

An Overview of CEPF's Portfolio in the Madagascar and Indian Ocean Islands Biodiversity Hotspot: Madagascar

The Madagascar and Indian Ocean Islands Hotspot comprises the island nation of Madagascar, and the neighboring island groups of the Mascarenes, Comoros and Seychelles. Located in the western Indian Ocean off the eastern coast of Africa, the hotspot harbors an estimated 10 percent of its original vegetative cover. Phenomenal levels of biological diversity and endemism characterize the hotspot. New data released in 2005 following a global hotspots reanalysis indicates that the hotspot is home to 10 endemic plant families and at least 12,000 species of plants, of which around 90 percent are endemic. Of all the plant species in the Afro-tropical region, 25 percent of them are found in Madagascar. The island is also the world's top priority for primate conservation, with 36 of its primate species unique to the hotspot. In addition, there are 340 species of reptiles, of which 314 are endemic. Almost all of the amphibians are unique to the hotspot, with 215 and 217 species on Madagascar being endemic. Overall bird diversity in the hotspot is relatively low, yet there are high levels of endemism, with Madagascar for example hosting 283 species – of these, there are 109 endemic species and five endemic families. CEPF investment is focused on Madagascar, as this island contains the largest amount of remaining habitat in the hotspot, and has the most significant national system of protected areas.

Madagascar's biodiversity faces an immense array of threats. It is estimated that as much as 80 percent of the islands' original forest cover has disappeared in the 1,500-2,000 years since the arrival of humans. The current population estimate is 15 million, and is increasing at a rate of 3 percent each year. Poverty is extremely high and Madagascar is regarded as one of the most economically disadvantaged countries in the world. Key threats include agricultural expansion, in particular for upland rice production that results in a loss of about 2,000 square kilometers of forest per year. Uncontrolled livestock grazing leading to clearance of vegetation, and fires, charcoal production, mining, hunting, timber exploitation, and uncontrolled international trade in plants and animals are also serious problems. These threats, coupled with insufficient local technical capacity, limited biodiversity information, inadequate government presence to manage and protect natural resources, and ambiguous policies, present a complex set of challenges that need to be addressed if biodiversity conservation and sustainable livelihoods for the people of Madagascar are to be achieved.

CEPF initiated investment in Madagascar in December 2000, with the approval of the Ecosystem Profile by the CEPF Donor Council and an allocation of \$3 million to be spent over five years. In December 2001, the Donor Council allocated an additional \$1.25 million to this hotspot. The additional allocation was made after the MacArthur Foundation joined CEPF and additional resources became available, resulting in a reassessment of allocations. In addition, the reallocation responded to the MacArthur Foundation's desire to provide increased resources to a focused number of hotspots. The CEPF investment strategy for Madagascar is based on conservation planning and

implementation efforts undertaken in the last decade. The strategic investment opportunities build on initiatives such as those put forth under the auspices of the National Environmental Action Plan, and recommendations that emerged from Madagascar's Conservation Priority-Setting Workshop (CPW) convened by Conservation International in 1995.

Given the small allocation for this hotspot, CEPF has sought to play a strategic role in activities that would provide incremental value in addressing national-level threats, and leverage additional resources to meet conservation objectives. The niche for CEPF investments in Madagascar is to support projects that focus the many disparate efforts at work in the country, and ensure that the best and most scientifically sound information is available to shape decisionmaking by a broad range of actors, in particular those at the highest level of government. In addition CEPF has sought to build the technical capacity of Malagasy staff within both international and local nongovernmental organizations (NGOs) in an effort to develop sustainable local capacity for conservation.

The CEPF strategy is described in the CEPF ecosystem profile (2000), and includes the following strategic directions that guide CEPF's investment in the region:

