CEPF FINAL PROJECT COMPLETION REPORT

I. BASIC DATA

Organization Legal Name: Dept. of Life Sciences, Anglia Ruskin University

Project Title (as stated in the grant agreement): Malundwes Afromontane forest and river catchments: Discovery and capacity building.

Implementation Partners for this Project: Mikumi National Park

Project Dates (as stated in the grant agreement): July 1, 2005 - December 31, 2007

Date of Report (month/year): May 2008

II. OPENING REMARKS

Provide any opening remarks that may assist in the review of this report.

The underlying purpose of this project was to substantiate and inform a wider conservation and scientific community, about the important biological affinities and conditions of the little known Afromontane forest atop Malundwe Mountain in the center of Mikumi National Park (Minapa). The CEPF funding project has helped bring the forest to the attention of those documenting and attempting to conserve the biodiverse forests of the Eastern Arc, especially managers and policy makers within Tanzania. Our preliminary analyses suggest that the forest is 'typical' for these systems though small. A number of near endemic species have been identified and at least 12 new vertebrate species (all reptiles and amphibians) are being evaluated. Repeat surveys of small mammals suggests that more extensive repeat surveys are necessary across years and seasons to adequately evaluate biotic diversity even in relatively small patches. Qualitative assessment (to be collaborated by transect and aerial survey data) suggests that the forest is expanding relative to its extent in the early 1980's. The remarkable and perhaps unique aspects of the forest are the complete continuity of altitudinal zones with no artificial boundaries due to human activity and similarly, the complex, dense and completely undisturbed lower woody strata which is reported to be reduced in larger forests which have a history of human activity and disturbance. The project was operated and facilitated by the research programs and teams of the Animal Behaviour Research Unit (ABRU) based within the park, working in close collaboration with park management.

III. ACHIEVEMENT OF PROJECT PURPOSE

***Project Purpose**:* Direct recognition of and action to sustainably manage Malundwe habitats by local (park - Minapa) and national (Parks System - Tanapa) authorities, consistent with and included in the conservation strategies for the Eastern Arc forest hotspots at the ecosystem level.

Planned vs. Actual Performance

Indicator	Actual at Completion
Purpose-level:	
Minapa directly manages Malundwe and corridors for sustainability	Recently completed Park Management Plan includes specifics of Malundwe system management. Patrols and monitoring systems planned and largely in place.
GIS database with vegetation maps habitat descriptions, boundaries and corridors included in park ecology monitoring and management protocols	GIS database in parks system and computers with protocol for ranger patrol data updates. Final aerial surveys and boundary assessment scheduled for June 2008 (weather permitting).
Important species and species assemblages identified and protected	Major plant and tree species identified along with larger mammals, small mammals and other vertebrates. All forest and corridor systems in 3 catchments surveyed. Risks at forest and park boundary edges identified. Anti-poaching enforcement enhanced with GIS, cameras and other equipment.

Describe the success of the project in terms of achieving its intended impact objective and performance indicators.

In terms of the primary goals of detailed description, profile raising and forest area assessment project has been highly successful. Identifying the biogeographical and riverine corridor affinities has been more difficult and while generally successful, work is still in progress to monitor across different seasonal conditions in all forest areas under consideration

Were there any unexpected impacts (positive or negative)?

The complete lack of long-term knowledge on routes of access to the Malundwe Forests and sources of water for survey teams was unexpected and identified a serious gap in the capacity of park management to patrol and monitor these forests. The long-term patchy information from ABRU records and memories of long-term staff informed surveys and pilot work which reestablished routes of access and water camp sites. As a consequence, rangers and park wardens were informed and trained in the movements to and from these important but isolated areas. This enhanced patrolling, monitoring, and protection efforts at several levels but was not an expected impact at the onset of the project.

