect critical areas in the Cerrado-Pantanal Corridors. This third statute supported four creation projects and twelve management actions, which included actions for protection, fire prevention, ecotourism infrastructure and the development of management plans. Such support is currently ongoing and is expected to be concluded in November 2009.

The REPAMS already include more than 70% of the private reserves as associates and have increased their regional influence, becoming a reference for legal issues and private land conservation. This situation was also worked in partnership with the state environmental agency, providing assistance in technical training and financial and logistical support for field verifications. This positive scenario has prompted the REPAMS to elaborate a strategy to raise funds for structuring a fund that gives financial sustainability to the actions in the private reserves. With the support of WWF and CI, this initiative will be launched in November 2009 and expects to acquire six million Reais over the next three years, thus ensuring the continued support for the program.

Ongoing activity 4.3: Increase knowledge on Corridor threats and disseminate findings

The mapping initiative of all of the UPB planned by the alliance of CI, WWF, Ecoa, Avina Foundation, and businessman Roberto Klabin, was completed and presents the most complete and updated assessment of the entire Pantanal complex. The mapping was performed on a scale of 1:50,000 and included intense field validation, and the analytic accuracy indicates errors of less than 1.5%, a standard above what is considered acceptable in a mapping scale. Although the official document will be ready for release at the end of October of 2009, the spatial data in digital format are already available.

These data show a strong change of the river springs flowing into the Pantanal, and the relatively good state of conservation of the wetlands. While the region of the springs shows more than 55% of deforestation, the wetlands indicate only 11% of occupation. This disturbing scenario was expounded to the Ministry of the Environment, which helped in the decision to exclude the UPB as an expansion area for sugar cane biofuels. Another outcome of this initiative was the creation of an NGO called SOS Pantanal, which will lead, along with other partners, the initiative for regular monitoring of the UPB.

Another important action that was completed this fiscal year and that will help in assessing threats and assist in guiding public policies, is defining the KBAs for the Pantanal. As described in Activity 3.2, CI is currently using information on the occurrence of endangered and endemic species and water basins to define key areas for conservation. In addition to the threatened vertebrate species, this year fish species and endemic plants were included.

Lastly, in order to summarize the ten years of work of GCP in the Pantanal, a compilation of

all the actions undertaken by the program was performed. To conduct this work, a company was hired to analyze all the technical reports produced by CI and partners. These data were organized as a digital publication to be distributed among the partners and stakeholders.

Ongoing activity 4.4: Support land use planning and assistance for the Corridor municipalities located at the headwaters of the Rio Negro

The recovery project for the Rio Negro fountainhead, carried out by APREMARINE and sponsored by Petrobras and supported by CI/GCP-USAID, has presented its first results. Four additional owners have joined the initiative, totaling 28 participating owners, representing 40% of the Café River basin. A total of 136 technical visits have been made to the properties in the micro-basin this year.

In the basin, 1,681 acres of PPAs were identified, which will be areas demarcated and isolated from the productive areas. This isolation work is being carried out by the owners, with 20% of the area already completed. The goal is to have all of the PPAs isolated by the end of 2010. This isolation is essential for the Public Ministry to recognize the effectiveness of the project and to consider the actions as sufficient for mitigating the region's environmental liabilities. In addition to the undertakings with the PPAs, APREMARINE is allocating the legal reserves under the Forest Code. Over 500 hectares of these reserves have already been allocated, representing a major breakthrough in the regularization of the region's properties.