1. *Integrating local groups and individuals in the management of protected areas and reserves.*
This strategic direction addresses the lack of local civil society involvement in protected area management, and particularly has addressed the need to increase and improve the performance of local NGOs in protected area management and conservation in general. Given the enormity of the task and the inability of national authorities to fulfill all the needs for protected areas and for new areas that will be afforded protected area status in the future, this strategic direction has been a major priority for CEPF investment.
2. *Enhance private sector conservation initiatives.*
The need to create alternative livelihoods for people living near protected areas is urgent, due to intense poverty and the resulting threat of encroachment and natural resource exploitation. This strategic direction was developed with a view toward mainly tourism, yet CEPF has looked at the issue more broadly. To date, however, CEPF has not received many applications under this strategic direction – thus it is an investment area that still needs attention.
3. *Biodiversity conservation and management training programs.*
Lack of capacity has consistently been recognized as a serious deficiency in Madagascar's ability to conserve its natural resources. As such conservation activities have often been dominated by international experts and international institutions, a situation that is regarded as unsustainable in the long term. This strategic direction addresses this concern and thus has had a focus on Malagasy staff of local and international conservation organizations, as well as students at a number of the country's universities.
4. *Public awareness and advocacy.*
Lack of awareness about environmental issues and priorities, and a poor legislative framework related to protected areas, has necessitated this strategic direction. Efforts under this strategic direction have been recognized as key to

improving the existing protection for natural resources, and for securing adequate policies and actions for future protected areas.

5. *Small Grants Program (Biodiversity Action Fund).*
The Biodiversity Action Fund was conceived in order to address unforeseen circumstances, and also as a means to support conservation action at the local level, by local civil society entities. Although initially difficult to communicate and later to deliver, CEPF has addressed this priority through a block grant to CI-Madagascar so that micro-grants can be disbursed to local groups to meet priority needs identified for select geographic areas.
6. *Create a participatory monitoring and coordination network.*
Initially this strategic direction was designed to fulfill an overall coordination and monitoring mechanism, however, it was early on realized that collaborative partnerships and coordination focus groups already exist in Madagascar. As such, this strategic direction has met specific needs, for example coordination of data through the Madagascar Biodiversity Network (REBIOMA).

In addition to the identification of the strategic directions outlined above, each strategic direction has further refined investment guidance provided through investment priorities, which are more specific and concrete. The investment priorities provide more specific targets for CEPF funding in the region and are used to inform grantmaking decisions. They are included as part of the full investment priority table in the ecosystem profile and on the CEPF Web site (www.cepf.net).

To date CEPF has awarded 35 grants valued at \$4.05 million (see Chart 1 included at the end of the overview). These grants range in size from \$3,000 to \$369,636, with the average grant size being \$116,000. The full status of the portfolio to date and the timeline of grants awarded are illustrated in Charts 2 and 3.

CEPF investment in this region also has a strong geographic focus. The 1995 Conservation Priority-setting Workshop, a 2001 workshop attended by experts on Madagascar's biodiversity, and preparation for the 5th IUCN World Parks Congress in Durban have all helped define the geographic focus for CEPF investment. Figures 1, 2 and 3 following the overview show this progression and refinement in geographic focus.

Portfolio Investment Highlights

The most important conservation development during the period of CEPF investment in Madagascar has been the declaration of President Marc Ravalomanana at the 5th IUCN World Parks Congress to increase the size of Madagascar's protected area network from 1.7 million hectares to 6 million hectares (from 3 percent to 10 percent), a three-fold increase. This declaration is a phenomenal achievement, credit for which is due in part to Madagascar's conservation community. It sets out a challenging and exciting agenda for the next five years. CEPF's investment in the region has contributed significantly to this development, by raising awareness about Madagascar's biodiversity, by providing the scientific data and arguments to justify the President's declaration, and by supporting international and national NGO efforts to prepare to meet this challenge.

Institutional support leading to key contributions to conservation in Madagascar

CEPF has directed significant investment into international and Malagasy NGOs, not only in capacity building and training, but also in core support to meet targeted

conservation objectives. This investment has reaped substantial rewards in terms of more and better trained staff, and concrete conservation achievements. This support has allowed these organizations to undertake conservation on the ground in high priority geographic areas, and the results have been remarkable.

Prior to CEPF involvement in the region, investment in local NGOs was not substantial. CEPF strategically invests in these organizations, largely due to the view that Malagasy NGOs must be given the opportunity to improve their performance and implementation, to deliver important conservation outputs. While the conservation community was dominated by international NGOs and the conservation challenge was (and still is) immense, the CEPF strategy aims to increase the scope and breadth of actors to promote sustainability on the national level, with the overall objective of increasing the effective management of protected areas. This investment has paid off.

The NGO Association Fanamby presents the best example of the success of CEPF investment in local NGOs. Fanamby received grants to work in Daraina and Menabe, both sites for which little funding was available prior to the arrival of CEPF. CEPF investment in Daraina via Fanamby has now led to this site, which consists of five forest blocks comprising some 66,000 hectares, being regarded as a national priority. Daraina is slated to be declared a *Site de Conservation* in 2005. Fanamby will continue its work and commitment to Daraina, and has leveraged significant funding to undertake this task.

