

# Assessing Five Years of CEPF Investment in the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya

A Special Report  
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## OVERVIEW

Critical Ecosystem Partnership Fund (CEPF) investment in the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya commenced in June 2003 with the approval of an ecosystem profile developed with stakeholders and a grant allocation of \$7 million to be awarded over five years.

The Eastern Arc Mountains and Coastal Forests shelter one of the greatest densities of plant and vertebrate species found nowhere else, or endemic, in the world. Juxtaposed with a high degree of forest fragmentation and threats, this area is considered among the areas most likely to witness the extinction of species in the near future.

The Eastern Arc Mountains and Coastal Forests comprise part of the larger Eastern Afromontane and Coastal Forests of Eastern Africa biodiversity hotspots, respectively. At the time the ecosystem profile was prepared, the Eastern Arc Mountains and Coastal Forests region was classified as a biodiversity hotspot itself. However, a reappraisal of the hotspots released in 2005 divided this region and placed it within the two newly identified hotspots mentioned above. The profile and CEPF investments focused strictly on the Eastern Arc Mountains and Coastal Forests of Kenya and Tanzania that comprise the original hotspot.

This report aims to assess the impact made possible by CEPF investment and is based upon grant recipients' project performance and final reports. All available final reports can be accessed from the publications section of the CEPF Web site, [www.cepf.net](http://www.cepf.net). In addition, data was drawn from questionnaires completed by grantees as part of this assessment. A draft of this report was shared with 93 participants at an assessment workshop in February 2009 to further enrich the findings, conclusions and lessons learned before the report was finalized.

CEPF is a joint initiative of l'Agence Française de Développement, Conservation International, the Global Environment Facility, the Government of Japan, the MacArthur Foundation and the World Bank. A fundamental goal is to ensure civil society is engaged in biodiversity conservation.

### CEPF Niche

The Eastern Arc Mountains stretch from the Taita Hills in southern Kenya south to the Udzungwa Mountains in southwestern Tanzania. This chain of ancient mountains is famous as the center of endemism of the African violet (*Saintpaulia* spp.).

Almost 40 percent of the approximately 2,000 vascular plants found here are endemic. They are located in almost all of the types of altitudinal forests, as well as in intervening habitats such as rocky outcrops, heathland, montane grasslands and wetlands. Of those studied, non-vascular plants also show significant endemism. Predictably, there is a direct correlation between the area of forest blocks and species richness. There remains only 3,300 km<sup>2</sup> of submontane and montane forest in the Eastern Arc Mountains, approximately 30 percent of the original forest cover. Faunal endemism is also extremely high for reptiles, amphibians and especially invertebrates.

At least 71 of the endemic or near-endemic vertebrates are threatened by extinction (eight critical, 27 endangered, 36 vulnerable, with an additional seven wide-ranging threatened species). There are also several endemic birds and mammals, such as the Critically Endangered Tana River red colobus (*Procolobus rufomitratu*s) found only along the Tana River in Kenya and the Sanje mangabey (*Cercocebus sanjei*) found only in the Udzungwa Mountains of Tanzania. Recent research has also revealed new species of vertebrate within the Eastern Arc Mountains that are likely to be endemic or near endemic.

The vulnerability of several endemic species is compounded as they have extremely limited distributions. For example, the Kihansi spray toad (*Nectophrynoides asperginis*), described in 1998, was known from an area of less than 1 square kilometer within the spray zone of a large waterfall on the Kihansi River. However, it is now presumed to be extinct in the wild as a result of a hydropower facility that altered the river flow and destroyed the natural spray zone followed by an outbreak of the infectious chytrid fungus.

The flora and fauna of the Eastern Arc Mountains represent an interesting combination of species associations including links with West Africa, Madagascar and even Southeast Asia. But, as an artifact of geographic isolation and other factors, the flora and fauna show high rates of endemism. Ongoing research in other afro-montane areas of Eastern Africa, particularly research carried out in the adjacent Southern Highlands at the same time as CEPF's investment further north, continues to reveal more about the complexities of the historical biogeography of the area such as the simultaneous discovery of the Kipunji (*Rungwecebus kipunji*) in the Udzungwa Mountains and the Southern Highlands.

The coastal forests ecoregion of East Africa includes the islands of Zanzibar (Unguja and Pemba) and comprises a mosaic of forest patches and intervening habitats. Closed canopy forest represents only 1 percent of the area but contains at least 400 endemic plant species out of the 3,000 plant species identified from coastal forests. The remaining 99 percent of the area is a heterogeneous mix including savanna woodlands, bushlands, thickets and farmland that contain more than 500 endemic plant species.

The region is part of the Zanzibar-Inhambane regional mosaic. Many of the plant species are relicts of a historical connection to the Guineo-Congolian lowland forests of West Africa. The highest biodiversity is found in the various kinds of closed canopy forest vegetation: dry forest, scrub forest, Brachystegia (miombo) forest, riverine forest, groundwater forest, swamp forest, and coastal/afro-montane transition forest. In total, there are more than 4,500 plant species and 1,050 plant genera. Single-site endemism and disjunct distributions are common, illustrated by the fact that a substantial proportion of the endemic plants are confined to a single forest.

These forests and the prevalence of endemic species are the result of geographic isolation combined with the small size of the region and the degree of natural fragmentation that exists. Thus, biodiversity conservation corridor outcomes were not defined in the ecosystem profile that guided investments; however the current degree of fragmentation of forests within individual sites poses a significant threat to the conservation of species. With this in mind, increasing connectivity between remnant fragments was considered vital.

The most prevalent threat to the remaining forests is habitat destruction leading to fragmentation and loss of remaining habitats for many known (and unknown) globally threatened species. There are four main threats that, combined, place significant pressure on the remaining forest fragments:

- Agriculture
- Timber and charcoal extraction
- Mining
- Fires

There are several intrinsically linked root causes of these threats. Burgeoning human population exerting pressure on forest resources and land; poverty leading to unsustainable use of forest resources; lack of strategic management and action plans; under-resourced government institutions; continuing problems in policy implementation and formulation; and insufficient political will all combine to undervalue forests and the ecosystem services that they provide.

On the positive side, these serious challenges are widely recognized and various initiatives including institutional, policy and legislative reforms, especially with respect to forestry, have been ongoing during the period of CEPF investment.

Tanzania and Kenya have had a long history of bilateral and multilateral support for natural resources management, both at the national and institutional level and through site-specific project activities. There is also a considerable amount of biological inventory and research activities that have been accomplished over the last century. CEPF sought to capitalize on these achievements, bearing in mind the biological priorities and threats described above as well as past and ongoing conservation activities.

In 2003, 48 people from scientific and research institutions, government departments, nongovernmental organizations, field projects and donor organizations, all of whom were knowledgeable about the region, met to define the most strategic way in which to invest CEPF funds. This was followed by a more extensive consultation process. The goal of the strategic funding directions was to achieve the conservation outcomes defined as part of the profiling process.

### **Species Outcomes**

The results of the outcome definition process in 2003 indicated that 333 globally threatened species occur in this region, with 105 species being represented in Kenya and 307 in Tanzania. The globally threatened flora and fauna were then known to be represented by 236 plant species, 29 mammal species, 28 bird species, 33 amphibian species and seven gastropod species. Of the 333 globally threatened species, 241 were Vulnerable, 68 Endangered and 24 Critically Endangered.

### **Site Outcomes**

The site outcomes define the CEPF niche in terms of geographic locations. Site outcomes are defined on the basis of the species outcomes in such a way as to ensure that all of the globally threatened species would be conserved within the priority sites. Through this analysis, 160 key biodiversity areas were identified. A matrix was developed overlaying the 333 globally threatened species and the top 160 sites in which these species occur. This matrix was enhanced with data from Important Bird Areas for restricted-range bird species and globally significant congregations of birds.

Many bird species in the Eastern Arc Mountains are known to move seasonally from the montane forest to the lowland, and altitudinal forest corridors are necessary for this to occur. This issue particularly relates to maintaining montane to lowland forest transitions in the Eastern Arc Mountains part of the region and is important in the context of global warming. A number of forest patches are also recently isolated from each other, causing the local extinction of species, as habitat patches become too small to support them as described below. Such sites deserve particular attention.

Through a participatory approach adopted during the ecosystem profile, five strategic directions were identified for CEPF investment:

1. Increase the ability of local populations to benefit from and contribute to biodiversity conservation, especially in and around Lower Tana River Forests, Taita Hills, East Usambaras/Tanga, Udzungwas and Jozani Forest.
2. Restore and increase connectivity among fragmented forest patches in EACF, especially in Lower Tana River Forests, Taita Hills, East Usambaras/Tanga and Udzungwas.
3. Improve knowledge of biodiversity in the region (all 160 sites eligible).

4. Establish a small grants program in the region (all 160 sites eligible) that focuses on Critically Endangered species and small-scale efforts to increase connectivity of biologically important habitat patches.
5. Develop and support efforts for further fundraising.

Under each strategic direction are a number of detailed investment priorities. These are described in the full Ecosystem Profile that can be downloaded from [www.cepf.net](http://www.cepf.net).

From the outset, it was envisaged that there would be a succession in the order with which the individual strategic directions were applied, with civil society groups initially applying for projects that improved biological knowledge. This would then give rise to information pertaining to how to improve connectivity within sites. The latter cannot be achieved without the support and involvement of the communities living within the landscape who need to benefit from sound natural resource management to achieve these priority conservation goals.

As a final point, the Uluguru Mountains were a priority pilot site for the GEF-UNDP Conservation and Management of the Eastern Arc Mountain Forests, Tanzania project which ran almost concurrently with CEPF's investment and thus was not included as a CEPF priority site.

### **Coordinating CEPF on the Ground**

Learning from CEPF investment in other regions and particularly the Cape Floristic Region Hotspot, CEPF first sought to establish a local entity to ensure an effective, efficient and coordinated approach among stakeholders in achieving the CEPF conservation outcomes.

To this end a Coordination Unit was formed comprised of the International Centre for Insect Physiology and Ecology (ICIPE); WWF-East African Regional Programme Office including the Tanzania Programme Office; Tanzania Forest Conservation Group (TFCG); and BirdLife International, as well as Neil Burgess as a co-opted member of the UNDP / GEF Conservation and Management of the Eastern Arc Mountains Forest project and WWF-US, and Tom Butynski, initially of Conservation International's regional program. BirdLife International was represented by the BirdLife Africa Partnership Secretariat and its partners in Kenya and Tanzania: Nature Kenya and the Wildlife Conservation Society of Tanzania.

The creation of the Coordination Unit brought on board an unparalleled blend of administrative, technical and programmatic strengths and opportunities from the various organizations building on extensive networks to ensure strategic, cost-effective and efficient collaboration among the local and international players in the region. The team effort also resulted in greater opportunities to reach out to other key agencies and initiatives.

Each member of the Coordination Unit led implementation of an output as described below.

<b>Organization</b>	<b>Output</b>
ICIPE	An EACF Coordination Unit exists with appropriate mechanisms to facilitate achievement of the Investment Priorities identified in the CEPF Ecosystem Profile.
TFCG	Stakeholders within civil society and government are aware of the CEPF process, goals and achievements and are sharing experiences.
WWF-East African Regional Programme	Civil society stakeholders supported to design effective

Office (Regional Office and the Tanzania Programme Office)	conservation projects in line with the CEPF Ecosystem Profile and submit proposals to CEPF.
BirdLife International (Birdlife International – African Partnership Secretariat, Nature Kenya, Wildlife Conservation Society of Tanzania)	A comprehensive and complementary suite of CEPF projects (within budget) is in place to fully address the strategic funding directions and investment priorities identified in the Ecosystem Profile.

The activities of the Coordination Unit were overseen by a project steering committee chaired by the heads of the Tanzania Forestry and Beekeeping Division and the Kenya Forest Service. This arrangement was meant to mainstream, synergize and seek support from these government institutions while maximizing conservation outcomes.

## Impact Summary

The impact of CEPF's five years of investment can be summarized by the following points:

1. 158,626 hectares were added to Tanzania's protected areas network with the gazette of the Kilombero and Uluguru nature reserves by Tanzania's Forestry and Beekeeping Division.
2. The process to gazette Magombero Forest as part of the Selous Game Reserve has been advanced with Illovo Sugar Company and the Wildlife Division of Tanzania.
3. The Udzungwa Mountains Ecological Monitoring Centre has been selected as one of the Tropical Ecology Assessment Monitoring (TEAM) field sites, a global network of tropical field stations, providing an early warning system on the status of biodiversity that can effectively guide conservation action.
4. Key corridors between the Udzungwa Mountains National Park and the Udzungwa Scarp Forest Reserve and the Selous Game Reserve have been identified.
5. A Coordination Unit was created that represents a unique entity within the conservation community in Tanzania and Kenya. Importantly in terms of impact, this unit will continue as an interface with government and donors beyond the CEPF investment.
6. Supporting activities that emphasized the direct link between a healthy forest and economic returns changed many people's behavior toward their forest resources in priority areas in Tanzania and Kenya.
7. Stakeholder workshops to develop collective landscape plans for the Taita Hills, Kenya and the Udzungwa Mountains, Tanzania resulted in broad support among stakeholders for these plans.
8. Surveys of 37 lesser-known forests have resulted in improved understanding of the biodiversity and the threats to these sites (21 of the lesser-known forests of the Eastern Arc Mountains and 16 coastal forests).
9. Threat status of 800 plants and 157 butterflies has been documented.
10. Discovery of a minimum of 29 new vertebrate species including the Kipunji monkey (*Rungwecebus kipunji*) and grey-faced elephant shrew (*Rhynchocyon udzungwensis*).

11. Tackling the issue of the illegal logging trade between Tanzania and China and effecting institution of a ban on illegal logging in Tanzania in 2004.
12. Supporting 26 students to master’s and doctoral level in conservation-related studies, which significantly contributed to capacity building of upcoming scientists and researchers, generating much-needed biological knowledge and creating linkages with the local academic and research institutions from which these students were drawn.
13. Increasing connectivity between the forest fragments in the Taita Hills forests based upon the community conservation efforts and results of landscape modeling work, which ultimately led to as the translocation of 10 individual Taita thrush (*Turdus helleri*) from Mbololo to Chawia forest reserve supported by the National Geographic Society.
14. Providing 146 community microgrants directly to civil society organizations (51 grants in Kenya and 94 in Tanzania) totaling \$251,529 for actions that improved livelihoods and benefited natural resources. Through this grant scheme, community conservation was highly enhanced and this has strengthened the network of community-based organizations and improved governance.
15. Developing a new teachers' resource manual for primary schools in Tanzania that is also expected to be ratified by the Ministry of Education. This together with other tools and materials developed contributed to environmental communication vital for awareness, education and capacity building.
16. Leveraging \$5,379,585 in additional financial contributions toward conservation efforts in this region.

## Implementing the Strategy

### Resource Allocation

During the five-year investment, CEPF awarded grants for 103 of 346 letters of inquiry received to 51 organizations valued at \$7,113,761 (Appendix A). The mean grant amount was \$76,018.

**Table 1: Resource allocation by type of organization**

Resource Allocation	International Organizations	Local Organizations
Number of organizations	27	24
Percent (%) of grants	52.9%	47.1%
Dollar allocation	\$4,231,344	\$2,882,417
Percent (%) dollar allocation	59.5%	40.5%



**Table 2: Resource allocation by strategic direction**

Resource Allocation	Number of grants for this strategic direction	Percent (%) of grants for this strategic direction	Dollar allocation for this strategic direction	Percent (%) dollar allocation for this strategic direction
Strategic Direction 1	36	34.9%	\$3,268,591	45.5%
Strategic Direction 2	20	19.4%	\$1,060,680	15%
Strategic Direction 3	24	23.3%	\$1,936,387	27.0%
Strategic Direction 4	17	16.5%	\$495,838	7.5%
Strategic Direction 5	6	5.8%	\$352,265	5.0%
Total	103	100%	\$7,113,761	100%

**Strategic Direction 1: Increase the ability of local populations to benefit from and contribute to biodiversity conservation**

This strategic direction focused on five priority sites, with the aim to break the cycle of poverty that leads to environmental degradation and biodiversity loss that emerged as a dominant theme in the Ecosystem Profile planning workshop. The 36 grants awarded concentrated on synergistic and direct linkages between people and biodiversity conservation and the piloting of new approaches.

The main emphasis under these grants was to engage civil society groups directly in conservation action. To achieve this, considerable financial resources were made available directly to community groups through two sources. Firstly, CEPF awarded 23 small grants (i.e. \$20,000 and less) directly to local community organizations for activities under this strategic direction. These grants focused on reforestation, agro-forestry, ecotourism, community management of natural resources and improving livelihoods.