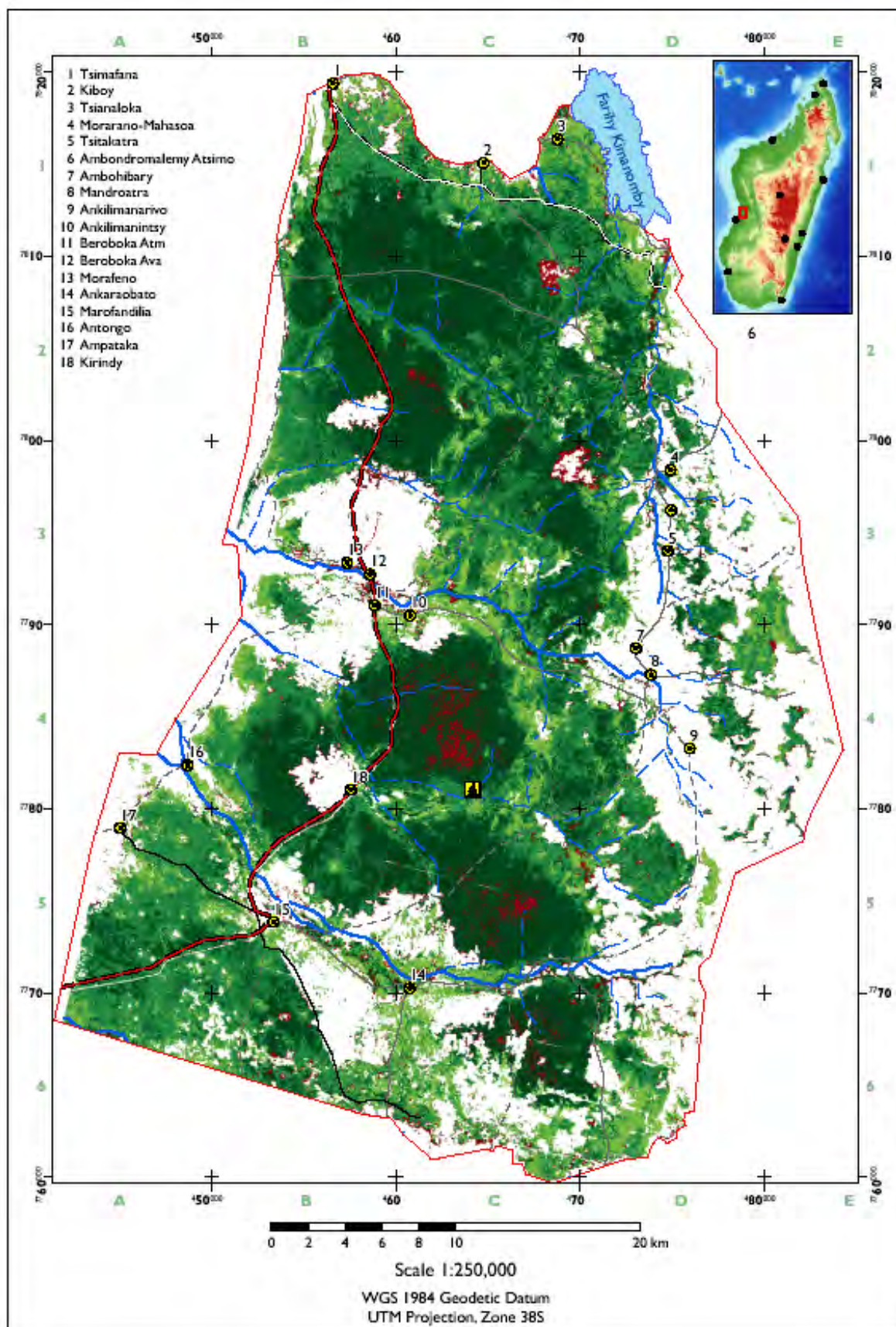


Figure 1: Forest cover map of Menabe

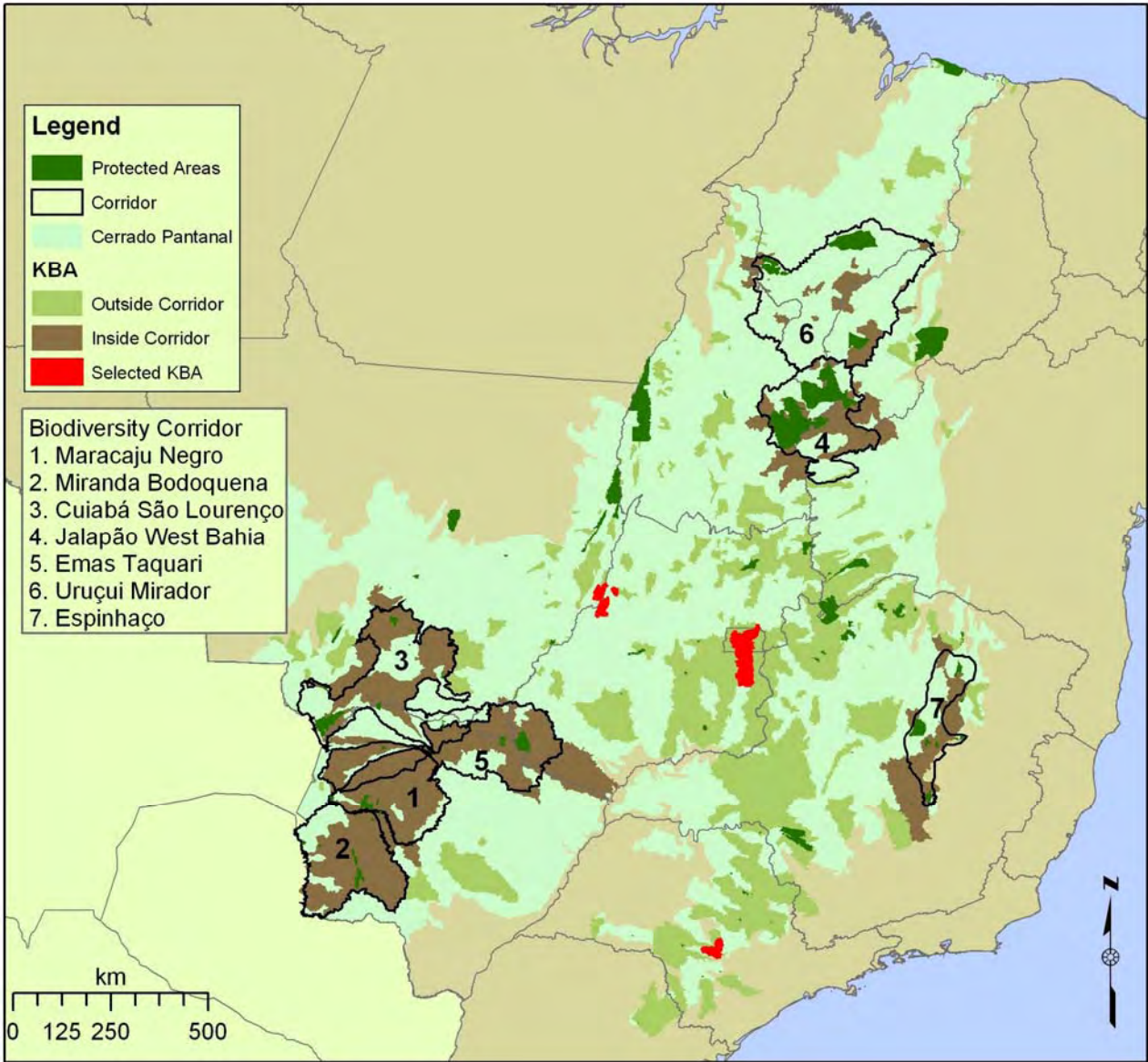


Figure 2: Cerrado-Pantanal Site