Fanamby's work in Menabe is no less significant. CEPF's funding allowed Fanamby to raise the profile of Menabe, and thus this important site is now scheduled to become the second *Site de Conservation* to be declared under the President's new commitment to triple the country's protected area network. Furthermore, Fanamby is in the process of finalizing an MOU with the government that would give this NGO the authority to coordinate the development of the "roadmap" to conservation of this site, thereby allowing Fanamby to coordinate the many institutions and stakeholders involved in this area and develop a management plan for its long-term conservation.

CEPF's investment in international NGOs, specifically WWF, Conservation International, WCS, Missouri Botanical Garden and BirdLife International, has also resulted in significant increases in capacity of Malagasy staff, as well as notable conservation achievements. A number of CEPF grants focus exclusively on training, although most encompass training nested within projects with ambitious conservation objectives.

Especially notable is WWF's Ecology Training Program (ETP), a partnership program between WWF and Malagasy universities which aims to provide clear guidance, aid, and mentorship to Malagasy graduate students enrolled in the ETP. More specifically, this program provided the means for enrolled students to have considerable guidance with field projects associated with their higher degrees in the field of biology. Further, the interactions (e.g. university courses and field schools) of project members with other Malagasy students not enrolled in ETP provided another level of capacity building for the next generation of Malagasy conservation biologists. At the close of 2004, the CEPF funds had supported two Ph.D. students into the final stages of their dissertations (presentations pending), had ushered five Ph.D. students and three D.E.A (masters) students into the stage where they are writing their dissertations, and had supported the participation of 64 students in field schools. While the training received by these students has increased the capacity and academic standing of the students enrolled in

the program, it is also crucial to note that the data obtained during biological inventories undertaken by students under the guidance of the project senior staff has played a major role in providing information that can be used to identify priority conservation actions.

Support to CI-Madagascar, in particular their *Biodiversity Conservation Training Program*, has resulted in students at the University of Antananarivo receiving specialized courses and modules in biodiversity conservation. Small grant funds were allocated to students to undertake field surveys and research. By the close of the project 32 post-graduate field studies were conducted, most of which focused on threatened flora and fauna and thereby contributed valuable data of use for conservation in Madagascar. This case is an excellent example of CEPF funding enabling a good idea to be tested which now runs with funding from many different sources.

Specialized training has been supported as well, for example through Missouri Botanical Garden's *Assessment of Priority Areas for Plant Conservation in Madagascar*, and The Royal Botanic Gardens, Kew's project *Mapping the Vegetation of Madagascar*. While some project staff have received training in the USA and the UK, these programs also entail extensive training of local staff in Madagascar, and involve students in the project work, with oversight from project staff for doctorate or master's programs.

Institutional support to other grantees, including the BirdLife International Madagascar Program, L'Homme et L'Environnement (MATE) and MATEZA, have assisted these organizations to undertake conservation action in the Mahavavy wetlands, the Vohimana Forest, and Zahamena National Park, respectively. MATEZA in particular, as a fledgling Malagasy NGO, has been able to grow and deliver conservation benefit through CEPF funding. The organization is one of the first Malagasy civil society groups to integrate the economic and health needs of local people into its conservation approach. It's three-year CEPF-supported project benefited up to 40,000 people in some 94 villages around Zahamena National Park, significantly raising the local communities' capacity to care for both the area's forests and themselves.

CEPF's support to local and international institutions has resulted in stronger core functionality and competent staff, and armed with these tools, these NGOs have maximized their potential and have delivered key conservation outputs. The results can be seen on local and national levels, and set a sound foundation for the future.

Supply of key information in support of the Durban Declaration

CEPF investment played a major role in the preparation leading up to the 5th IUCN World Parks Congress, and the subsequent presidential declaration to increase the country's protected area network. While many projects have yielded scientific data important for identifying species and geographic priorities that have been used to formulate the justification for the bold move by the President, one project undertaken by CI-Madagascar has been instrumental in instigating a change in policy. The project *Biodiversity Advocacy in Madagascar* has aimed to conduct focused policy advocacy related to the third phase of the National Environmental Action Plan (PEIII) and the Durban Declaration, and specifically has supported the activities of CI's executive director to participate in the policy realm. Under this grant, the executive director has participated in committees established to finalize PEIII and prepare for the World Parks Congress, has led his team in collaborating with the World Bank and other donors on studies of the economic value of biodiversity and natural resource management undertaken in preparation for the Congress, and has orchestrated a wide range of

communications activities designed to raise awareness about Madagascar's biodiversity within the country as well as during the event. This work has also involved promoting good governance within the forest sector, via a forest sector roundtable, and the executive director has participated in a consultative committee on forest policy. CI's work, which includes numerous studies, technical assistance, and pilot projects, has been instrumental in contributing to the process of developing a new vision for Madagascar's protected area network and the subsequent presidential declaration that will make this vision a reality.