In addition a program of community microgrants was implemented by the WWF-East African Regional Programme Office. This program awarded 145 grants of up to \$5,000 each to civil society organizations for training, capacity building and improved livelihood activities (Appendix B). Awarding grants to community-based organizations resulted in considerable increase in these groups' capacity to implement projects, manage finances and meet reporting demands. At a second tier, CEPF sought to improve local livelihoods through conservation activities. Front and center in achieving this was ICIPE's environmental health division, which sought to bring a suite of alternative nature-based livelihood activities to communities in three priority sites: the Lower Tana Forests, the Taita Hills and East Usambara Mountains. These included improved honey production, extracting essential oils from local herbs, soap making, pine resin harvesting, mushroom production and butterfly farming.

Crucially, the funds granted under this strategic direction leveraged considerable additional funds (such as \$150,000 from Ford Foundation) for further community enterprise projects. Another very welcome development from Strategic Direction 1 grants was enhanced collaboration between biodiversity organizations and development agencies to implement projects jointly. Examples of such collaborations include the Wildlife Conservation Society and CARE, and ICIPE and World Vision.

### **Strategic Direction 2: Restore and increase connectivity among fragmented forest patches**

Fragmentation has been the driver for much of the speciation in the Eastern Arc Mountains and Coastal Forests and as a result, no biological corridors were identified between sites during the preparation of the Ecosystem Profile. However, it was recognized that there was a vital need to increase connectivity between forest fragments within individual sites, especially the Lower Tana River Forests and Taita Hills in Kenya, and the East Usambaras/Tanga and Udzungwas in Tanzania. Maintaining connectivity, especially in mountainous areas, would also mitigate the impacts of climate change.

CEPF investment represented an opportunity to take a broad approach to effecting conservation on the ground that engaged communities based upon the best scientific information available. To this end, broad stakeholder planning workshops were held at the start of the investment for both the Udzungwa Mountains in Tanzania and the Taita Hills in Kenya. In both cases, these workshops determined the course of action for a suite of grants that, combined, fundamentally changed how conservation has been approached in these landscapes with new, enduring partnerships among scientists, community groups, district administration and local government. These workshops, backed by scientific evidence as presented by various stakeholders and discussions that ensued, appear to have helped change the perception of adjacent communities on the impact and implications of their activities on biodiversity.

During a 2004 workshop with stakeholders to plan activities for the Udzungwa Mountains, key connectivity areas were identified including the Magombera Forest, the Mngeta gap and wildlife corridors across the Kilombero Valley. Subsequently CEPF supported a process to include Magombera Forest within the Selous Game Reserve that has received support from communities, the private sector and local government; further research has been carried out to identify the best location for a corridor across the Mngeta gap, and parts of the corridor are now under participatory forest management; and research has identified potential wildlife corridors across the Kilombero Valley. A process has been initiated to engage communities and the private sector to manage this area appropriately.

### **Strategic Direction 3: Improve biological knowledge in the region**

The Ecosystem Profile recognized that there was an uneven level of knowledge across forest blocks with a paucity of data on several of the forests blocks compared to others. It was anticipated that this strategic direction would be oversubscribed, as many of the organizations that had been involved in the profile process had extremely strong backgrounds in research in the region.

Initially many of the letters of inquiry were relevant to the investment priorities in the profile but the individual applications were discordant and did not present a means to advance the understanding of the region in its entirety or provide a means to compare between sites and studies. In a bid to overcome this, grantees were asked to consult one another and look for opportunities to work in partnership locally, making best use of available resources. They were also requested to develop standard methods for undertaking the biodiversity assessments to allow sites to be compared.

The result of this approach was that several organizations developed projects in collaboration, playing to their respective strengths and specialist areas. Field assessments in more than 65 forests were undertaken, including all five top priority sites identified during the initial planning workshop, and covered 12,000 hectares of protected areas alone. It should be noted that the full list of sites is currently weighted towards many less critical sites which were not prioritized for action.

Data derived from these assessments has been compiled into a series of technical reports, databases, maps and other tools. These tools have facilitated access at national and international levels by decisionmakers, as well as contributed toward efforts for strategic monitoring.

All grantees were encouraged to work closely with the relevant national institutions, such as the University of Dar es Salaam, to ensure that the specimens and data collected would contribute to the established body of knowledge. Support was also provided to enable these data to be captured in the National Biodiversity Database at the University of Dar es Salaam.

The result was a comprehensive suite of research grants that supported the discovery of about 35 new species, range extensions of 50 vertebrate and 10 plant species, and one species rediscovery. High-profile examples supported by CEPF include the reassessment of the kipunji's taxonomy and discovery of the grey-faced elephant shrew from the remote Ndundulu Forest. Rates of endemism are highest amongst the amphibians, reptiles and invertebrates.

CEPF supported the publication of the Journal of East African Natural History as a means to publish survey and other data acquired. The grant has enabled all back issues since 1911 to be scanned in and made available online through [www.BioOne.org](http://www.BioOne.org) as well as [www.ajol.org](http://www.ajol.org) and other distributors of online content. The East African Natural History Society now receives modest financial contributions in proportion to the manuscripts that are downloaded. A BirdLife-led project was also put in place to implement a comprehensive sustainable monitoring system involving all key stakeholders in the region, making this information widely available and accessible.

#### **Strategic Direction 4: Establish a small grants program that focuses on Critically Endangered species and small-scale efforts to increase connectivity of biologically important habitat patches**

CEPF regards a grant of \$20,000 and less as being a “small grant.” The established small-grant program offered an opportunity to support pilot projects throughout the region from a number of different strategic directions. Grantees largely interpreted this specific strategic direction as a means to secure smaller amounts of money to fill gaps in the overall portfolio. As the funds under Strategic Directions 1 and 2 were depleted, many requests for small grants were received. In fact, CEPF supported 59 small grants comprising 14 percent (\$996,350) of the total portfolio.

Many of these grants were to international organizations that were seeking funds to complete an aspect of their field research considered to be relevant. However, the Coordination Unit considered that the main thrust of this strategic direction as described in the Ecosystem Profile was to support local Kenyan and Tanzanian scientists in improving the cadre of qualified and experienced scientists described in the project list.

In this vein, CEPF provided a grant of \$200,000 to the BirdLife Africa Secretariat to administer studentships to national scientists for sums up to \$10,000. Through this mechanism 26 sub-grants were awarded covering 27 key biodiversity areas and various taxa as follows (number of sub-grants in parenthesis): insects (3), mammals (4), birds (3), plants (7), herpetofauna (1) and gastropods (2). There was also coverage of wider issues, such as invasive species (1), forest cover change (2), effects of climate change (1), and ecosystems services (2). These students represent a cadre of conservation scientists who will hopefully continue their studies and mentor other students in the future. All the students supported attended a scientific conference to present their research findings.

#### **Strategic Direction 5: Develop and support efforts for further fundraising for the Eastern Arc Mountains and Coastal Forests**

Given what has already been established in Tanzania and Kenya, opportunities for long-term funding and how best to harness these was extremely complicated. In a bid to unravel the range of opportunities available, Coordination Unit member ICIPE supported a consultancy for a Sustainable Funding Strategy<sup>1</sup>

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<sup>1</sup> Sustainable Funding Strategy for the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya, October 2007, [www.cepf.net/Documents/EAMCF\\_SustainableFinanceStrategy.pdf](http://www.cepf.net/Documents/EAMCF_SustainableFinanceStrategy.pdf)

to undertake a review of all possible opportunities. This resulted in a number of recommendations that could assist in raising additional financial resources for conservation action in the short and long term.

Based upon the recommendations of the consultancy, CEPF supported the WWF-East African Regional Programme Office to develop a fundraising strategy with the Eastern Arc Mountains Conservation Endowment Fund that will guide efforts to secure additional contributions to capitalize the endowment, raise additional funds to continue the role of the Coordination Unit and support specific projects in the region that have resulted from CEPF investment. However, all parties accept that the recent downturn in the global financial markets is likely to compromise the immediate chances of success.

Looking to future opportunities and capitalizing on achievements already made by CARE Tanzania, CEPF provided additional resources to a program of payments for watershed services projects in the Uluguru Mountains that was supported by Coca Cola and Dar es Salaam Water and Sewerage Corporation under the Equitable Payment for Watershed Services scheme. This intervention may be replicated in other Eastern Arc watersheds, starting in the Usambaras. CARE will also seek support from the government of Tanzania under the Strategy for Urgent Action that was established during the 2007 drought that brought power cuts and water shortages to Dar es Salaam. These initiatives for payment for water services will also stimulate a long-term examination of current policies and lessons learned, particularly in relation to settlement/resettlement issues.

Similarly, a study of carbon baselines was conducted in the Tana River and Arabuko and Madunguni Forests. These data were used by the Kenya Forest Service to support its application for World Bank support under reducing emissions from deforestation and forest degradation (REDD) and to solicit funding for Nature Kenya from Kenya Airways for re-afforestation at Mdunguni. A separate small grant to Nature Kenya raised awareness among the local communities at Madunguni on this issue. The recent \$70 million carbon fund established for Tanzania by the Norwegian government also offers opportunities, particularly if interpreted in terms of avoided deforestation. This will be administered by the director of forestry. The Kenya Forest Service is developing parallel initiatives.

The Sustainable Funding Strategy also recommended that the Coordination Unit be funded for an additional three years. This would require a minimum of \$50,000 per year to support communications and meetings. The members of the Coordination Unit have already agreed to continue as a collaborative entity into the future as best it can using its own institutional resources to take stock, define its future role in relation to a wider network of stakeholders, and to explore emerging opportunities. The latter include recent improvements in national bandwidths and video conferencing to economize on travel and meeting expenses. Capacity-building for proposal development in the wider network will also be a focus.

Finally, CEPF allocated \$50,000 from this strategic direction to enable the WWF-East African Regional Programme Office to employ a consultant to develop new fundraising proposals for the region in 2009. Learning from the Cape Floristic Region and Succulent Karoo hotspots, the Coordination Unit will also explore the possibility of establishing a conservation marketplace to bring together the private sector, donors and implementing partners.

### **Leveraging Additional Resources**

Civil society groups that received CEPF grants reported leveraging or co-financing of at least \$5,379,585 from other sources for conservation in the Eastern Arc Mountains and Coastal Forests. This figure is expected to increase as this amount does not include reporting from projects that have not yet been completed and closed. See Appendix C for details.

## Biodiversity Results

### Creation/Expansion of Protected Areas

Through the landscape-planning exercises, CEPF directly contributed to the creation of 158,626 hectares of protected areas including the Kilombero (134,511 hectares) and Uluguru (24,115.09 hectares) nature reserves in Tanzania. In addition, CEPF investment will shortly see the gazette of the Derema Forest Reserve totaling 938.53 hectares. While small, this new reserve will ensure the long-term contiguity of approximately 45,000 hectares of the Eastern Usambara Mountain Forests.

The Forestry and Beekeeping Division has subsequently adopted the stakeholder planning approach pioneered by CEPF to gazette the Nilo Nature Reserve (6,025 hectares) and also is considering gazetting the Mngeta Corridor between the newly created Kilombero Nature Reserve and the Uzungwa Scarp Forest Reserve as a protected area. These are key areas to maintain these ecosystems as intact, functioning units.

In the East Usambara Mountains, CEPF investment played a critical role in securing the Derema Corridor, a forest block that connects the southern Amani Nature Reserve with more northerly forests of the Nilo Nature Reserve. Local farmers produced cardamom and other species as understory crops, preventing the regeneration of the forest that would eventually create a permanent gap. CEPF supported a critical process to help communities understand the compensation program that was financed by the Tanzanian and Finnish governments and Conservation International's Global Conservation Fund, as well as the process for gazetting the forest.

In the Taita Hills a cautious, stepwise approach resulted in a considerable shift in the attitudes of the local communities toward the remaining forest fragments. The initial stakeholder workshop in February 2005 allowed individuals to understand one another's perspectives and identify relevant projects for CEPF to support, as well as provided an opportunity for the community to seek support from ecologists as to how best conserve the remaining forest fragments. The culmination was a model illustrating which forests were key to enable birds to move through the landscape. The forest area is now being restored through enrichment planting by the local communities for the long-term conservation of the Critically Endangered bird species found here.

Based upon the success of the community conservation initiatives and the independent confirmation that the restoration of Chawia Forest had been a success, the National Geographic Society supported the translocation of 10 Taita thrush identified as "floater individuals" that were not paired or occupying a breeding territory from the Mbololo population.

On the island of Unguja, Zanzibar, significant conservation gains resulted from a project jointly implemented by CARE Tanzania and the Wildlife Conservation Society. CARE focused on socioeconomic aspects and diversifying livelihood opportunities and Wildlife Conservation Society worked within the village administration and established Resource Use Management Agreements with the eight villages surrounding Jozani-Chwaka Bay National Park to monitor the presence of Ader's duiker (*Cephalophus adersi*) and Zanzibar red colobus.

The results of this collaboration are significant. Using the village savings-and-loan committees as an entry point into civil society, the project led to the establishment of a series of other community-based organizations involved in beekeeping, making handicrafts, producing vegetables and farming mud crabs for sale to tourist lodges on the island.

The forests of the Lower Tana Delta were the subject of an environmental assessment prepared largely at the behest of the Japanese Bank for International Cooperation and the Tana and Athi Rivers Authority.

However, this area became the focus of a convoluted legal battle concerning the establishment of a sugar cane plantation, which prevented the recommendations from being implemented.

### **Improved Management and Implementation of Management Tools**

From the outset, CEPF sought to establish a portfolio-wide monitoring and evaluation process to measure the impact of CEPF's and other partners' activities in Tanzania and Kenya. Through a CEPF grant, BirdLife and its national partners Nature Kenya and Wildlife Conservation Society of Tanzania established an active monitoring program using standardized protocols. Monitoring information from stakeholders across the Eastern Arc Mountains and Coastal Forests was collated against 19 agreed indicators, and a status and trends report was compiled at the end of 2008.

The most effective monitoring tools were the Forest Disturbance Transects and Management Effectiveness Tracking Tool (METT) combined with remote sensing data to measure forest cover change. This has led to an increased knowledge of the state of biodiversity in the region as a result of increased research efforts and sharing of information among stakeholders.

Specifically in Tanzania, the METT has been adopted by the Forestry and Beekeeping Division and adopted by protected area personnel. In Kenya there have been discussions with the Forest Service on the use of the METT in order to develop a set of indicators for use in monitoring on effective forest management throughout the country.

At the site level, BirdLife employed the Threat Reduction Assessment Tool in Arabuko Sokoke Forest to monitor illegal bushmeat hunting. In addition, the Disturbance Transect Assessment methodology has been used in Dakatcha woodlands and Arabuko Sokoke forest. These have also been tested in Kakamega forest in western Kenya, which is outside the Eastern Arc Mountains and Coastal Forests. The IBA Monitoring Framework was employed in all the IBAs in the Eastern Arc and Coastal Forests part of Kenya. The framework also has been adopted to capture data/information in non-IBA areas in Kenya.

The developing National Forestry and Beekeeping Database, managed by the Ministry of Natural Resources, Forestry and Beekeeping Division, is aimed at supporting decisionmaking and monitoring by national government agencies in Tanzania. In Kenya the National Museums Database serves a similar role for sharing information.

The IUCN Red List of Threatened Species has benefited from data collected during the CEPF investment, allowing information on Eastern Arc species to contribute to efforts to conduct global monitoring of species' conservation status via the Red List index and improving information to guide public and private-sector policy at an international level through GEF's Resource Allocation Framework.

These data ultimately comprise part of the Integrated Biodiversity Assessment Tool (IBAT), which combines the World Database for Protected Areas, the World Biodiversity Database and the Red List Database and serves to mitigate threats to biodiversity. The first tool, IBAT for business, was launched in October 2008 (see [www.ibatforbusiness.org](http://www.ibatforbusiness.org)). New tools are being developed to support investment planning by development banks.

As part of an international program, the recently launched Tanzanian Biodiversity Information Facility makes biodiversity information available to the general public, forming part of the broader Global Biodiversity Information Facility.

### **Targeting Species for Conservation Action**

CEPF supported conservation action for a number of species identified as priorities in the ecosystem profile, including birds, mammals, molluscs, herptiles, plants and insects. These were taxa that were of global conservation concern or were considered little known.

The National Biodiversity Database at the University of Dar es Salaam now includes data confirming 55 amphibian species to be endemic or near endemic to the Eastern Arc Mountains. Out of these, 37 species are strictly endemic to the Eastern Arc Mountains and 18 species are near endemic. These species can be categorized as Critically Endangered, six species; Endangered, 14 species; Vulnerable, 17 species; Least Concern, 12 species; Near Threatened, one species; and Data Deficient, five species. They also found 47 bird species to be strictly endemic or near endemic to the Eastern Arc Mountains. These include 21 species that are strictly endemic and 26 species that are near endemic to the mountains. These species can be categorized as Critically Endangered, three species; Endangered, eight species; Vulnerable, 11 species; Least Concern, 21 species; and four species have been given no status.