IV. PROJECT OUTPUTS

***Project Outputs**: Enter the project outputs from the Logical Framework for the project*

Planned vs. Actual Performance

Indicator	Actual at Completion
Output 1: Floristic Assessment	
1.1. Description of floral species	Approximately 280 woody plant species associated with Eastern Arc forests identified and quantified along transects and plots. Woody and herbaceous species identified and entered on Minapa plant database.
1.2. Descripton of floral specie assemblages	Woody vegetation characterized by habitat and elevation affinities.
1.3. Identification of endemic species and/or species of special importance e.g endangered, range extension	Eleven endemics and near endemics of afromontane forests identified including 3 also associated with coastal forest. Habitat affinities by type and elevation established.
Output2: Faunal Assessment	
2.1. Description of faunal species	Intensive descriptive sampling of vertebrates with pit and camera traps, mist nets, track identification and bird call identification. Butterfly and other invertebrate traps partially sample invertebrates.
2.2. Description of faunal specie assemblages	Mammals, birds and other vertebrates and butterflies identified and associated with elevation and habitat types.
2.3. Identification of endemic species and/or species of special importance e.g endangered, range extension	12 species of vertebrates (reptiles and amphibians) believed to be new species and under taxonomic study. Endemics or near endemics typical of Eastern Arc forest systems identified for all vertebrate groups.
Output3: Mapping of forest boundaries extent & area with assessment of stratigraphy & ecotonal relations between woodland and forest	Slope relevant transects descent from high forest elevations through transition to woodland areas on lower slopes. Aerial survey planned and awaiting right weather conditions and approval to use military airspace on border of Minapa.
3.1. GIS database linked to satellite and OS map of slope and boundary patterns of forest.	Transects, survey sites game trail routes, water sources and forest edges mapped using GPS and linked to existing GIS database
Output4: Survey and assessment of corridors between patches within Mikumi & between Malundwe systems and the neighboring Uzundgwa and Uluguru systems.	
4.1. GIS database linked to satellite and OS map of catchment systems and wooded or forested patches with real or apparent connectivity to adjacent forested areas	Transects, survey sites game trail routes, water sources and forest edges mapped using GPS and linked to existing GIS database
Output5: Assessment of fire impact poaching and other risks to forest	

sustainability	
5.1. Fire records collected and maintained for forested and forest edge areas	Few fires were observed impacting on forests or forest edges during project but historic edges were noted and entered into GIS
5.2. Record data base of poaching events or signs in or adjacent to forested areas	Snares collected and locations of snares, poacher trails and camps recorded by GPS and entered to GPS database.

Describe the success of the project in terms of delivering the intended outputs.

All outputs were successfully achieved to a large extent. It was clear from repeated surveys that more intensive surveys over more areas would be needed across seasonal conditions to fully characterize the faunal diversity.

Were any outputs unrealized? If so, how has this affected the overall impact of the project?

Aerial survey has been delayed by weather conditions and the need to have government approval to use military airspace which borders the park.

V. SAFEGUARD POLICY ASSESSMENTS

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

VI. LESSONS LEARNED FROM THE PROJECT

Describe any lessons learned during the various phases of the project. Consider lessons both for future projects, as well as for CEPF's future performance.

Local knowledge and capacity to survey these isolated areas was completely lacking. Similar work in the future should take such possible limitations into account.

Project Design Process: (aspects of the project design that contributed to its success/failure)

Project design was largely based on previous and historic surveys by the ABRU project working on Malundwe in the 1980's with input from other projects and teams working in similar habitats especially the Udzungwa's. Project benefited from a permanent research base, database and team within the park and the close collaboration of park authorities in all stages of the project.

Project Execution: (aspects of the project execution that contributed to its success/failure)

Repeated preliminary surveys to find routes and water camps were necessary and were an important contributor to overall success. If the larger survey teams had attempted to enter the forests without the benefit of information provided by the reconnoitering teams, it is unlikely they would have successfully completed the planned tasks.

VII. ADDITIONAL FUNDING

Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.

Donor	Type of Funding*	Amount	Notes
British Airways	B	$3200	Airline Tickets
Anglia University SRIF equipment funds	B	$25,000	Camera traps, binoculars, aerial survey equipment, Cameras, GPS units, GIS software
ABRU operational fund	A	$1500	ABRU research team support

Additional funding should be reported using the following categories:

- ***A*** *Project co-financing (Other donors contribute to the direct costs of this CEPF project)*
- ***B*** *Complementary funding (Other donors contribute to partner organizations that are working on a project linked with this CEPF funded project)*
- ***C*** *Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF funded project.)*
- ***D*** *Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)*

Provide details of whether this project will continue in the future and if so, how any additional funding already secured or fundraising plans will help ensure its sustainability.

Monitoring of the Malundwe forests will be attempted on an annual basis by the ABRU teams in collaboration with Minapa park ecology departments. It is hoped that continued assessment and monitoring can be incorporated into Masters Projects being undertaken by Wildlife Management graduate students from Sokoine University of Agriculture – Morogoro (SUA). This will be part of an ongoing collaboration between ABRU and the Department of Wildlife Management at SUA for which Delphe (British Council) funding has been applied for or obtained.

VIII. ADDITIONAL COMMENTS AND RECOMMENDATIONS

CEPF staff were very supportive and worked hard to ensure collaborative interactions between various CEPF projects. Workshops were useful. The emphasis on certain methods to ensure comparability across study areas may have had a few problems do to the lack of validation or appropriateness of some of these methods to forest conditions and stratigraphy.

VIII. INFORMATION SHARING

CEPF aims to increase sharing of experiences, lessons learned and results among our grant recipients and the wider conservation and donor communities. One way we do this is by making the text of final project completion reports available on our Web site, www.cepf.net, and by marketing these reports in our newsletter and other communications. Please indicate whether you would agree to publicly sharing your final project report with others in this way.
Yes ___X____
No _____

If yes, please also complete the following:

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