It is critical to recognize that the contribution within the higher levels of government by CI-Madagascar has not been made in isolation. Virtually all of the major international and national NGOs have been involved with various committees and have inserted their information and technical expertise where it is most appropriate, and many of these NGOs have been able to do so in part because of CEPF support. Furthermore, great efforts have been made within Madagascar to form alliances to present a united front to achieve conservation goals. While such collaboration in general is difficult to reach, in Madagascar, the magnitude of the challenge has led organizations to work together in a collaborative and coordinated manner – this coordination goes beyond the scope of NGOs and instead is broad and far-reaching, including all the major donors.

The implementation of the Durban Vision depends on sufficient available funding. CI-Madagascar has taken a lead role in securing financing for biodiversity conservation in Madagascar, and specifically as chair of the long-term sustainable financing sub-committee of the NEAP Coordination Committee, which has as a key focus the capitalization of a biodiversity trust fund. The current status of the trust fund is such that \$20 million has been committed, and \$10 million has been earmarked. The target of the fund is \$50 million. Funds will be used to finance the running costs of existing and new protected areas, and will be an important source of revenue to complement the donor support for PEIII over the next five years, which is projected to reach \$178 million.

The Durban Vision Group and implementation of the Durban Declaration

The Durban Vision Group was formed following the President's declaration in September 2003. This group is comprised of donors, national and international NGOs, and government, and seeks to formulate the strategy and means to implement the Durban Declaration. Paramount in the objectives of this group is the challenge of conservation planning – determining which sites should be proposed for inclusion in the new protected area network, developing the most appropriate methods for making these determinations, and assisting the Government of Madagascar to identify the ways and means to implement the legislative, policy and financial frameworks for ensuring that the Durban Declaration is implemented successfully.

A number of CEPF grantees figure prominently in this process, such as the Wildlife Conservation Society's *Madagascar Biodiversity Network* (known as REBIOMA). CEPF provided critical funding in the initial phases of the REBIOMA project enabling WCS to develop a database structure and analytical tools that can capture Madagascar's biodiversity data and present it in a manner that can guide conservation planning. Indeed, REBIOMA has been identified as one of the key tools for storing biodiversity data for the implementation of the Durban Vision. Many of the World Bank activities funded under PEIII will take place in priority sites identified using REBIOMA and other tools, and conservation results will be evaluated by the same means. As REBIOMA develops, it will help in the management and long-term monitoring of activities

associated with Madagascar's obligations under international conventions such as CITES and the CBD, and will be one of the tools used by Madagascar to measure its effectiveness at biodiversity conservation.

A number of grantees have made their data available to REBIOMA, and are also ensuring that their work is available to the Durban Vision Group. Of note is the Missouri Botanical Garden (MBG), which has used CEPF funding to assess priority areas for plant conservation. The team at MBG have been involved in an extensive effort to analyze plant species data to determine which areas outside of the existing protected area network are priority areas in need of protection. Their analysis has led to identification of 77 sites. MBG's project includes numerous communications outputs, such that stakeholders in Madagascar understand the project and are kept abreast of progress. It is with this emphasis on coordination that MBG has continually shared information about the project and now participates as a member of the Durban Vision Group, thereby ensuring that key plant information is fed into the national conservation planning process.