With CEPF support, an inaugural Plant Red Listing Workshop was held in March 2006, as a first step in the process of evaluating the conservation status of all the endemic and near endemic species in these areas. An initial 176 taxa were evaluated, including all target taxa in the families Amaranthaceae, Anacardiaceae, Ancistrocladaceae, Annonaceae, Apiaceae, Apocynaceae, Araceae, Araliaceae, Arecaceae, Asteraceae, Canellaceae, Caricaceae and Cucurbitaceae. Seventy-one percent, or 123, taxa were assessed as Threatened (30 Critically Endangered, 53 Endangered, 40 Vulnerable), and an additional 12 as Near Threatened.

Data from the surveys reinforced the conservation imperative with the fact that there were 96 endemic vertebrates recorded as endemic in the Eastern Arc Mountains.

### **Conservation of Ecosystem Services**

The ecological services provided by the Eastern Arc Mountains are well known. Shortages in rainfall directly result in water shortages and power cuts in the main urban centers of Dar es Salaam and Tanga. This direct link has led both “The Natural Capital Project” and University of Cambridge’s “Valuing the Arc” project to undertake defining the precise financial value of these. Data generated by CEPF-supported projects, especially the forest change analysis, are available to both these analyses.

### **Climate Change**

Ensuring that connectivity within forested landscapes will be maintained in the long term provides species that are most sensitive to climate change with the ability to undertake altitudinal migrations and adapt to the changing environment. CEPF investments in landscape planning, especially in the East Usambara, Uluguru and Udzungwa Mountains, have led to the gazettement of several nature reserves that conserve contiguous tracts of closed-canopy forest that will ensure the long-term survival of species.

The gazettement of the Uluguru Nature Reserve and the compensation paid to farmers affected by the inclusion of the Bunduki Gap, as mentioned previously, ensure long-term protection to the habitat for the Uluguru bush shrike (*Malaconotus alius*).

### **Socioeconomic Results**

The considerable emphasis on engaging civil society, especially at the community level, in activities that would improve livelihoods and generate conservation benefits has resulted in significant improvements in people’s livelihoods in the priority areas. Providing a range of nature-based livelihoods has in many cases provided a second string to people’s largely agricultural economies in both the short and medium term. To this end, grantees working in priority landscapes worked with communities to develop a suite of

alternative nature-based livelihoods. As a result of these activities around \$15,000 has been generated in direct revenues from these ventures, substantial capacity was built, equipment was provided and marketplaces established in the Taitas and the East Usambaras that will help ensure these activities will endure after CEPF investment.

Training was also provided for silk production and plantations were established, but this activity will require further investment to bring to fruition. The most immediate impact on livelihoods came from a grant to TFCG that supported 390 butterfly farming households surrounding Amani Nature Reserve, who earned \$55,000 in 2008 from the sale of pupae to “flight houses” in Europe and the United States.

The complicated issue of the synergies between conservation and livelihoods was addressed by two independent studies. One was the subject of a master’s thesis by the founder of the Amani butterfly farm, in which conservation behaviors were compared between participants and non-participants. Significant improvements in conservation behavior were observed. The second was a study supported by the CEPF student grants program that, for the first time, demonstrated scientifically the widely held assumption that honey yields are improved by the presence of forests. Yields next to the edge of Arabuko-Sokoke Forest were double those 3 kilometers away.

CEPF also supported several studies that assessed the effectiveness of participatory forest management within Tanzania both from socioeconomic and biological components. The lessons learned from these studies are that both aspects need to be addressed for participatory forest management to succeed. The main findings of these approaches were published in a special issue of the TFCG *Arc Journal* (volume 21, [http://www.cepf.net/Documents/arc\\_journal\\_edition\\_21.pdf](http://www.cepf.net/Documents/arc_journal_edition_21.pdf)).

In Mtwara District, Tanzania, as a follow up to the alarming rates of illegal logging of the coastal forests in this region, CEPF supported a two-pronged approach to improve livelihoods of the local communities in the district. The approach included the development of district forest harvesting plans that have been approved by the Forestry and Beekeeping Division, and the surveying of 14 forest reserves, demarcating these and producing digitized maps to ensure that local communities are aware of the extent of the reserves and also how they can benefit from timber revenue.

The benefits are not simply economic. The community microgrants have provided financial resources and training to communities throughout the region in fuel-efficient stoves, thereby significantly reducing the demand for fuel wood. A study was conducted of Gogoni Village in Kenya, where the community group was supported to produce energy-saving stoves. To date the group has made fuel-efficient stoves in 100 households and fuel wood consumption data indicate a 60 percent reduction in demand for fuel wood, reduced time for women to gather fuel wood and reduced conflict levels between the community and the Kenya Forest Service. An additional benefit was that families using the fuel-efficient stoves also reported improved respiratory health.

### **Enabling Condition Results**

CEPF’s impacts cannot be taken in isolation but more as a reflection of the links forged with other ongoing activities. First and foremost was the partnership with the GEF-UNDP Conservation and Management of the Eastern Arc Mountain Forests, Tanzania. The technical support provided by Neil Burgess and Felician Kilahama has been instrumental in ensuring that both projects complemented but did not duplicate one another and supported activities that integrated with the outputs from this project.

The members of the Coordination Unit also provided links with the GEF Medium Sized Project for the Kwale District in Kenya and the USAID Arabuko Sokoke project and Visitors Centre at Fort Jesus, Mombasa. Again, this ensured that the respective activities were working in tandem to achieve a greater impact.



Strong partnerships have also been forged between several grantees who were requested to look at opportunities to work together or combine respective skill sets. This was especially true for the biodiversity surveys, with organizations combining their teams to complete the field assessments and improve the overall quality of the data recorded.

However, the epitome of fostering a partnership approach was the project, “Conservation of Zanzibar's Unique Flora and Fauna via Community-Based Forest Management and Socioeconomic Development Around Jozani-Chwaka Bay National Park,” implemented jointly by the Wildlife Conservation Society and CARE Tanzania. This project expanded the conservation and development activities around the park, in conjunction with village conservation committees, community-based organizations and the Zanzibar government.

With regard to shaping policy, TFCG has been able to contribute to the review of the national guidelines of participatory forest management in Tanzania, bringing to bear its substantial experience in the most effective steps to establish sound community management rights over forest resources. Members of the Coordination Unit have also made contributions in reviewing the policy briefs for both the Environment and the Wildlife Acts in Kenya as well as advising on the creation of the Kenya Forest Service to replace the Forest Department in 2005.

The Sokoine University of Agriculture, in conjunction with Conservation International's Center for Applied Biodiversity Science, produced a forest change map for the coastal region for the periods 1990, 2000 and 2007 which has shown that the rate of loss of the region decreased between 2000 and 2007. These data serve as a baseline for future monitoring and advocacy tool for governments, civil society and the donor community to formulate appropriate policies. The GEF-UNDP Conservation and Management of the Eastern Arc Mountain Forests will provide the updated analysis of forest cover and change for the Eastern Arc Mountain Forests in 2009.

CEPF supported TRAFFIC to assess the impact of the new Mkapa Bridge across the Rufiji River that provided access to the coastal forests of southern Tanzania. This study revealed significant illegal logging of the coastal forests of Rufiji, Kilwa and Lindi districts in the southeast of the country. This led the government of Tanzania to ban the export of timber in July 2004 until September 2005 and seize 157 shipping containers of roundwood that had been illegally extracted. The export ban on logs and sandalwood ban was reinstated in early 2006 after revelations that “under-collection of natural forest product royalties at district level during 2003 and 2004 resulted in up to USD 58 million lost annually across the country,” according to further research by TRAFFIC. The Forestry and Beekeeping Division is now believed to be actively addressing illegal logging and export of timber.

There was also a significant benefit from the education and awareness campaign spearheaded by TFCG under the project TALK (Training, Awareness, Learning and Knowledge) about the Eastern Arc and Coastal Forests of Kenya and Tanzania. Over the five years of investment, CEPF was featured prominently in local and international media, including the BBC's “Villagers on the Frontlines,” which was viewed by 100 million people, as well as a picture essay on the BBC World Service Web site.

Finally, TFCG recently completed the publication, “*Mwongozo wa Elimu ya Mazingira kwa Shule za Msingi*,” a teacher's guide to integrating environmental education into the national syllabus. This is a considerable resource that provides many ideas to raise awareness about the environment and details practices that improve environmental stewardship. This publication is being submitted to the committee at the Ministry of Education for approval as primary school material.

## **Capacity Building**

Based on the 25 out of 103 questionnaires received from CEPF-supported projects as part of undertaking this final assessment, capacity was built for 11,700 individuals out of whom 97 percent were local community members, 2 percent were government personnel and the rest were students and nongovernmental organization staff. The training focused on various aspects, including training of trainers (56 individuals in Kenya and Tanzania) and entrepreneurial skills (five community-based organizations) to support income-generating activities in beekeeping, aloe and neem oil production and processing in Kwale District.

A total of 42 protected-area personnel were trained in Kenya and Tanzania in the adoption of the Management Effectiveness Tracking Tool (METT) as a result of which METT forms for 63 key biodiversity areas in Kenya and Tanzania were completed in 2006 and 2007. Consequently, this tool has been mainstreamed into the routine monitoring of management effectiveness by the Forest and Beekeeping Division of Tanzania.

Two training workshops in remote sensing and geographic information systems were conducted for 18 participants drawn from relevant institutions in Kenya and Tanzania aiming to improve biodiversity monitoring. This demonstrates the contribution of the CEPF program to development of much-needed capacity of civil society groups, equipping them with the requisite skills to support or take a lead in subsequent conservation, sustainable development and monitoring initiatives.

Individual grantees already in active employment (at least seven in government institutions, four in universities and three in nongovernmental organizations) will have an immediate opportunity to translate their skills practically through their routine work. For students that are not in gainful employment, it is recommended that they be engaged and mentored as much as possible by the various institutions as interns. It is anticipated that some of these students will initiate follow-up work at some of these key biodiversity areas. Already one master's student proceeded with doctoral work in the Eastern Arc Mountains and Coastal Forests of Tanzania.

In terms of capacity building, 26 students were supported to master's and doctoral level in conservation-related studies that significantly contributed to capacity building of upcoming scientists and researchers, generating biological knowledge and creating linkages with the local academic and research institutions from which these students were drawn. This analysis excludes four postgraduate students benefiting from the larger CEPF granting program. These grantees are potential ambassadors for the hotspot by virtue of their respective strategic positions as staff for government, nongovernmental organizations, research and academic institutions.

A lot of information has been generated by the various student grantees, and as part of promoting internships, a student grantee has been engaged to review all the student reports to systematically document concise scientific information generated from these studies. This information will be disseminated as widely as possible through publication of student results into peer-reviewed journals. Considering the importance of researchers providing their results to field-based personnel for policy formulation and implementation and community adoption, it is also encouraged that grantees convene debriefing sessions with protected area staff to present this research information as well generate simplified versions of their research work for easier consumption by protected area managers. It is anticipated that these student grantees will diversify their research activities to have a ripple effect on other sites and taxonomic groups and follow up will be done to keep track of student grantee activities for a certain period of time.

## **Policy Development and Implementation**

Tackling the issue of the illegal logging trade between Tanzania and China and effecting a ban on illegal logging in February 2004 is a key output from a CEPF-supported project focusing on unsustainable timber trade and extraction. The recommendations from a report developed by TRAFFIC International translated into immediate action by the Tanzanian government. Subsequent facilitated discussions between the forest departments of Tanzania and Kenya has elicited plans for a collective and well-coordinated transboundary approach and high-level engagement in addressing illegal logging issues.

The TRAFFIC report also led directly to the “Mama Mimitu” project, which is a two-year advocacy and awareness-raising campaign on governance and forest management that targets both national and international stakeholders at multiple levels. The Tanzania Forest Working Group is implementing the campaign with 17 launch partners supported by Gesellschaft für Technische Zusammenarbeit (GTZ or German Technical Cooperation) and the Ministry of Foreign Affairs for Finland.

A member of the Coordination Unit provided support toward inscribing the kayas—remains of villages of the Mijikenda people—as national monuments and adding them to the World Heritage Site listing.

Participatory forest management is a new concept that has been piloted in both countries through CEPF funding. This approach to forest conservation has been reviewed and as a result of the positive impact, recommendation for replication at more sites has been suggested.

Through the connectivity initiatives at priority sites within the region, subsequent policy approaches and interventions are being pursued by the government, including the gazettement of corridors (such as Derema corridor, Kilombero Valley) as forest reserves, elevating the protected area status.

Because of the community and participatory approach, the enabling framework operationalizing the new Forest Act in Kenya through the formation of community forest associations has been easily formed as stipulated in this act and members of community-based organizations have been incorporated into district environment committees and district youth affairs committees at some sites. At least for a few sites, by-laws concerned with conservation are now more keenly enforced and received more enthusiastically by the community. Local policies with regards to burning of farm refuse, for example, are now in place.

A forest service departments’ sensitization workshop provided a good opportunity to engage the protected-area personnel in an exercise that was useful in updating them on the CEPF program. Subsequent products such as the forest change analysis maps have been useful in reviewing degraded areas and how these areas can be prioritized for reforestation and other appropriate policy interventions.

The Forestry and Beekeeping Division of the Tanzania Ministry of Natural Resources and Tourism has accepted a list of potentially threatened plants in the Eastern Arc Mountains (Eastern Africa Plant Red List Authority, 2008) for incorporation into the Eastern Arc strategy that was produced by the GEF-UNDP Conservation and Management of the Eastern Arc Mountain Forests project.

## **Partnerships and Linkages**

The Coordination Unit and linkages with forest departments through the Project Steering Committee brought on board the government in a way that ensured its support and involvement at the various stages of program implementation. The Coordination Unit is still working as a team, coordinating and planning to pursue further conservation work.

There has been a phenomenal level of linkage with existing initiatives such as the Eastern Arc Mountains Conservation Endowment Fund, the UNDP Conservation and Management of Eastern Arc Mountain Forests project and WWF Coastal Forests Ecoregion Project. The CEPF program in the last years has

been characterized by wide consultations through which, for example, stakeholders from the various institutions participated in at least eight major consultative meetings. To stimulate linkages and partnerships, institutions were encouraged to send in proposals for joint projects, resulting in more than 10 such proposals. These collaborative efforts maximized conservation outcomes while minimizing duplication, and capitalized on the existing, diverse wealth of expertise among institutions.

As a result of CEPF's approach nongovernmental organizations and government institutions collaborate more closely. For example the Kenya Forest Service now liaises with the National Museum of Kenya; the East African Wildlife Society is working with Nature Kenya, ICIPE and University of Helsinki (Taitas); WCS, CARE International and the Department of Commercial Crops Fruits and Forestry teamed up in Zanzibar; and the National Museums' Coastal Forests Conservation Unit got involved as the coordination unit for implementation of community microgrants.

Student research grants have engaged universities and research organizations within the region and abroad, enhancing relationships through donation of equipment from postgraduate student research, as well as supervision and mentorship.

WWF's nodes for community microgrants facilitated contact with site-based staff from other organizations. This ensured cost-effectiveness in implementation of the microgrants. The sustainable biodiversity monitoring program is a keystone in terms of the partnerships developed through stakeholder consultative forums, engagement of protected area personnel in the use of METT forms, compilation and maintenance of a contact database which has details of more than 450 conservation professionals as well as development of the associated literature bibliography comprising 1,350 pieces of literature.

## **Lessons Learned**

As part of the Coordination Unit, TFCG led a process to hold a series of lessons learned workshops organized around strategic directions 1, 2 and 3. These were extremely productive meetings, bringing together the majority of the grantees to discuss the achievements and adaptive management that projects have engaged in. The full proceedings can be obtained from the CEPF Web site, [www.cepf.net](http://www.cepf.net). The lessons below are some of the overall lessons learned from this portfolio drawing from these workshops as well as experiences throughout implementation.

### **Strategic Direction 1: Increase the ability of local populations to benefit from and contribute to biodiversity conservation, especially in and around Lower Tana River Forests, Taita Hills, East Usambaras/Tanga, Udzungwas and Jozani Forest**

- Grants succeeded in reaching communities and significantly increased their capacity to contribute to conservation. They also improved their livelihoods. This increased capacity is an opportunity for future conservation initiatives and an important base for sustainability.
- There are significant opportunities to link with government, particularly in the context of new, more supportive policies. The Forest Departments in both Kenya and Tanzania were brought together through the Project Steering Committee for the Coordination Unit and greatly appreciated this forum. They were further supported through the community microgrants facility that linked community-based organizations and local government officers. However, governmental bureaucracy and delays in signing joint forest management agreements can undermine conservation initiatives.

- Many of the initiatives supported by CEPF remain dependent on donor funding. The discontinuation of funding from CEPF and others may mean that these initiatives cease when the funding ends. However there is an opportunity to tap other sources of funding from donors and payments for environmental services.
- The visioning process at the outset of the investment and the training of trainers provided by the Coordination Unit provided a strong foundation for the investment. However, delays in the transfer of funds, application procedures and consultations discouraged some grantees.
- CEPF supported a wide range of nature-based businesses that contributed to improved livelihoods in communities living adjacent to the forests. These businesses represent a significant opportunity for the future, particularly if they can be linked with conservation initiatives. However, there is some uncertainty as to whether the returns and market shares necessary can be achieved in the absence of further investment.

**Strategic Direction 2: Restore and increase connectivity among fragmented forest patches, especially in Lower Tana River Forests, Taita Hills, East Usambaras/Tanga and Udzungwas**

- Establishing partnerships improves the quality of projects by bringing in varied skills and allows for the sharing of collective experience and expertise (scientific, socioeconomic). Partnerships between civil society organizations can also effect change in government policies and actions.
- Participatory planning workshops provided an opportunity for stakeholders to plan jointly, thereby avoiding duplication of effort and allowing for learning from previous experiences while making grantees aware that they are part of a larger suite of projects. These meetings also introduced a quality control mechanism for proposed projects such as the Derema Corridor compensation process, through which claims were processed under the Land Act instead of through the Agricultural Compensation Act after consultation among stakeholders.
- The Ecosystem Profile and the planning processes behind it significantly strengthened CEPF investment by providing clear direction based on the experiences and priorities of a wide range of stakeholders, allowing for CEPF investment to build on existing initiatives.
- The CEPF focus on civil society organizations resulted in not only increased capacity of nongovernmental organizations and community-based organizations but also strengthened local and central government partners.
- The hotspot-wide monitoring program that CEPF has supported provides an important resource for stakeholders working on forest connectivity issues and allows for a broader assessment of progress on the restoration of forest connectivity.
- Although lessons have been learned about identifying suitable sites for the restoration of connectivity and about how to restore connectivity, there is still a need for clearer guidelines on best practices taking into consideration local factors.
- There is still a need for more innovative and effective approaches to be developed to offer alternative livelihood practices that are more beneficial to communities than destructive income-generating activities and can address human-wildlife conflicts, as well as some of the underlying threats to forest connectivity, including population growth, governance and issues of land and natural resource tenure.

- Forest connectivity is strengthened through the inclusion of indigenous knowledge and traditional rights in conservation approaches.
- The case study of the Derema Corridor has raised many issues that should inform future compensation processes, including the importance of managing community expectations very carefully and providing them with investment advice; good communication between those involved in the process, especially the communities; and the need to be realistic about the length of time it takes to raise funds to cover the costs of compensation. Civil society organizations can play a valuable role in facilitating communication, but need to ensure that they have appropriate skills to take this on board. Guidelines for a compensation scheme are needed.
- CEPF prioritization of the restoration of connectivity put the issue of connectivity firmly on the conservation agenda and enabled organizations to leverage additional funding.

### **Strategic Direction 3: Improve knowledge of biodiversity in the region**

- The value of direct contact and sharing information with communities and decisionmakers was demonstrated through presentation to the community or others stakeholder rather than simply emailing or posting a report.
- CEPF investment in awareness raising and capacity building was enhanced through productive partnerships sharing complementary information, data and specimens; avoiding duplication of efforts; and documenting biodiversity values and indigenous knowledge.
- CEPF projects have a wealth of information, technical expertise and participant commitment, and have built capacity at a local and institutional level, backed in Tanzania particularly by President Kikwete's emphasis on conservation. But there is a need to invest further at a district level in encouraging participation, supporting the Forestry and Beekeeping Division in implementation of participatory forest management and targeting the private sector.
- CEPF's focus on civil society organizations has benefited from accountability, flexibility and innovative approaches resulting in tangible results for awareness raising and capacity building. It is important, however, to be aware of limitations of expertise at the community level.
- CEPF projects used a range of methods to communicate findings and raise awareness through Web sites, meetings and other means on a local, national and international level. But, knowledge of the Eastern Arc and projects remained limited amongst the general public, as there were insufficient linkages to media.
- A lack of taxonomists emerged as an impediment to collecting, analyzing and formally naming new or re-discovered species.

### **Conclusion**

The primary conclusion that can be drawn is that the participatory approach adopted during the preparation of the Ecosystem Profile in 2003 laid a firm foundation for CEPF investment. The niche identified was extremely relevant and integrated well with the other activities that were ongoing in the region, especially the GEF-UNDP Conservation and Management of the Eastern Arc Mountain Forests, Tanzania project, the GEF Medium Sized Project for the Kwale District in Kenya and the USAID

Arabuko Sokoke project and Visitors Centre at Fort Jesus, Mombasa. The relevance of CEPF investment was underscored by the signing of a Memorandum of Understanding between Conservation International and the Government of Tanzania's Ministry of Natural Resources and Tourism that provided government support to all of CEPF-supported research projects throughout Tanzania.

The role and technical capacity represented by the Coordination Unit were key to CEPF success in integrating with parallel activities that were being implemented concurrently.

With regard to biodiversity conservation, the situation in the region has shifted dramatically over the last five years of CEPF investment. By steadfastly maintaining the line that communities, scientists, government departments and nongovernmental organizations must work together to achieve conservation goals, CEPF created a portfolio of complementary and collaborative projects that raised the understanding and awareness of the importance of these forests and the biodiversity they contain, as well as enabled the implementation of projects that achieved considerable conservation goals.

The livelihoods of communities within the priority areas have been positively improved through training in a range of activities such as proposal writing, diversifying income-generating options and advocacy, all of which generate benefits and at the same time directly or indirectly improve the overall health and coverage of the forests. These advances also benefit human well-being.

The overall understanding has also been improved, with the results of biodiversity surveys further highlighting the need to improve the conservation status of the current forest reserves, as well as taking steps toward maintaining the integrity of the remaining forests and the connectivity between them. These data will increasingly become available in future issues of the Journal of East African Natural History and serve as a baseline from which to measure rates and the direction of adaptation to climate change.

In response to the local needs, two small grant mechanisms were established through the CEPF investment: 1) a studentship program, and 2) community microgrants. These have been extremely successful in achieving conservation and development goals in Tanzania and Kenya.

With regard to building capacity, many community-based organizations received funds directly from CEPF to implement projects themselves. Occasionally they have sought assistance in meeting the demands for programmatic and technical reporting from national nongovernmental organizations, but this reinforced the integrity of the network of organizations.

In terms of developing a cadre of Tanzanian and Kenyan scientists to build upon these achievements, the scientific rigor that the students had to demonstrate in their applications and implementation of research projects has created a generation of new conservation biologists in a broad range of fields.

The most profound and enduring legacy will remain the partnerships that have been forged during the past five years. These have included government officials in Tanzania and Kenya, international nongovernmental organizations involved in natural resource management in the region and research institutions engaged in field work, and communities living around the sites. It is expected that these partnerships will grow and become an important resource for any subsequent follow-up work, taking advantage of opportunities such as payments for carbon sequestration and ecosystem services provided by these vital forests.

## CEPF FIVE-YEAR LOGICAL FRAMEWORK REPORTING

LONG-TERM GOAL STATEMENT	TARGETED CONSERVATION OUTCOMES	RESULTS
<p>Species and sites targeted through projects to achieve globally significant biodiversity conservation.</p>	<p>160 Key Biodiversity Areas targeted in Kenya and Tanzania (see Ecosystem Profile for complete list).</p>	<p>In all, 103 projects were supported in 74 key biodiversity areas. However, importantly, these sites encompassed 310 of the 333 conservation outcome species through research, monitoring and community conservation approaches.</p> <p>In addition, support was provided to two projects—Equator Ventures and a small grant mechanism for global conservation of amphibian diversity—that benefitted this region and others in the CEPF global portfolio.</p> <p>Standard methods for biodiversity surveys were developed to enable direct comparisons between forests surveyed.</p> <p>In addition, a standardized, simple and cost-effective monitoring protocol was agreed upon among all stakeholders to monitor biodiversity at priority sites in terms of state, pressure and response to ensure the status of key taxa and ecosystem processes, particularly species of global conservation concern.</p>
		<p>A set of 19 measurable biodiversity indicators and accompanying tools were developed through a participatory process aimed at mainstreaming biodiversity monitoring into institutional routines and ensuring that the indicators are useful in measuring conservation outcomes.</p>



		These data also contributed to the National Biodiversity Database in Tanzania and to the Conservation Outcomes database maintained by Nature Kenya in Nairobi to improve the overall understanding of the region and to effect site management and conservation action.
	333 globally threatened species (236 plant, 29 mammal, 28 bird, 33 amphibian and seven gastropod), of which 241 are Vulnerable, 68 are Endangered, and 24 are Critically Endangered.	<p>The projects supported addressed conservation issues or improved knowledge of 310 of the conservation outcomes species.</p> <p>29 new vertebrate species have been described to science, including a new genus of mangabey named Kipunji (<i>Rungwecebus kipunji</i>) and the grey-faced elephant shrew (<i>Rhynchocyon udzungwensis</i>).</p> <p>Successful restoration and enrichment planting by the community neighboring Chawia Forest Reserve in the Taita Hills, Kenya, paved the way for 10 Taita thrush “floater individuals” to be translocated from nearby Mbololo Forest to assist this subpopulation, which was showing asymmetry as a result of a genetic bottleneck.</p>
	<b>IMPACT INDICATORS</b>	<b>RESULTS</b>
	Community-based organizations and other local civil society organizations (at least 20) contribute to and benefit from biodiversity conservation throughout the Coastal Forests and Eastern Arc Mountains of Tanzania and Kenya as a result of the CEPF investment.	<p>24 community-based and local organizations contributed to and benefited from biodiversity conservation throughout the Coastal Forests and Eastern Arc Mountains of Tanzania and Kenya as a result of the CEPF investment.</p> <p>Of the 103 grants awarded, 59 grants up to \$20,000 were provided directly to civil society organizations to effect behavior change and improve the conservation of natural resources.</p>

		<p>These included support for agroforestry activities, ecotourism, ethnobotanical surveys, species and site-specific research, awareness and dissemination of information.</p> <p>In addition, 146 community microgrants up to \$2,000 were distributed to community-based organizations throughout Tanzania and Kenya through a small-grants mechanism led by the WWF-East African Regional Programme Office.</p> <p>These grants encompassed constructing fuel-efficient wood stoves; establishing tree nurseries, environmental awareness and education activities; community landscape planning and zoning.</p>
	<p>Connectivity between forest patches is enhanced in at least 15 sites containing at least 30 percent of the threatened and endemic species including the Lower Tana River Forests, Taita Hills, East Usambaras / Tanga and in the Udzungwas.</p>	<p>Connectivity enhanced in five priority sites—the Lower Tana River Forests, Taita Hills, East Usambaras / Tanga and in the Udzungwas—comprising 93 percent of the threatened and endemic species.</p> <p>At the request of the Japanese Bank for International Cooperation and the Tana and Athi Development Authority, CEPF supported an environmental assessment of the lower Tana forests, which shelter the Critically Endangered primates Tana River red colobus (<i>Procolobus rufomitratatus</i>) and Tana River mangabey (<i>Cercocebus galeritus</i>). The final report compares socioeconomic, botanical and primatological surveys and provides sound recommendations to reconcile the various demands upon the natural resources. However, political instability in this area surrounding</p>

		<p>potential sugar cane farming and beef production meant that it was too sensitive to proceed with the recommendations of this study.</p> <p>A cautious, stepwise process in Taita Taveta District, Kenya has led to communities, nongovernmental organizations and landscape ecologists identifying priority sites for re-establishing native forests. A subsequent grant as a result of stakeholder planning and scientific modeling to the East African Wild Life Society engaged the local communities and the Kenya Forest Service in developing three participatory forest management (PFM) plans prepared for three groups of forests, namely:</p> <ol style="list-style-type: none"> <li>1. Vuria, Jaycee, and Mwaghanini forests</li> <li>2. Chawia and Susu forests</li> <li>3. Wesu Big Rock, Mbili Weni Mwana forests</li> </ol> <p>Based upon these PFM plans, three Community Forest Associations have been formed and registered.</p> <p>In the East Usamabara Mountains CEPF supported the WWF Tanzania Program Office to define the process of establishing the Derema Corridor, an area of 938 hectares that provides a vital link connecting 45,000 hectares of moist tropical forest as part of the Amani Nature Reserve.</p> <p>With the support of the Global Conservation Fund, the Finnish and Tanzanian governments, compensation payments have been made to the</p>
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		<p>1,072 farmers affected by the expansion of the protected area. This will ultimately link with the 6,025-hectare Nilo Nature Reserve.</p> <p>In the Uluguru Mountains, a master’s study on the ecological and socioeconomic factors for forest restoration planning in the Bunduki Gap combined with an updated population assessment of the Critically Endangered Uluguru bush shrike (<i>Malaconotus alius</i>) that revealed that this species occurred in forest fragments on both sides of the gap led to the gazettement of the 24,115-hectare Uluguru Nature Reserve.</p> <p>In the Udzungwa Mountains, biodiversity surveys identifying a new genus of mangabey and a new species of elephant shrew combined with two stakeholder workshops highlighted the importance of this area to the Forestry and Beekeeping Division in Tanzania and resulted in the 134,511-hectare Kilombero Nature Reserve.</p> <p>A project undertaken in partnership among the Wildlife Conservation Society, CARE Tanzania and the Department of Commercial Fruits and Forestry around the Jozani Chwaka-Bay National Park worked with eight villages to develop resource use management agreements zoning their communal areas to reconcile conservation and development aspirations. These included eight villages composed of 11 homesteads. These villages are:</p> <ul style="list-style-type: none"> <li>• Muungoni</li> <li>• Muyuni A, B, and C</li> <li>• Kibuteni</li> </ul>
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		<ul style="list-style-type: none"> <li>• Kizimkazi Dimbani</li> <li>• Kizimkazi Mkunguni</li> <li>• Mtende</li> <li>• Jambiani</li> <li>• Paje.</li> </ul>
	<p>Improved access to information relating to the status and trends of all threatened and endemic species. Information on the 161 priority sites and the conservation responses—ongoing and required—is being shared systematically with a wide range of stakeholders</p>	<p>CEPF’s support to the Journal of East African Natural History enabled this society to scan and make available all of the journal’s manuscripts since 1910. Issues since 1994 have been made available on <a href="http://www.BioOne.org">www.BioOne.org</a> as well as other digital media distributors. In addition, all articles published from 1910-1993 are available through the Biodiversity Heritage Library initiative (<a href="http://www.biodiversitylibrary.org">www.biodiversitylibrary.org</a>).</p> <p>Much of the information on CEPF’s activities has been made locally available through the creation of the <a href="http://www.cepf.tfcg.org">www.cepf.tfcg.org</a> site.</p> <p>In addition, and as a complement to the Web site for the Eastern Arc Mountains (<a href="http://www.easternarc.or.tz">www.easternarc.or.tz</a>), CEPF supported the creation of <a href="http://coastalforests.tfcg.org/">http://coastalforests.tfcg.org/</a>. This site acts as a repository of the most up-to-date information on the coastal forests in Tanzania and Kenya.</p> <p>With regard to improving access to information and working with the Zoology Department of the University of Dar es Salaam, CEPF supported the expansion of the National Biodiversity Database for Tanzania. This project ensured that researchers undertaking biodiversity surveys were able to deposit specimens with the university and were assisted where necessary</p>

		<p>with identification. The grant also allowed Kim Howell to transcribe the field notes from 35 years of field observations throughout Tanzania.</p> <p>Conservation International's Center for Applied Biodiversity Science, in conjunction with the GIS Team at the Sokoine University of Agriculture, completed a forest change map of the Coastal Forests for the period 1990, 2000 and 2007.</p> <p>CEPF assisted in distributing relevant publications, including the Coastal Forest books and WWF Ecoregion books to conservation institutions, government departments, museums and universities throughout the region.</p>
	<p>Sustainable fundraising mechanisms are in place with active leadership from local civil society organizations and have raised at least \$14 million to support further conservation investment by 2008.</p>	<p>A consultancy to assess opportunities for long-term funding was completed in 2007 that identified a series of opportunities for fundraising in Tanzania and Kenya, including:</p> <ul style="list-style-type: none"> <li>• Payments for ecosystem services</li> <li>• Payments for watershed service</li> <li>• Carbon sequestration/avoided deforestation</li> <li>• Tourism (increased taxes, bed fees)</li> <li>• Private sector engagement</li> <li>• Community-based conservation enterprises</li> <li>• Engaging the charcoal industry</li> <li>• Establishing conservation incentive agreements</li> </ul> <p>This consultancy also identified that there was an opportunity for CEPF to assist in raising the</p>

		<p>capital of the Eastern Arc Mountains Conservation Endowment Fund, which has already reached \$7 million.</p> <p>Based upon these opportunities, CEPF supported a pioneering carbon project for the Madunguni Forest Reserve involving the local community.</p> <p>Support was also provided to CARE Tanzania for its payments for watershed services in the Uluguru Mountains that supply water and hydroelectric power to Dar es Salaam as part of the equitable payment for watershed services program.</p> <p>The WWF-East African Regional Programme Office started implementing a fundraising strategy that aims to secure additional funds for an endowment fund established for this region, as well as maintain the Coordination Unit as an active unit developing proposals that build upon the achievements of CEPF-supported projects.</p> <p>Finally, as a direct result of CEPF's investment, ICIPE and Conservation International's Center for Applied Biodiversity Science have been approved for a grant from the Finnish government for a €5.8 million (\$7.8 million) for a project to determine the impacts of climate change on ecosystem services in the Eastern Afromontane Biodiversity Hotspot and identify means to mitigate these.</p>
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\* As part of developing this report, CEPF also assessed results of its investments against the World Bank's standard biodiversity indicators. The completed reporting against those indicators is included as Appendix D.