Setting a foundation for the future

Expansion of Madagascar's protected areas network will entail development and adoption of a new concept – the *Site de Conservation*. This new status is intended to be an area that will contain different portions zoned for different uses, in order to allow biodiversity conservation to be achieved alongside delivering benefits to local people. CEPF has supported several grantees in their efforts to identify key areas appropriate for this new status, and also to initiate management and planning efforts. Fanamby's efforts with Daraina and Menabe are mentioned above. WCS is currently working in the northeast in Makira, the largest unprotected forest block in Madagascar. Responding to a request by the Government of Madagascar, WCS has been charged with helping to create and manage this important area, totaling approximately 3,000 square kilometers. The challenge involves myriad activities, including demarcating the site, conducting threat assessments, working with local NGOs, municipalities and communities to improve livelihoods and reduce threats to the forest, conducting environmental education activities, and exploring and developing long-term financing options from sale of carbon credits. WCS efforts have been phenomenal thus far in this remote and challenging region, with the inauguration of this site scheduled for December 2005. Protection of this site will be a major achievement – it is estimated that this area contains 50 percent of the at least 12,000 plant species thought to occur on Madagascar.

Support to other grantees may result in similar movements. BirdLife International has been working with local communities and industries to conserve and manage Mahavavy-Kinkony wetlands, which is an important area home to the Critically Endangered Sakalava rail. Investigation into the potential for tourism and thus local long-term benefits to residents of the area has been promising, particularly because the Sakalava rail is regarded as one of the last "unknown" birds of Madagascar. BirdLife is planning to propose the area as a *Site de Conservation* at some point in the future, and it would be an ideal candidate due to its mix of biodiversity conservation and local economic benefits. While BirdLife has already leveraged significant funding for ongoing activities, additional long-term financing will be required if the site is to receive adequate support in the years to come.

A major tool in the implementation of these conservation sites will be funding small-scale conservation and development initiatives conducted by local community actors. In

recognition of this, CEPF is supporting a Small Grants Program implemented by CI-Madagascar. In reality these grants should be thought of as micro-grants, as some may be of as little as \$50 - still a significant amount of money for an impoverished farmer. CI-Madagascar is implementing this fund through the Nodes concept, where NGOs with strong technical presence in a region are given a block grant, which they then sub-grant to local associations, NGOs and even individuals, creating a kind of market for conservation and a mechanism for reducing and overriding the transaction costs associated with improving environmental management. This new concept has been implemented in two areas already and the model is being taken up by other actors as the economy of scale and fine-grained impacts become evident.

Funding to CI-Madagascar through several grants has helped with the creation and implementation of the Center for Biodiversity Conservation (CBC). This model represents a significant and strategic step forward in scaling up the impact of CEPF investments, as well as other donor initiatives. This CI initiative, funded by the Gordon and Betty Moore Foundation, entails investment of \$7.5 million into the CBC to change the scale of conservation by increasing technical capacity and alliance building. The design and implementation of the CBC aims to achieve species, site and corridor outcomes that improve related policy, increase capacity, and increase land under conservation management. CI will award 30 percent of the CBC funding as grants to partners working in the region. CI is expected to have significant influence on PEIII activities in the period 2002-2007, chiefly through CBC funding of activities.

Collaboration with the World Bank

The characteristics of CEPF funding during the National Environmental Action Plan have been that it is nimble, strategic, aligned with national policy, and innovative. These are characteristics that have enabled substantial complementarity to World Bank funding in the National Environmental Action Plan, through the development of the intermediate support network provided by Madagascar-based NGOs and associations. CEPF has contributed to the growth of this sector, to the point where it can engage successfully with government, international NGOs, and other bi-lateral and multi-lateral agencies.

Conclusion

As CEPF starts its fifth and final year in Madagascar, it can be observed that funding has had a significant and inspiring impact. CEPF has been able to stimulate and support actions by both international and national NGOs, and this has played a major role in moving forward the country's conservation agenda.

CEPF support has filled a key niche, specifically in supporting work in the policy and financing realm, in supporting local NGOs and increasing the technical capacity of Malagasy staff, and most importantly in supporting contributions to the 5th IUCN World Parks Congress and the implementation phase of the Durban Declaration that is now underway. CEPF funds have allowed the involvement of a wide range of actors, many of whom had never been given the opportunity to expand and strike out on their own. CEPF also allowed better-known entities to take risks to strive for conservation objectives where the future was uncertain. In the four years since the arrival of CEPF, despite the small allocation for this hotspot, it is apparent that the funds have reaped conservation rewards.

At the same time, the challenge of the future remains enormous. While projected donor allocations to PEIII are substantial (\$178 million projected), they are not expected to

cover what is needed to fully protect Madagascar's fragile and threatened biodiversity, nor are they expected to be able to make the full range of on-the-ground links with communities such that benefits accrue to local people. The new *Sites de Conservation* are not included in the current agenda for expenditure, leaving a large gap in support not only for the sites that will be declared in 2005, but also for those not yet identified or proposed but that would be included in the President's goal of increased area under the new protected area network. The funds available will primarily be channeled through government, and therefore there may be NGO needs in the future to support actions in the *Sites de Conservation* under their responsibility.