## **APPENDICES**

Appendix A. List of CEPF Approved Grants

Appendix B. Subgrantee Partners

Appendix C. Leveraging Data for the Eastern Arc Mountains and Coastal Forests

Appendix D. Reporting Against Standard World Bank Biodiversity Indicators



## **Appendix A. List of CEPF Approved Grants**

### ***Strategic Direction 1. Increase the ability of local populations to benefit from and contribute to biodiversity conservation***

#### **Aerial Monitoring of Vegetation Quality, Cover and Threats of the Forests of the Eastern Arc Mountains, Tanzania**

Define the area of forest habitat and levels and types of disturbance throughout the region to improve forest management strategies for both Eastern Arc Mountains and coastal forests. Retrospective comparison with 1950s vegetation maps will provide statistics on the extent and rates of change of forest cover.

Funding: \$146,976

Grant Term: 6/1/05 to 12/31/06

Grantee: Wildlife Conservation Society

#### **Agroforestry Activities around Arabuko Sokoke**

Scale up agroforestry practices of this community-based organization through increased propagation and planting of indigenous and commercial species that have important cultural and economic uses, reducing the pressure on the natural resources on the 41,600-hectare Arabuko Sokoke coastal forest, the largest remaining fragment of coastal forest in East Africa.

Funding: \$10,300

Grant Term: 7/1/05 to 12/31/06

Grantee: Mabuwani Women Group

#### **Assessment of Tumbatu Flora and Fauna Species**

Reinforce the capacity of the local population of this island to undertake a survey to determine species abundance and distribution. Using these data, explore how best to develop appropriate management and conservation mechanisms based upon the local cultural and spiritual values.

Funding: \$7,000

Grant Term: 1/1/06 to 12/31/06

Grantee: Jongowe Environmental Management Association

#### **Baseline Carbon Storage Assessment of Kenya's Coastal Forests**

Assess the carbon storage potential of East Africa's coastal forests as a prelude to establishing compensation schemes to community-managed forests from greenhouse gas emitting industries under the Kyoto Protocol.

Funding: \$16,447

Grant Term: 10/1/04 to 3/31/05

Grantee: International Centre of Insect Physiology and Ecology

#### **Business-Oriented Conservation and Agroforestry Initiatives in Muheza District, Tanzania**

Establish a demonstration farm neighboring the East Usambaras, a priority area within the region, to show the potential of agroforestry techniques to generate short-term economic benefits. Activities will also raise awareness of the threats to *Brachylaena huliensis*, a tree with high export value on the Kenya wood carving market.

Funding: \$19,412

Grant Term: 4/1/05 to 3/31/08

Grantee: JPFIRST

### **Capacity Building to Empower Community Conservation**

Create environmental conservation awareness among the village members and promote ecotourism in the region.

Funding: \$11,285

Grant Term: 10/1/04 to 11/30/05

Grantee: Kasigau Conservation Trust

### **Capacity Building to Improve the Management of the Amani Nature Reserve**

Update the infrastructure, communication, and management of the Amani Nature Reserve headquarters to enhance conservation effectiveness and increase tourism-related revenue to the reserve.

Funding: \$19,500

Grant Term: 1/1/07 to 12/31/07

Grantee: Amani Nature Reserve

### **CEPF Investment Coordination and Sustainability in the Eastern Arc / Coastal Forests Hotspot**

Coordinate CEPF's investments in this region to ensure they complement ongoing activities, engage a wide array of nongovernmental organizations, and achieve the greatest impact. The International Centre of Insect Physiology and Ecology will lead a consortium of the WWF-East African Regional Programme Office, the Tanzania Forest Conservation Group and BirdLife Africa to promote the conservation of biological diversity at all levels of civil society.

Funding: \$780,000

Grant Term: 2/1/04 to 3/31/09

Grantee: International Centre of Insect Physiology and Ecology

### **Community Biodiversity Conservation Micro-Grants in the Eastern Arc and Coastal Forests of Kenya and Tanzania**

Support community-based organizations reliant upon the forest resources with funds to undertake small-scale activities that serve to improve livelihoods and contribute to the conservation of the forests. Grants will include activities at individual sites, as well as actions that have indirect conservation benefits, including training and exchange visits.

Funding: \$415,000

Grant Term: 1/1/06 to 6/30/09

Grantee: World Wide Fund for Nature

### **Conservation and Management Policy Development**

Promote awareness and conservation of the sacred forests, or Kayas, by introducing tangible economic benefits from alternative activities including bee-keeping, production of fruits, and offering tours around the forest. In addition, important cultural information will be documented.

Funding: \$19,383

Grant Term: 5/1/05 to 4/30/07

Grantee: Kaya Muhaka Forest Conservation Organization

### **Conservation of Zanzibar's Unique Flora and Fauna via Community-Based Forest Management and Socioeconomic Development Around Jozani-Chwaka Bay National Park**

Expand the conservation and development activities around Jozani-Chwaka Bay National Park, in conjunction with village conservation committees, community-based organizations, and the Zanzibar Government to ensure the long-term survival of Zanzibar's endemic flora and fauna, including the Endangered Zanzibar red colobus and Aders' duiker.

Funding: \$83,077

Grant Term: 1/1/06 to 12/31/07

Grantee: Wildlife Conservation Society

**Conservation of Zanzibar's Unique Flora and Fauna via Community-Based Forest Management and Socioeconomic Development Around Jozani-Chwaka Bay National Park**

Expand the conservation and development activities around Jozani-Chwaka Bay National Park, in conjunction with village conservation committees, community-based organizations, and the Zanzibar Government to ensure the long-term survival of Zanzibar's endemic flora and fauna, including the Endangered Zanzibar red colobus and Aders' duiker.

Funding: \$91,908

Grant Term: 1/1/06 to 12/31/07

Grantee: CARE International

**Conserving Coastal and Eastern Arc Forests Through Community Access to Retail Markets for Good Wood Wood Carvings on the South Coast of Kenya**

Alert both tourists and artisans in this popular tourist destination about the threats to indigenous trees favored by craftsmen in meeting the demand for woodcarvings as safari souvenirs, and promote the use of alternative and abundant timber including neem and jacaranda timber as "good woods."

Funding: \$19,999

Grant Term: 1/1/05 to 9/30/06

Grantee: Wakuluzu: Friends of the Colobus Trust Ltd.

**Do Payments For Environmental Services Offer the Potential For Long Term Sustainable Financing?**

Knowing the value of watershed services provided by forests is vital in defining the link between urban populations that rely on these ecological functions, this study will assess the contribution made by the forests of the Uluguru Mountains. These forests are the source of the Ruvu River that supplies Morogoro and Dar es Salaam with water and generates hydroelectric power.

Funding: \$15,840

Grant Term: 10/1/04 to 9/30/07

Grantee: World Wide Fund for Nature

**Equator Ventures**

Support the pilot phase of Equator Ventures, a partnership initiative with UNDP's Equator Initiative. Implement loan and technical assistance packages to small- to medium-sized enterprises benefiting biodiversity and local communities, and monitor biodiversity results.

Funding: \$11,110

Grant Term: 6/1/05 to 3/31/09

Grantee: Conservation International. This is a multiregional project covering nine hotspots; the total grant amount is \$99,986.

**Evaluation of Tanzania Forest Conservation Group's Participatory Forest Management Initiatives in the Eastern Arc**

Identify the best practices and lessons learnt from communities engaged in participatory forest management within Tanzania. These findings will be shared with all stakeholders through a variety of media describing impacts and benefits of participatory forest management on biodiversity conservation and local livelihoods.

Funding: \$35,686

Grant Term: 3/1/05 to 3/31/06

Grantee: Tanzania Forest Conservation Group

### **Forest Use and Conservation of Biodiversity in Witu Forest**

Survey both wildlife distribution and abundance as well as human activities on a 100,000-hectare conservancy. Using these data, assess the potential to develop an integrated conservation and development plan in conjunction with the local communities through ecotourism and sustainable natural resource management activities.

Funding: \$19,942

Grant Term: 1/1/07 to 3/30/07

Grantee: Danish Zoological Society

### **Instituting a Standardized Sustainable Biodiversity Monitoring System in the Eastern Arc / Coastal Forests of Tanzania and Kenya**

Monitor conservation outcomes as a result of all investments undertaken at species, site and landscape scales. In addition, provide a mechanism for all data accrued from projects to be available to address the most urgent priorities that can be compared against an analysis of forest change throughout the region.

Funding: \$351,947

Grant Term: 2/1/05 to 3/31/09

Grantee: BirdLife International

### **Instituting a Standardized Sustainable Biodiversity Monitoring System in the Eastern Arc / Coastal Forests of Tanzania and Kenya**

Monitor conservation outcomes as a result of all investments undertaken at species, site and landscape scales. In addition, provide a mechanism for all data accrued from projects to be available to address the most urgent priorities that can be compared against an analysis of forest change throughout the region.

Funding: \$125,962

Grant Term: 2/1/05 to 6/30/09

Grantee: Conservation International

### **Investigating the Benefits of Participatory Forest Management in Uluguru Forest Reserves**

Extrapolate the relationships between community livelihoods and forest cover in six locations within the Uluguru Mountains to identify the best practices and constraints to forest management approaches and assist in refining these approaches accordingly.

Funding: \$16,616

Grant Term: 10/1/05 to 3/31/07

Grantee: Wildlife Conservation Society of Tanzania

### **Kachororoni Saintpaulia Conservation Project**

Conserve and rehabilitate the main location of the rare African violet (*Saintpaulia ionantha*) subspecies *rupicola* that is found in the Kachororoni river gorge, Kilifi District, Kenya. Establish trails and information boards to educate tourists about the importance of the Africa violets as important species for the region.

Funding: \$10,000

Grant Term: 10/1/07 to 12/31/08

Grantee: National Museums of Kenya

### **Kaya Kinondo Community Ecotourism Project**

Demonstrate the positive influence of ecotourism by connecting conservation management in the Kinondo region with tangible social and economic benefits to the local people.

Funding: \$19,915

Grant Term: 10/1/04 to 3/31/06

Grantee: Kaya Kinondo Conservation and Development Group and Coastal Forest Conservation Unit

### **Kwale Herbal and Beauty Production Centre**

Improve the quality control on a range of beauty products that are derived using essential oils extracted from plants growing in the natural and sacred forests in Kwale District in order to obtain Kenya Bureau of Standards certification and expand the available market.

Funding: \$12,030

Grant Term: 1/1/07 to 6/30/09

Grantee: National Museums of Kenya

### **Managing the Interface between Forest Product Extraction and Rural Livelihoods in the Eastern Arc Mountains and Coastal Forests**

Mitigate threats to the long-term conservation of Tanzania's forests from unsustainable timber trade and extraction through a combination of strengthening civil society and improved community management of forest reserves that will provide the tools necessary to prevent unsustainable trade.

Funding: \$100,000

Grant Term: 10/1/06 to 6/30/09

Grantee: TRAFFIC International

### **Mangabey Educational Tourism Project in the Udzungwa Mountains, Tanzania: Phase 1**

Complete the habituation of a troop of Endangered Sanje mangabeys (*Cercocebus galeritus sanjei*) around the Udzungwa Mountains National Park headquarters at Mang'ula to enhance educational tourism for both local and international visitors. In so doing, train and build the skills of rangers and local guides to ultimately increase revenue for the park and local community.

Funding: \$20,000

Grant Term: 11/1/06 to 8/31/07

Grantee: Trevor P. Jones

### **Mrimazo Forest Conservation and Rehabilitation Project**

Improve community stewardship of the Mrimazo forests through an integrated approach that will combine agroforestry, improved beekeeping, and farm forestry activities as well as enrichment planting of indigenous tree species within the degraded parts of Marenje and Dzombo forests.

Funding: \$10,000

Grant Term: 9/1/07 to 8/31/09

Grantee: National Museums of Kenya

### **Promoting Community Involvement in Resource Protection in and around the Boni-Dodori-Kiunga Protected Area Complex**

Strengthen community participation and collaboration between local organizations, the Kenya Wildlife Service, and other stakeholders to improve the conservation of these remote coastal forests of northern Kenya. Undertake a participatory assessment of the current level of off-take of natural resources and develop self-regulating mechanisms to moderate over extraction.

Funding: \$19,930

Grant Term: 1/1/06 to 12/31/06

Grantee: Africa Conservation Fund

### **Promotion of Nature-Based, Sustainable Businesses for Forest-adjacent Communities in the East-Usambara-Tanga, Taita Hills, and Lower Tana River Forests**

Develop nature-based alternative livelihood opportunities for communities in and around three priority areas. These opportunities include production and marketing of commercial insects, honey production, silk farming, and medicinal plants that will enable communities to sustainably use natural resources in ways that also contribute to conservation.

Funding: \$500,000

Grant Term: 4/1/05 to 12/31/08

Grantee: International Centre of Insect Physiology and Ecology

**Protecting Biological Diversity on Unilever's Mufindi Tea Estate**

Analyze the causes of forest degradation around the Mufindi Tea estate. Based upon this, and in conjunction with select user communities, develop projects to promote alternative sources of energy and agroforestry practices to supply fuel wood, building materials, and medicinal plants as a means to conserve these forests.

Funding: \$20,000

Grant Term: 10/1/06 to 9/30/07

Grantee: Unilever Tanzania Limited

**Rubeho Environmental Action Plan (REAP) Project—Phase I**

Engage all relevant stakeholders in developing an action plan that will improve the conservation of the Mafwomero Forest landscape and promote environmentally sound alternatives to reduce the impact of the demand for building materials and firewood among the local community.

Funding: \$100,000

Grant Term: 12/1/06 to 9/30/08

Grantee: African Rainforest Conservancy

**Saintpaulia Project: Wildflower Field Guides for the Eastern Arc Mountains**

Produce pocket field guides of the wild flowers and butterflies for priority areas within the Eastern Arc Mountains.

Funding: \$13,140

Grant Term: 4/1/07 to 12/31/08

Grantee: Wildlife Conservation Society of Tanzania

**Socioeconomic Study of the Udzungwa Scarp Area: A Potential Wildlife Corridor**

Undertake a socioeconomic study of villages between the Udzungwa Mountains National Park and the Uzungwa Scarp Forest Reserve. These data will be used to evaluate the most effective approaches required to improve conservation and reconnect these important forest blocks.

Funding: \$17,720

Grant Term: 2/1/06 to 7/31/06

Grantee: World Wide Fund for Nature

**TALK (Training, Awareness, Learning, and Knowledge) about the Eastern Arc and Coastal Forests of Kenya and Tanzania**

Raise awareness about the importance of these forests, the biodiversity they contain, the services they provide, and the threats confronting their long-term conservation through a variety of media including drama and music competitions, publications, radio, and TV programs to be broadcast in BBC's Earth Report.

Funding: \$143,600

Grant Term: 2/1/06 to 6/30/09

Grantee: Tanzania Forest Conservation Group

**The Amani Butterfly Project**

Expand the current operations of the Amani butterfly project to enable more communities to engage in butterfly farming as an income-generating activity, in so doing defining the link between livelihoods and maintaining healthy, intact forest cover.

Funding: \$9,880

Grant Term: 11/1/05 to 10/31/06

Grantee: Tanzania Forest Conservation Group

**The Change from Central to Community-Based Forest Management in a Biodiversity Hotspot in Tanzania: Evaluating the Effect on Conservation and Poverty Alleviation**

Repeat surveys undertaken in 2000-2001 to determine changes in relative densities of wildlife populations, natural resource use and socioeconomic livelihood aspects in households around the Dabaga Ulongambi and West Kilombero Scarp forest reserves, Tanzania. These data will be applied to assess the effects of participatory forest management and provide lessons learned on community conservation of forest resources.

Funding: \$36,832

Grant Term: 12/1/07 to 12/31/08

Grantee: Danish Centre for Forest, Landscape and Planning, University of Copenhagen

**The Wildlife Works/Verde Ventures Kasigau Reforestation Project**

Reduce the pressure on the montane forest of Mt Kasigau through a reforestation program on the surrounding lowlands. Activities include empowering and involving communities in propagating indigenous tree species and replanting areas seriously denuded by uncontrolled charcoal burning and logging for domestic timber usage, as well as restoring depleted hardwood tree species to improve soil conservation and water catchments in the area.

Funding: \$18,154

Grant Term: 9/1/06 to 9/30/09

Grantee: Wildlife Works EPZ Ltd.

***Strategic Direction 2. Restore and increase connectivity among fragmented forest patches***

**Army Ants in the Fragmented Forests of Taita Hills and Lower Tana River**

Survey army ant (*Dorylus molestus*) populations, a keystone species, in forest patches of different sizes to determine how forest patch size and time since isolation influence army ant occurrence and abundance. The minimum patch size supporting viable populations will assist in planning connectivity interventions in other highly fragmented forest environments in both semi-arid and humid regions.

Funding: \$10,000

Grant Term: 11/1/05 to 12/31/05

Grantee: Caspar Schöning

**Assessing the Potential for Restoring Connectivity and Evaluating Options for Improved Management of the Udzungwa Scarp, Iyondo, Matundu, and Nyanganje Forest Reserves in the Udzungwa Mountains of Tanzania**

Assess the condition of the forests, ecosystem integrity, and human impacts between the Udzungwa Mountains National Park and the Uzungwa Scarp Forest Reserve to identify and map potential corridors between these critical conservation areas. Explore options for improving the management and conservation status of these areas.

Funding: \$88,535

Grant Term: 1/1/06 to 3/31/07

Grantee: Museo Tridentino di Scienze Naturali

**Assessment of the Potential to Restore and Increase the Connectivity of Zanzibar's Coral Forests**

Assess opportunities to improve connectivity between Jozani-Chwaka Bay National Park and Kiwengwa Forest Reserve, Muyuni Forest, and the Southern and Eastern coral rag forests. In partnership with the Department of Commercial Crops, Fruits and Forestry and the Jozani Environmental Conservation Association, work with communities in developing conservation corridors and expanding the protected area network.

Funding: \$19,210  
Grant Term: 1/1/08 to 12/31/08  
Grantee: Wildlife Conservation Society

**Conservation Biology of Ecological Indicators to Enhance Connectivity in the East Usambara Mountains, Tanzania**

Examine the influence of forest land-use practices on bird species movement, survivorship, and natality to define land-use practices within corridors that promote bird movement and survivorship. The recommendations from this study will provide guidelines that would be applicable to other corridor sites throughout the Eastern Arc Mountains.

Funding: \$69,865  
Grant Term: 8/1/05 to 12/31/08  
Grantee: William D. Newmark

**Facilitating a Process of Stakeholder Consultations on the Interventions Required to Restore and Increase the Connectivity of Forest Patches in Taita Hills**

Ensure that the findings from research undertaken within the hotspot are made available to all relevant institutions and individuals to raise awareness and conservation of these vital habitats. The grantee will perform this role and assist non-Tanzanian researchers with securing the relevant research permits.

Funding: \$17,905  
Grant Term: 2/1/05 to 2/28/05  
Grantee: The East African Wild Life Society

**Facilitating the Compensation Payments for the Derema Forest Reserve, East Usambara Mountains**

Secure one of the most important biodiversity sites in Africa, the Derema corridor, linking the Amani Nature Reserve in the East Usambara Mountains to several other forest reserves. This grant will establish the working mechanisms for a compensation scheme capitalized by the governments of Tanzania and Finland, the Global Conservation Fund and other donors.

Funding: \$143,000  
Grant Term: 7/1/05 to 12/31/09  
Grantee: World Wide Fund for Nature

**Facilitating the Process of Designing CEPF/GCF Connectivity Interventions in the Udzungwa Mountains Area**

Determine, through a stakeholders' workshop, a cohesive set of conservation priorities in the areas surrounding Udzungwa National Park that face demands from the local communities and commercial enterprise, as well as the need to protect the ecological services of the catchment forests that provide habitat for several endemic species.

Funding: \$20,000  
Grant Term: 12/1/04 to 12/31/04  
Grantee: World Wide Fund for Nature

**Forest Conservation in the Matumbi Hills, Rufiji District**

Improve community conservation of five forests reserves in Tanzania through participatory forest management with the Forest and Beekeeping Division to create Village Land Forest Reserves as a means for long-term, sustainable forest use. Implement a monitoring plan that tracks changes in forest quality, management effectiveness, and species diversity.

Funding: \$164,000  
Grant Term: 7/1/07 to 12/31/09  
Grantee: World Wide Fund for Nature



### **Improve Forest Connectivity in the Taita Hills: A Preparatory Phase**

In conjunction with village community forest associations, develop participatory management plans for selected forest fragments identified to improve connectivity, namely Vuria, Susu and a combined plan for Wesu Big Rock, Mbili and Weni Mwana.

Funding: \$53,627

Grant Term: 5/1/07 to 12/31/08

Grantee: The East African Wild Life Society

### **Improving the Conservation of Magombera Forest**

Lead the process that involves all stakeholders, including the local community, private sector, and government departments, to formally gazette Magombera Forest as part of the Selous Game Reserve. In so doing, develop alternative livelihood activities to improve local livelihoods and conserve the Iringa red colobus.

Funding: \$64,000

Grant Term: 11/1/06 to 12/31/09

Grantee: World Wide Fund for Nature

### **Making Available Free Copies of Coastal Forest Books**

Distribute the IUCN publication The Coastal Forests of Eastern Africa (2000) that remains the only complete description of this mosaic habitat, the current status, biodiversity values, human impacts, and potential benefits from the remaining forests.

Funding: \$5,375

Grant Term: 7/1/05 to 9/30/05

Grantee: World Wide Fund for Nature

### **Rapid Environmental Impact Assessment of the Rehabilitation of the Tana Delta Irrigation Project with Design of Critical Primate Habitat Improvement, Increased Indigenous Forest Connectivity and Community Woodlots**

Review previous research and documentation of the Lower Tana River Forest area, update both the biological and socioeconomic baseline and use this information to design an environmental component of a planned rehabilitation with the focus of enhancing conservation management while also engaging local residents in discussion and action regarding the long-term benefits of forest connectivity.

Funding: \$20,584

Grant Term: 10/1/04 to 7/31/05

Grantee: National Museums of Kenya

### **Rehabilitation and Restoration of Mwambirwa Forest**

Rehabilitate 318 hectares of Mwambirwa forest that burned down in 2001, replacing exotic plantation species with a mix of indigenous trees. In so doing, reestablish connectivity with the larger Mbololo forest to improve the long-term survival of the Critically Endangered Taita thrush (*Turdus helleri*).

Funding: \$19,409

Grant Term: 4/1/05 to 9/30/07

Grantee: The East African Wild Life Society

### **Rehabilitation of Chawia Forest for the Conservation of Its Flora and Fauna**

Conserve the Critically Endangered Taita thrush (*Turdus helleri*) through restoring the understory vegetation within Chawia forest, while providing alternative sources to many of the forest products required by the local communities. Activities also include advocating for change in community use of the forest to improve the breeding success of this ground-dwelling species.

Funding: \$18,990

Grant Term: 4/1/05 to 3/31/07

Grantee: The East African Wild Life Society

### **Resource Center for the Provision of Information and Technical Advice to Local Stakeholders in Forest Restoration Work in Taita Hills**

Provide relevant, appropriate information and Internet links that describe conservation, livelihoods and farming practices to improve land-use and conservation priorities to the communities living throughout the Taita Hills through a resource center based in Wundanyi. Raise awareness of the activities of researchers within the area and opportunities to exchange information and ideas.

Funding: \$19,988

Grant Term: 4/1/05 to 3/31/06

Grantee: The East African Wild Life Society

### **Restoration and Increase of Connectivity Among Fragmented Forest Patches in the Taita Hills, Southeast Kenya**

Model the opportunities to increase connectivity between the forest fragments that comprise the Taita Hills to ensure the long-term conservation of threatened species. These data will then guide future conservation investments within the Taita Hills to address priority areas, including promoting alternative nature-based livelihoods to reduce the pressure on the natural resources.

Funding: \$105,203

Grant Term: 7/1/05 to 9/30/06

Grantee: Ghent University

### **Restoration and Increase of Connectivity in Taita Hills Forests: Survey and Suitability Assessment of Exotic Plantations**

Map and describe the plantations of exotic tree species within the Taita Taveta District and study opportunities and limitations to increasing connectivity between the fragments of remaining indigenous forests through "enrichment planting" within these plantations. These data will contribute to the connectivity model being undertaken by the University of Ghent.

Funding: \$20,000

Grant Term: 5/1/05 to 11/30/05

Grantee: The East African Wild Life Society

### **Restoring Forest Connectivity in the Udzungwa Mountains**

Identify biodiversity corridors combining both biological imperative and community use between existing forest fragments. In consultation with the local communities, the appropriate mechanisms to establish forest corridors will be put in place and the corridors will be replanted and tended to ensure the seedlings survive.

Funding: \$77,450

Grant Term: 8/1/06 to 12/31/08

Grantee: Tanzania Forest Conservation Group

**Standardizing Forest Change Methodologies Between Sokoine University and CABS to Assist in Identifying Connectivity Priorities Across the Eastern Arc and Coastal Forests**

Demonstrate the methodology developed to detect forest change and assess how similar this is to methodologies being used to detect forest change by Sokoine University and the WWF approach, and ideally develop a standardized method for this analysis so that the individual parts can be compiled as a region-wide forest cover change map.

Funding: \$7,203

Grant Term: 2/1/05 to 2/28/05

Grantee: Conservation International

**Technical Advisor—Conservation Corridors: Eastern Arc and Coastal Forests of Tanzania and Kenya**

Establish position for scientific advisor, who will provide up-to-date advice on the research priorities within the region and ensure that data are collected in a standard and comparable manner, thus ensuring that a cohesive set of research projects are implemented.

Funding: \$116,336

Grant Term: 7/1/05 to 6/30/06

Grantee: Conservation International

***Strategic Direction 3. Improve biological knowledge in the hotspot***

**“Scientific Advisor” for the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya Hotspot**

Providing up-to-date advice on the research priorities within the hotspot the scientific advisor will also ensure that data are collected in a standard and comparable manner, thus ensuring that a cohesive set of research projects are implemented throughout the hotspot.

Funding: \$90,400

Grant Term: 7/1/04 to 9/30/05

Grantee: Conservation International

**Assessment of the Amphibian Species Diversity, Population Status and Trends within the Forest Fragments of the Taita Hills, Kenya**

Survey and consolidate information on amphibian populations, their range and abundance within the forest fragments comprising the Taita Hills and Mount Kasigau as a barometer of environmental health. Working thorough local counterparts, this project will train local field assistants with a view to developing a sustainable long-term monitoring program.

Funding: \$64,999

Grant Term: 9/1/05 to 12/31/08

Grantee: Dr. G. John Measey

**Assessment of the Conservation Status of the Newly Discovered Mangabey *Rungwecebus kipunji* in the Udzungwa Mountains of Tanzania**

Contribute to the Red List assessment of this newly discovered primate in the Udzungwa Mountains by undertaking surveys of the range, abundance and ecological data in wet and dry seasons. These data will serve to recommend appropriate conservation actions. In addition, a Tanzanian graduate ecologist and local fieldworkers will be trained in primate survey techniques.

Funding: \$18,692

Grant Term: 1/1/05 to 4/1/06

Grantee: Trevor P. Jones

**Biodiversity Assessment and Monitoring of the Insect Fauna in the Eastern Arc Mountains and Coastal Forests Using Ground-Dwelling Ants and Beetles as Indicator Groups**

Complete a thorough field sample program across the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya to assess the composition and abundance of these important invertebrate groups. This will provide baseline data for future monitoring as well as contribute to the red listing of these often-neglected groups.

Funding: \$185,592

Grant Term: 3/1/05 to 6/30/09

Grantee: AfriBugs CC

**Biodiversity Research and Awareness in the Lesser Known Eastern Arc Mountains: Mahenge, Rubeho, Ukaguru, and Nguru**

Inventory the fauna and flora of the lesser-known sites and make these data available to all parties working to improve biological knowledge and forest management. Methods will be consistent with the other CEPF-supported biological surveys to enable direct comparison between sites. Data collected will feed into the National Biodiversity Database and Red List processes.

Funding: \$224,369

Grant Term: 7/1/05 to 11/30/07

Grantee: The Society for Environmental Exploration

**Chytrid Distribution and Pathogenicity Among Frogs of the Udzungwas**

Conduct a study to improve understanding of the level of infection and the threat posed by the Chytrid fungus among endemic amphibian species in the Udzungwa Mountains.

Funding: \$19,999

Grant Term: 3/1/04 to 7/31/05

Grantee: Wildlife Conservation Society

**Conservation Ecology of the Endangered Endemic Sanje Mangabey (*Cercocebus sanjei*) of the Udzungwa Mountains, Tanzania**

Complete a study that will define, for the first time, the ecological requirements, behavior and demographics of the Sanje mangabey (*Cercocebus sanjei*) in the Udzungwa Mountains National Park. These data are vital in determining the conservation needs of this highly endangered endemic primate.

Funding: \$13,000

Grant Term: 8/1/04 to 12/31/05

Grantee: Carolyn L. Ehardt

**Conservation of Indigenous Forest and Endemic Species on Pemba Island**

Expand the achievements of the Pemba flying fox (*Pteropus voeltzkowi*) project through community forest conservation initiatives around Ngezi-Vumawimbi Nature Forest Reserve and Msitu Kuu forest. In addition, strive to eradicate the invasive umbrella tree (*Maesopsis eminii*) that threatens the integrity of these indigenous forest fragments.

Funding: \$48,943

Grant Term: 7/1/05 to 6/30/07

Grantee: Fauna & Flora International

**Coordination, Facilitation and Dissemination of Research Works within the Critical Ecosystem Priority Sites, Tanzania**

Facilitate researchers in obtaining research permits and in conducting research to ensure that the information generated will be disseminated to the relevant government departments and community-based organizations.

Funding: \$18,378

Grant Term: 1/1/05 to 12/31/07

Grantee: Wildlife Conservation Society of Tanzania

### **Documenting Four Thematic Issues of the Journal of East African Natural History**

Provide a natural home for peer-reviewed papers, research findings, and short notes in the field of natural history that contribute to knowledge, status, and conservation within the region. In addition, all relevant papers published in the journal since 1910 will be made available for open access as portable document format files on the Web.

Funding: \$120,000

Grant Term: 1/1/05 to 6/30/09

Grantee: East Africa Natural History Society

### **Ethnobotanical Knowledge for Adaptive Collaborative Management at Mt. Kasigau, Kenya**

Compile indigenous knowledge of plant resources around Mount Kasigau including the traditional uses, values, economic benefits and pressures on particular plant species with a view to developing methods to sustainably manage these resources.

Funding: \$19,900

Grant Term: 5/1/05 to 8/31/07

Grantee: Miami University

### **Field Guide to the Moist Forest Trees of Tanzania**

Publish the completed text of a Field Guide to Moist Forest Trees of Tanzania.

Funding: \$19,697

Grant Term: 9/1/04 to 7/31/07

Grantee: University of York

### **Filling the Knowledge Gap: Surveys of Poorly Known Sites and Species in the Eastern Arc and Coastal Forests**

Understand the vertebrate biodiversity of three isolated, lesser-known sites Rubeho (within Dodoma Region), Udzungwa and North Pare Mountains. In addition, on a wider geographical scope, complete species-specific surveys of Endangered nocturnal and diurnal primates, duikers, elephant-shrews, hyraxes, amphibians and reptiles in Tanzania's Eastern Arc Mountains.

Funding: \$237,870

Grant Term: 4/1/05 to 6/30/08

Grantee: Tanzania Forest Conservation Group

### **Making Data Available on the Species and Sites of the Eastern Arc and Coastal Forest Hotspot in Tanzania**

Develop the Tanzanian National Biodiversity Database to include all existing specimens as well as incorporating site and species records from biodiversity surveys. These data will be available to identify gaps in knowledge as well as enhance the monitoring of conservation investments through the conservation outcomes database of Red List species.

Funding: \$67,500

Grant Term: 5/1/05 to 12/31/09

Grantee: University of Dar es Salaam

### **Malundwe's Afromontane Forest and River Catchments: Discovery and Capacity Building**

Describe and map the fauna and flora of Mount Malundwe located within Mikumu National Park to improve the management of the important forest habitats within the protected area.

Funding: \$30,000

Grant Term: 7/1/05 to 12/31/07

Grantee: Anglia Ruskin University

### **Managing CEPF's Outcomes Database for the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya Hotspot**

Maintain and expand the conservation outcomes database for this hotspot pending the development of a comprehensive monitoring system for the duration of the CEPF investment period. Ultimately, this will improve the Red Listing of species and benefit conservation action in the region.

Funding: \$9,998

Grant Term: 3/1/04 to 2/28/05

Grantee: East Africa Natural History Society

### **Overview of Butterfly Faunas of Eastern Arc Mountains and Coastal Forests: Biodiversity, Endemism, Conservation**

Collate existing data on all butterfly species, especially endemic butterfly species, throughout the region from existing collections (the grant recipient has the largest collection of African butterflies in existence), as well as identify gaps in the current knowledge and undertake field surveys to provide a complete a record.