While CEPF funding has enabled substantial gains in the capacity of Malagasy individuals and organizations to contribute to the Durban Vision, there are many sectors and areas that still require this kind of targeted, sympathetic support. The Node model, for instance, is still a model that requires refinement and extension to different parts of the country. This is one method of channeling conservation investment at a scale and context that works at the community level, but there are many other possibilities that need testing, in marine and freshwater habitats especially. There is still a major gap in capacity for technicians at the intermediate level, to work in the emerging Conservation Sites - hundreds of trained personnel will be required and there are many training institutions ready and waiting to contribute.

Finally, while CEPF has accomplished much over the past four years, the successes have contributed to a greater, rather than a lesser need for the continuation of CEPF involvement in the region. The fact that the challenge is greater now, is not a negative for Madagascar. Instead, it represents the fruits of much dedication, commitment, collaboration and coordination, and clarifies the need for renewed commitment from the donor community to participate in the implementation of the Durban Declaration.

-March 2005

* Prepared for: Improving Linkages Between CEPF and World Bank Operations, Africa Forum, Cape Town, South Africa, April 25-26, 2005.

March 2005 Charts — Madagascar and Indian Ocean Islands Biodiversity Hotspot: Madagascar

Chart 1. Approved Grants by Strategic Direction

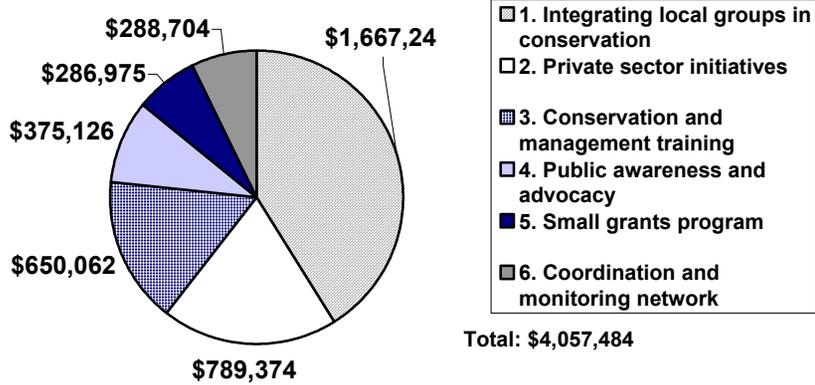


Chart 2. Portfolio Status by Strategic Direction

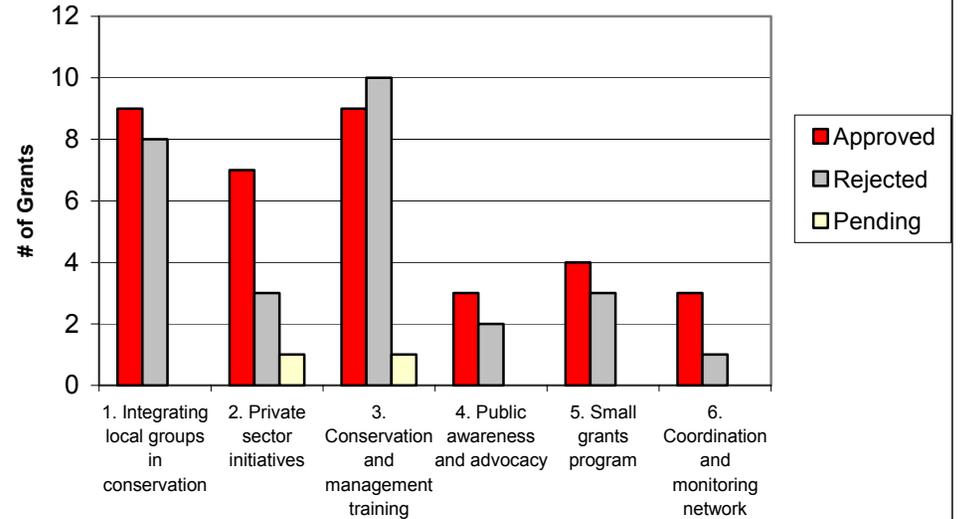


Chart 3. Combined Value of Grants Awarded