Funding: \$19,700

Grant Term: 2/1/05 to 1/31/06

Grantee: African Butterfly Research Institute

### **Plant Conservation Assessment in the Eastern Arc Mountains and Coastal Forests Mosaic of Kenya and Tanzania**

Survey important sites and species with limited distributions to update the conservation status of forest plants and broaden the network of East African plant specialists. Species new to science will be published and type specimens deposited in collections as well as being available online through the Missouri Botanical Garden's Web site. This information will contribute to the Red Listing of plant species.

Funding: \$318,001

Grant Term: 2/1/05 to 6/30/08

Grantee: Missouri Botanical Garden

### **Plant Conservation Assessment in the Eastern Arc Mountains and Coastal Forests Mosaic of Kenya and Tanzania**

Survey important sites and species with limited distributions to update the conservation status of forest plants and broaden the network of East African plant specialists. Species new to science will be published and type specimens deposited in collections as well as being available online through the Missouri Botanical Garden's Web site. This information will contribute to the Red Listing of plant species.

Funding: \$111,384

Grant Term: 2/1/05 to 6/30/08

Grantee: IUCN-The World Conservation Union

### **Preventing Unsustainable Timber Trade from the Coastal Forests of Southeast Tanzania Following Completion of the Mkapa Bridge**

Build on existing baseline research about threats to coastal forests from illegal timber extraction in this hotspot, which has increased due to completing the Mkapa Bridge over the Rufiji River in southeast

Tanzania and improved infrastructure. TRAFFIC will undertake a rapid assessment of the threats to these forests and define conservation action needed.

Funding: \$19,999

Grant Term: 7/1/04 to 6/30/05

Grantee: TRAFFIC International

**Primates on Mt. Kasigau, Kaya Rubai and Along the Tana River, Kenya: Preparing for Red List Assessments and Conservation Action**

Conduct research on primate species in important sites in Kenya to fill knowledge gaps on population and distribution data and enable adequate assessment of extinction risks and conservation action.

Funding: \$19,900

Grant Term: 1/1/04 to 6/30/04

Grantee: Conservation International

**Small Mammal Studies in Three Important Eastern Arc Mountains Sites for the Creation of Innovative Educational, Scientific, and Conservation Tools**

Survey small mammal species (shrews, bats and rodents) in three lesser-known sites—North Pare, Rubeho, and Malundwe Mountains—to fill a gap in current level of knowledge. Bilingual education materials, based upon the findings of these surveys, will serve to improve the local appreciation of these often overlooked species.

Funding: \$150,000

Grant Term: 6/1/05 to 12/31/08

Grantee: The Field Museum of Natural History

**The Forgotten Coastal Forests of Mtwara: A Reconnaissance to Prioritize Biological Knowledge for Community Conservation Initiatives**

Undertake biological inventories of major taxa in select forests in Mtwara region, a largely neglected part of southern Tanzania's coast. These data will contribute to assessments of the conservation status of these species and will be translated into Kiswahili for the benefit of local communities and administrators managing these forests.

Funding: \$69,037

Grant Term: 2/1/05 to 12/31/05

Grantee: The Society for Environmental Exploration

**Trends in the Health of Selected Forests in the Eastern Arc and Coastal Forest**

Re-measure a series of forests plots five years after they were established in priority areas throughout the region to assess the trends in forest health. These data will provide a solid indication of the impacts that specific levels of threat have on the forests to assist with forest management.

Funding: \$39,030

Grant Term: 7/1/05 to 12/31/07

Grantee: West Chester University

*Strategic Direction 4. Establish a small grants program in the hotspot that focuses on Critically Endangered species and small-scale efforts to increase connectivity of biologically important habitat patches*

**A Bilingual Field Guide to the Amphibians of the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya**

Publish an up-to-date guide to the amphibians of the region, including accurate descriptions of the natural history and biology, in both English and Kiswahili. Promote further research and conservation of threatened species in this biogeographic realm.

Funding: \$19,540

Grant Term: 9/1/07 to 12/31/09

Grantee: The Research Institute of the State University of New York

**A Second Population Assessment of the Uluguru Bush Shrike *Malaconotus alius*, Uluguru Mountains**

Complete a second population census of the Uluguru bush shrike *Malaconotus alius*, an Alliance for Zero Extinction species within the Eastern Afromontane Hotspot. Combined with the data from the 2000 census, these data will be used to measure the status and trends of this Critically Endangered species.

Funding: \$12,280

Grant Term: 11/1/06 to 4/30/07

Grantee: Wildlife Conservation Society of Tanzania

**Assessment of Baseline Ecological and Socioeconomic Factors for Forest Restoration Planning in the Bunduki Gap of the Uluguru Mountain Forests of Tanzania**

Assess baseline ecological and socioeconomic factors for forest restoration planning in the Bunduki Gap in order to increase forest connectivity between the Uluguru North and South forest reserves and enhance biodiversity conservation.

Funding: \$6,628

Grant Term: 7/1/06 to 6/30/07

Grantee: CARE International

**Assessment of Overall Spider Diversity and Establishment of the Status and Ecology of Two New Species of Spiders from Taita Hills**

Establish a full checklist of the spider fauna of the Taita Hills and also carry out a detailed ecological survey of two recently described endemic species of spiders *Toxoniella taitensis* and *Toxoniella rogoae* to assess their conservation status

Funding: \$17,902

Grant Term: 10/1/06 to 12/31/08

Grantee: National Museums of Kenya

**Assessment of the Diversity and Conservation Status of Primates in the Coastal Forests of Kenya**

Resolve important questions pertaining to the taxonomy, distribution, abundance, and conservation status for the nine endemic species and five endemic/near-endemic subspecies of primates in the region. These data will produce recommendations for long-term conservation actions and contribute to improving the IUCN Red List status of these primates.

Funding: \$19,900

Grant Term: 8/1/05 to 12/31/08

Grantee: Yvonne de Jong

**Biodiversity of a Landscape: Examining Forest Heterogeneity and Ecological Change in the East Usambaras Since 1975**

Assess long-term ecological change, species diversity, and vegetation architecture to determine how these affect the ability of any area to be an effective biological corridor. Data on species composition and structure will be incorporated into a landscape-scale predictive model by integrating detailed biological surveys with high-resolution satellite images since 1975.

Funding: \$15,860

Grant Term: 12/1/05 to 11/30/06

Grantee: University of Florida



### **Capacity Development for Conservation in Africa**

Support nine students to attend at the Pan-African Ornithological Congress in South Africa during September 2008. The students: three each from Upper Guinea Forest region; Kenya, Tanzania, and Madagascar will present papers on their research findings as well as being introduced to a larger body of like-minded conservation scientists.

Funding: \$19,041

Grant Term: 5/1/08 to 12/31/08

Grantee: BirdLife International

### **Coordinated Monitoring of the Endangered Spotted Ground Thrush in the East African Breeding and Non-breeding Grounds**

Provide information that increases the knowledge about the spotted ground thrush (*Zoothera guttata*), its habitat, and the sites it occupies. Detect and act on threats to the species and other biodiversity of those sites, and help assess the effectiveness and progress of conservation efforts.

Funding: \$20,000

Grant Term: 3/1/07 to 12/31/08

Grantee: BirdLife International

### **Instituting a Biodiversity Monitoring System of Globally Threatened Species in Dakatcha Woodland**

Engage the local community in an ecological monitoring program by providing training on methods to measure environmental factors. The community will then undertake a baseline assessment of the woodlands and continue to monitor changes and effects on the bird community.

Funding: \$19,978

Grant Term: 1/1/06 to 12/31/08

Grantee: Nature Kenya

### **Making Available Copies of WWF Ecoregion Books**

Disseminate, to key institutions and policymakers in East Africa, the recently published Terrestrial Ecoregions of Africa: A Conservation Assessment and Freshwater Ecoregions of Africa: A Conservation Assessment. These publications represent the culmination of current understanding of these ecoregions. Improving access to these publications will strengthen the case for conservation interventions.

Funding: \$19,000

Grant Term: 1/1/06 to 3/31/06

Grantee: World Wide Fund for Nature

### **Population Density Estimates and Threats Evaluation of the Highly Endangered Udzungwa Forest Partridge in the Udzungwa Mountains of Tanzania**

Survey the known and potential range of the Udzungwa forest partridge (*Xenoperdix udzungwensis*) to determine the population size, density, and abundance to update the status in the IUCN Red List. Document the population structure and obtain genetic material for analysis as well as gain an idea of the food preferences of this threatened species.

Funding: \$19,778

Grant Term: 2/1/06 to 1/31/07

Grantee: University of Copenhagen

### **Population Estimates of Threatened Birds in the East Usambara Mountains, Tanzania**

Calculate the population density of several highly threatened bird species occurring in the East Usambara Mountains. These data will contribute to assessing the 2003 gold rush that affected this area as well as contribute to the long-term monitoring of conservation investments of this key biodiversity forest area.

Funding: \$19,960

Grant Term: 12/1/05 to 5/31/08  
Grantee: The Field Museum of Natural History

**Small Grants for Building Research Capacity Among Tanzanian and Kenyan Students**

Provide bursaries for students to undertake research at the species, site, and landscape levels.

Funding: \$200,000

Grant Term: 9/1/06 to 6/30/09

Grantee: BirdLife International

**Small Grants for Global Conservation of Amphibian Diversity Within Hotspots**

Develop and implement the Amphibian Action Fund aimed at the long-term conservation of amphibian species, and their habitats, within biodiversity hotspots around the globe. This fund will make available small grants of up to \$10,000 to be awarded to individuals and groups working within the hotspots on targeted amphibian conservation activities.

Funding: \$30,000

Grant Term: 7/1/05 to 9/30/09

Grantee: Arizona State University

This is a multiregional project covering seven hotspots; the total grant amount is \$200,000.

**Survey of Microchiropteran Bats of Mafia, Pemba, and Unguja, and Subsequent Creation of Educational, Scientific, and Conservation Tools**

Survey microbats on Pemba, Unguja and Mafia islands off mainland Tanzania to identify the diversity of bat species, current status and threats to roosts and feeding habitats. These data will be compared with similar assessments being undertaken on other Indian Ocean Islands, including Madagascar.

Funding: \$19,954

Grant Term: 7/1/05 to 12/31/07

Grantee: The Field Museum of Natural History

**Taxonomy and Conservation Genetics of the Threatened Mangabey Taxa of the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya**

Collect genetic samples and record vocalizations from the major populations of mangabeys throughout Tanzania and Kenya. These data will be analyzed to determine the degree of speciation of the respective populations and the extent of reproductive isolation and potential threats to survival due to loss of genetic variability.

Funding: \$19,925

Grant Term: 9/1/05 to 8/31/08

Grantee: Carolyn L. Ehardt

**Threatened Plant Species of not yet Surveyed Coastal Forest Patches in Handeni District, Tanzania**

Complete a botanical survey of the little known coastal forest of Kwedijela in Handeni District on the western boundary of Saadani National Park to contribute to the protection of globally threatened plants and help guide conservation investment.

Funding: \$16,092

Grant Term: 5/1/06 to 12/31/07

Grantee: Adansonia Consulting

***Strategic Direction 5. Develop and support efforts for further fundraising for the hotspot***

**Convening the CEPF Eastern Arc & Coastal Forests Assessment Workshop**

Organize and host a stakeholder workshop to help assess the gains achieved and identify future priorities and strategies for forest conservation in Tanzania and Kenya. Produce a documentary highlighting the

approaches taken, as well as showcase these achievements and exchange experiences with members of other CEPF coordination team, including members from the Cape Floristic Region, Caucasus, Eastern Himalayas and Western Ghats biodiversity hotspots.

Funding: \$109,539

Grant Term: 5/1/08 to 4/30/09

Grantee: Tanzania Forest Conservation Group

#### **Hotspot Butterflies: Making the Butterfly Exhibit Industry Work for Conservation**

Improve the market share for community-raised butterfly pupae supplied to flight houses in Europe and North America. This will, in turn, improve the livelihoods and benefits from conservation for communities engaged in butterfly farming. In conjunction with the butterfly exhibit industry, explore opportunities to stage displays focused on individual hotspots promoting the overall awareness of these biodiversity reservoirs and the threats they face.

Funding: \$15,565

Grant Term: 11/1/07 to 4/30/08

Grantee: International Centre of Insect Physiology and Ecology

#### **Improving Rewards for Environmental Stewards in Equitable Payment for Watershed Service Scheme**

Increase the financial returns to rural communities participating in the equitable payment for watershed services program around the Uluguru Mountains to promote a shift in land-use practices reducing the negative impacts on the watershed functions, improve the quantity and quality of water flow and improve livelihood security in target communities.

Funding: \$46,911

Grant Term: 7/1/08 to 6/30/09

Grantee: CARE International

#### **Long-term Fundraising Opportunities for the Conservation of the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya**

Explore opportunities to secure funds to continue to enhance forest conservation and civil society development in this critical region through engaging additional donor support to the Eastern Arc Mountains Conservation Endowment Fund, securing funds to promote the work of the Coordination Unit and assessing other funding mechanisms.

Funding: \$125,000

Grant Term: 9/1/08 to 12/31/09

Grantee: World Wide Fund for Nature

#### **Promoting Conservation Through Trees for Carbon Sequestration and Livelihoods Improvement in Madunguni Forest Reserve, Malindi District, Kenya**

Establish a pilot project to assess the potential for carbon sequestration as a mechanism for forest conservation. This community-based initiative seeks to develop strategic site management and business plans for voluntary carbon trading and benefits sharing for Madunguni forest in conjunction with the Kenya Forest Service.

Funding: \$35,250

Grant Term: 7/1/08 to 6/30/09

Grantee: East Africa Natural History Society

#### **Technical Backstopping of Sustainable Finance and Final Reporting Processes**

Provide technical advice to the CEPF Secretariat and East Africa Coordination Unit with regard to opportunities for long-term funding as well as linking with the Valuing the Arc and Natural Capital

projects that much of the data from biological inventories of forest cover and forest change analysis will contribute to in the future.

Funding: \$20,000

Grant Term: 6/1/07 to 3/31/09

Grantee: World Wide Fund for Nature - UK

## **Appendix B. Subgrantee Partners**

The following partners received CEPF funding directly from our grant recipients. These partners include the many communities who received support from the community grants program managed by the WWF-East African Regional Programme Office and students who received funding from the studentships program managed by the BirdLife Africa Secretariat.

Active Youth Community Initiative  
Afya na Maendeleo Self Help Group  
Arabuko Sokoke Guides Association  
Baricho Youth Group  
Bomani Women Group  
Capacity Building and Establishment of Community Savings and Credit  
Capacity Building for Magangani Butterfly Farmers to Enhance Conservation Effort  
Chapembe Kajiweni Mikoko Group  
Chikira, Hassan Senkondo  
Chitsanze Falls/ Cheka Cheka Medicinal Woodland Group  
Coast Farm Forest Association  
COCOBA (Community Conservation Bank) Tamburu  
COCOBA (Community Conservation Bank) Tong'omba  
Dalko Progressive Group  
Enendeni Women Group  
Environmental Development Group  
Gazi Women's Group  
Gede Cultural Group  
Gogoni Conservation Initiative  
Green Isaka Youth Nature Group  
Green Laza Community Based Organization  
Halmashauri Ya Kijiji Cha Njage  
Hifadhi Mazingira Tingi  
Himisa Group  
Ihomboza Group  
Jipe Moyo Mazingira Group  
Jitegemee Group  
Juhudi Group  
Juhudi Na Maarifa Group  
Kalumanga, Elikana  
Kamati ya Matumizi Bora ya Ardhi  
Kaya Jorore Group  
Kaya Kinondo Conservation & Development Group  
Kaya Likunda Drama Group  
Kenya Union of the Blind Shimba Hills  
Kibuta Poverty Eradication  
Kidau Group  
Kihale Wildlife Conservation Farm  
Kikundi Cha Juhudi Na Maarifa  
Kikundi Cha Kujiendeleza  
Kikundi cha Mazingira Kifinga  
Kikundi cha Mazingira Mwaya  
Kikundi cha Uhifadhi wa Kaya Fungo  
Kikundi cha Uhifadhi wa Makaya ya Rabai

Kikundi cha Wakulima na Uhifadhi wa Mazingira  
 Kikundi Cha Wanyumi  
 Kilibasi Self Help Group  
 Kilifi Green Town Environmental Initiative  
 Kilimo Na Mazingira Muyombo  
 Kilio Cha Haki Youth Group  
 Kiluma, Linda Stephen  
 Kilwala Nature Group  
 Kimanzichana Environment and Poverty Alleviation  
 Kiruku Green Zone  
 Kitalu Cha Misitu Na Kilimo Cha Mbogamboga  
 Kitalu Cha Upandaji Miti, Kijiji Cha Mwaya, Mangula  
 Kuanzisha Kitalu Cha Mitiya Misitu Na Matunda  
 Kuboresha Mazingira Ili Kuondoa Umaskini  
 Kuchile Kumekucha  
 Kuendeleza Msitu  
 Kufundisha Vikundi Juu Ya Ujasiriamali (Income Generation Activities)  
 Kujenga Uwezo Wa Jamii Inayozunguka Hifadhi Ya Taifa Ya Jozani Na Ghuba Ya Chwaka Kuhusiana  
 Na Umuhimu Wa Matumizi Endelevu Ya Misitu  
 Kukuza Uelewa Wa Uhifadhi Mazingira Pugu Station Shule Ya Msingi  
 Kulmiye Youth Group  
 Kuotesha Miche Ya Asili Kwa Ajili Ya Kuhifadhi Misitu Vijiji Vya Kizapala Na Vianzi  
 Kuotesha Miti Ya Asili Na Matunda  
 Kurungurungu Group  
 Kutunza Na Kuendeleza Msitu Wa Kijiji Wa Katurukila  
 Kuzuia Uchomaji Moto Vijiji Vya Magoza Na Sunguvuni  
 Kuzuia Uchomaji Moto Vijiji Vya Magoza Na Sunguvuni Mkuranga  
 Kwale Wildlife Action Patrons Group  
 Kwale Youth Action Plan  
 Lugandu, Simon Deus  
 Maingi, Kimuyu Duncan  
 Mama Nyuki: Malkia wa Msitu  
 Mapango Yetu  
 Marafa Group  
 Masande Self Help Group  
 Mazingira na Maendeleo  
 Mbega Group  
 MIDA Creek Conservation and Awareness Group  
 Miritini Environmental Devt Group  
 Mkwelimija Group  
 Mkwemeni Progressive Association  
 Mligo, Cosmas  
 Mpeketoni Imani Youth Group  
 Mpiri, Aloyce  
 Mradi wa Kuhifadhi Msitu wa Mkamba  
 Mradi wa Msitu, Mlima wa Visiga  
 Mradi wa Uhifadhi wa Bioanuai Ikolojia Kilwa  
 Mradi Wa Upandaji Miti Kijiji Cha Vikindu  
 Mradi Wa Upandaji Miti Rufiji  
 Mradii wa Matumizi Endelevu Ya Misitu ya Vikindu Pwani  
 Mruki Economic Development Group

Msabaha Neem & Mango Growers  
 Msambweni Beekeeping Association  
 Msitu wa Lupondo Hazina yetu  
 Mtandao Wa Ilondo  
 Mtepeni Primary Infrastructure Savings  
 Mlike Wetu Group  
 Mugasha, Wilson Ancelm  
 Muluguni Umoja Youth Group  
 Mumbi, Cassian T.  
 Musila, Simon Nganda  
 Mwachambi Tree Nursery  
 Mwangi, Kenneth Njoroge  
 Mwanda Environment Conservation Project  
 Mwanikah, Mercy  
 Mwaura, Ann Njeri  
 Mzeru, Deogratias Paul  
 Nature Conservation and Sustainable Conservation Trust  
 Ndalila, Mercy Nelima  
 Ngaruiya, Grace Wambui  
 Ngosaquata Development Council  
 Nguku, Julius K.  
 Nguruka kwa Kulala  
 Nuru Njema Masenge  
 Nyuki Upendo  
 Nyuki Youth Group  
 Ogoma, Maurice  
 Okoth, Susan Sande  
 Participatory Conservation of Biodiversity and Environment in Uluguru Mountain Forest  
 Patrick, Charles  
 Pima, Nancy Eliad  
 Sabaki River Estuary Youth Group  
 Sabuni, Christopher  
 Safina Akiba Group  
 Sauti ya Nyikani FFS (Field Farm Scheme)  
 Serikali ya Kijiji cha Utete Mashariki  
 Shikaadabu union Devt Prog  
 Shimba Hills Environmental Community Conservation Organisation  
 Shimba Hills Forest Guides Association  
 Shiwagaya Group  
 Shoo, Rehema A.  
 Shule Ya Msingi Iwemba  
 Shule Ya Msingi Mhovu  
 Shule Ya Msingi Msowero  
 Siyu Economical & Development Self Help Group  
 Soi, Bernard Cheruiyot  
 Sokoke Community Forest/ Game Scouts Association  
 Sunrise Coast  
 Sustainable Environment and Livelihood Limited  
 Tana Delta Conservation Organisation  
 Toroitich, Faith Jebet  
 Tujiendezeze Group

Tujitegemee Group  
Tumaini Jema Group  
Tumaini Vugiri - Korogwe  
Tumam Group  
Tumia Jana Namupa Lindi  
Tunza Mazingira Ambangulu Vugiri (Tumaini)  
Uchozini Cooperative Ufugaji na Uhifadhi Mazingira  
Uendelezaji Nishati Asilia Na Hifadhi Ya Mazingira Rufiji (RUTEDECO)  
Ufugaji Nyuki Kwa Maendeleo Nauhifadhi Wa Mazingira  
Ufugaji Nyuki Wa Kisasa Kijiji Cha Njia Nne  
Ufugaji wa Nyuki  
Uhifadhi Na Usimamizi Wa Misitu Ya Jamii Vijiji Vya Migeregere/ Rukatwe - Kilwa  
Uhifadhi Wa Eneo La Muinuko La Bubujiko Wete Pemba  
Uhifadhi wa Mlima wa Asili Magotwe  
Uhifadhi wa Vyanzo vya Maji na Utunzaji wa Msitu  
Umima Group  
Umoja Wa Vijana Wa Sali (Uvisa)  
Upandaji Miti Na Utunzaji Mazingira Kihare  
Upandaji Miti,Ufugaji Nyuki Na Uhamasishaji Jamii Jinsi Kuendeleza Uhifadhi Wa Misitu Ya Asili  
Ushirikishwaji Wananchi Juu Ya Uhifadhi Usimamizi na Utawala Wa Misitu Ya Pugu Na Kazimzumbwi  
Uviwata (Wawata Na Viwawa) Group  
Wambugu, Geoffrey Mwangi  
Watu na Nyuki Ruvu Kusini  
Wete Environmental Conservation Club  
Wildlife Conservation Society of Tanzania  
Youth Environment & Sustainable Development Organization  
Zanzibar Butterfly Center



**Appendix C. Leveraging Data for the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya**

<b>Grantee</b>	<b>Project Title</b>	<b>CEPF Funds Agreed</b>	<b>Leveraged and Co-Financing Funds</b>
Adansonia Consulting	Threatened Plant Species of not yet Surveyed Coastal Forest Patches in Handeni District, Tanzania	\$16,092	\$28,850
Africa Conservation Fund	Promoting Community Involvement in Resource Protection in and around the Boni-Dodori-Kiunga Protected Area Complex	\$19,930	\$31,500
African Butterfly Research Institute	Overview of Butterfly Faunas of Eastern Arc Mountains and Coastal Forests: Biodiversity, Endemism, Conservation	\$19,700	\$18,917
African Rainforest Conservancy	Rubeho Environmental Action Plan (REAP) Project – Phase I	\$100,000	\$45,000
Amani Nature Reserve	Capacity Building to Improve the Management of the Amani Nature Reserve	\$19,500	\$26,500
Anglia Ruskin University	Malundwe’s Afromontane Forest and River Catchments: Discovery and Capacity Building	\$30,000	\$29,700
BirdLife International	Coordinated Monitoring of the Endangered Spotted Ground Thrush in the East African Breeding and Non-breeding Grounds	\$20,000	\$500
BirdLife International	Capacity Development for Conservation in Africa	\$19,041	\$900
CARE International	Improving Rewards for Environmental Stewards in Equitable Payment for Watershed Service Scheme	\$46,911	\$1,775,000
Conservation International	Technical Advisor – Conservation Corridors: Eastern Arc and Coastal Forests of Tanzania and Kenya	\$116,336	\$30,000
Danish Zoological Society	Forest Use and Conservation of Biodiversity in Witu Forest	\$19,942	\$7,951
Ehardt, Carolyn L.	Conservation Ecology of the Endangered Endemic Sanje Mangabey ( <i>Cercocebus sanjei</i> ) of the Udzungwa Mountains, Tanzania	\$13,000	\$10,000

Ehardt, Carolyn L.	Taxonomy and Conservation Genetics of the Threatened Mangabey Taxa of the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya	\$19,925	\$3,795
Fauna & Flora International	Conservation of Indigenous Forest and Endemic Species on Pemba Island	\$48,943	\$33,853
International Centre of Insect Physiology and Ecology	Promotion of Nature-Based, Sustainable Businesses for Forest-adjacent Communities in the East-Usambara-Tanga, Taita Hills, and Lower Tana River Forests	\$500,000	\$1,560,000
IUCN-The World Conservation Union	Plant Conservation Assessment in the Eastern Arc Mountains and Coastal Forests Mosaic of Kenya and Tanzania	\$111,384	\$44,600
Jones, Trevor P.	Assessment of the Conservation Status of the Newly Discovered Mangabey <i>Rungwecebus kipunji</i> in the Udzungwa Mountains of Tanzania	\$18,692	\$7,831
Jong, Yvonne de	Assessment of the Diversity and Conservation Status of Primates in the Coastal Forests of Kenya	\$19,900	\$15,000
Kasigau Conservation Trust	Capacity Building to Empower Community Conservation	\$11,285	\$2,299
Measey, Dr. G. John	Assessment of the Amphibian Species Diversity, Population Status and Trends within the Forest Fragments of the Taita Hills, Kenya	\$64,999	\$66,270
Missouri Botanical Garden	Plant Conservation Assessment in the Eastern Arc Mountains and Coastal Forests Mosaic of Kenya and Tanzania	\$318,001	\$44,600
Museo Tridentino di Scienze Naturali	Assessing the Potential for Restoring Connectivity and Evaluating Options for Improved Management of the Udzungwa Scarp, Iyondo, Matundu, and Nyanganje Forest Reserves in the Udzungwa Mountains of Tanzania	\$88,535	\$53,000
Nature Kenya	Instituting a Biodiversity Monitoring System of Globally Threatened Species in Dakatcha Woodland	\$19,978	\$312,790
Tanzania Forest Conservation Group	Restoring Forest Connectivity in the Udzungwa Mountains	\$77,450	\$16,900

Tanzania Forest Conservation Group	Filling the Knowledge Gap: Surveys of Poorly Known Sites and Species in the Eastern Arc and Coastal Forests	\$237,870	\$62,000
The East African Wild Life Society	Rehabilitation and Restoration of Mwambirwa Forest	\$19,409	\$310,903
The East African Wild Life Society	Rehabilitation of Chawia Forest for the Conservation of Its Flora and Fauna	\$18,990	\$54
The East African Wild Life Society	Improve Forest Connectivity in the Taita Hills: A Preparatory Phase	\$53,627	\$9,074
The Field Museum of Natural History	Population Estimates of Threatened Birds in the East Usambara Mountains, Tanzania	\$19,960	\$28,188
The Society for Environmental Exploration	Biodiversity Research and Awareness in the Lesser Known Eastern Arc Mountains: Mahenge, Rubeho, Ukaguru, and Nguru	\$224,369	\$25,827
TRAFFIC International	Preventing Unsustainable Timber Trade from the Coastal Forests of Southeast Tanzania Following Completion of the Mkapa Bridge	\$19,999	\$72,500
Unilever Tanzania Limited	Protecting Biological Diversity on Unilever's Mufindi Tea Estate	\$20,000	\$170,183
University of Florida	Biodiversity of a Landscape: Examining Forest Heterogeneity and Ecological Change in the East Usambaras Since 1975	\$15,860	\$50,000
West Chester University	Trends in the Health of Selected Forests in the Eastern Arc and Coastal Forest	\$39,030	\$41,600
Wildlife Conservation Society	Aerial Monitoring of Vegetation Quality, Cover, and Threats of the Forests of the Eastern Arc Mountains, Tanzania	\$146,976	\$25,000
Wildlife Conservation Society	Conservation of Zanzibar's Unique Flora and Fauna via Community-Based Forest Management and Socioeconomic Development Around Jozani-Chwaka Bay National Park	\$83,077	\$32,000
World Wide Fund for Nature	Forest Conservation in the Matumbi Hills, Rufiji District	\$164,000	\$50,000
World Wide Fund for Nature	Socioeconomic Study of the Udzungwa Scarp Area: A Potential Wildlife Corridor	\$17,720	\$256,500

World Wide Fund for Nature	Long-term Fundraising Opportunities for the Conservation of the Eastern Arc Mountains and Coastal Forests of Tanzania and Kenya	\$125,000	\$75,000
World Wide Fund for Nature - UK	Technical Backstopping of Sustainable Finance and Final Reporting Processes	\$20,000	\$5,000
<b>Total</b>		<b>\$2,965,431</b>	<b>\$5,379,585</b>



Improving management effectiveness of protected areas	No		
Ha of production systems that involve improving sustainable use of biodiversity resources.	No		
Percent of beneficiaries engaged in improved livelihoods based on sustainable NR management (or sustainable harvesting?) <sup>2</sup>	Yes	<p>Percentage was not tracked per se, however grantees have reported the following related accomplishments in priority sites:</p> <p>ICIPE’s Nature-Based, Sustainable Businesses for Forest-adjacent Communities project resulted in the following revenues:</p> <ul style="list-style-type: none"> <li>• \$2,385 from <i>Ocimum kilimandscharicum</i> (Naturub) in East Usambara</li> <li>• \$300 from neem oil in Tana River</li> <li>• \$2,242 from honey in Tana</li> <li>• \$3,522 earned from butterflies in the Taitas</li> <li>• \$50,000 in reported earnings by the Amani Butterfly project from the sale of pupae to flight houses in Europe and North America.</li> </ul> <p>CARE Tanzania was engaged in community conservation activities with 17 villages surrounding the Jozani-Chwaka Bay National Park and reported that:</p> <ul style="list-style-type: none"> <li>• 214 individuals engaged in</li> </ul>	<p>As a result of this project, the relevant infrastructure and training have been put in place in each of these priority sites to ensure that these activities can continue to earn more revenue into the future. These include:</p> <ul style="list-style-type: none"> <li>• 4 honey extractors</li> <li>• 2 processors</li> <li>• 5,000 honey jars</li> <li>• 2 refractometers</li> <li>• 5,000 honey labels.</li> </ul> <p>Community members have been trained in extraction and packaging.</p> <p>The market linkages are in place and products arising from the enterprises have generated incomes for the communities. Post-project sales have continued for all three enterprises, and we are confident that the revenues can be sustained, although more support will be needed to consolidate the beekeeping and Naturub enterprises. The Taita link has greatly assisted Kipepeo in maintaining supplies to their clients during the dry season</p>

<sup>2</sup> Guided by a sustainable management plan.

		<p>beekeeping activities.</p> <ul style="list-style-type: none"> <li>• 69 women were actively producing handicrafts.</li> <li>• 154 people were actively producing vegetables.</li> <li>• 10 individuals were farming mud crabs to sell to tourist lodges.</li> </ul>	when butterfly production at Arabuko is very low.
Changes in sectoral policies, laws and regulations and their application, changes in institutional arrangements, responsibilities and effectiveness, to improve biodiversity conservation and sustainable use.	Yes	<ul style="list-style-type: none"> <li>• TRAFFIC East and Southern Africa undertook an exhaustive study of the illegal logging trade between Tanzania and China, effecting a ban on illegal logging in February 2004.</li> <li>• The Tanzania Forest Conservation Group formed part of the advisory panel on the national guidelines on participatory forest management, bringing lessons learned to bear to guide participatory forest management as well as commenting on policy briefs for both the Environment and the Wildlife Acts for Tanzania.</li> <li>• TFCG produced a new teachers' resource manual for primary schools featuring information and examples from the Eastern Arc and Coastal Forests that has been submitted to the Ministry of Education for approval as part of the national school curriculum.</li> <li>• In the Taita Hills, Kenya, the East African Wild Life Society developed participatory forest management agreements in collaboration with the Kenya Forest Service for eight forest blocks.</li> </ul>	
Sharing of benefits between and/or in countries, arising from the	No		

use of genetic resources			
Other impacts <sup>3</sup>	Yes	<ul style="list-style-type: none"> <li>• Surveys of 37 lesser-known forests resulted in improved understanding of the biodiversity and the threats to these sites (21 of the lesser-known forests of the Eastern Arc Mountains and 16 coastal forests).</li> <li>• Discovery of a minimum of 29 new vertebrate species including the Kipunji (<i>Rungwecebus kipunji</i>) and grey-faced elephant shrew (<i>Rhynchocyon udzungwensis</i>).</li> <li>• Community conservation efforts in Chawia Forest Reserve, Taita Hills, Kenya enabled the translocation of 10 individual Taita thrush to reinforce the relic population.</li> <li>• Udzungwa Mountains Ecological Monitoring Centre selected as one of the Tropical Ecology Assessment Monitoring (TEAM) field sites, a global network of tropical field stations, providing an early warning system on the status of biodiversity that can effectively guide conservation action.</li> <li>• 26 students to master's and doctoral level in conservation-related studies which significantly contributed to capacity building of upcoming scientists and researchers.</li> </ul>	

<sup>3</sup> Other impacts may include increase in scientific understanding and knowledge base of biodiversity conservation and sustainable use, etc.



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