CEPF FINAL PROJECT COMPLETION REPORT
(3/24/08)

I. BASIC DATA

Organization Legal Name: West Chester University

Project Title (as stated in the grant agreement): Trends in the Health of Selected Forests in the Eastern Arc & Coastal Forest Area

Implementation Partners for this Project: CEPF; Sokoine University of Agriculture, Faculty of Forestry & Nature Conservation; Forestry & Beekeeping; East African Wild Life Society; Kenya Forest Service; USDA Forest Service; West Chester University of Pennsylvania; Philadelphia Zoo.

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

Date of Report (month/year): 3//24/2008

II. OPENING REMARKS

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

Most of the original crew members from the implementation team in 2000 were available to complete the re-measurement of our plots and all the plots were re-marked and GIS coordinates measured. The field work was completed in October 2006 and data based quality assured by March 2007. Since that time the field manual and data base were electronically shared with Kenya (Nature Kenya) and Tanzania (Wildlife Conservation Society), to the Conservation and management of Eastern Arc Forest Project and Antje Ahrends, PhD candidate, University of York, UK. Any one can use the data as they see fit. A draft report that summarizes all the data will be has been submitted to CEPF. One scientific publication was submitted, gone through the review process, and is currently being revised for publication. Another is just being prepared for publication.

General results in the detailed report identify:

Density of trees, saplings and seedling / ha
Tree death by location (natural and man-caused)
Dominant tree, sapling and seedlings at each location
Average diameters and range of diameter of dominant trees
Tree condition status (damages and crown condition)
Condition and change in condition of saplings at each location
Growth rates for common species (also growth by diameter relationships)
Occurrence of epiphytes

In-country partners should look at individual plot data and deliver important finings at the appropriate local level (e.g. government agency; village environmental committee)

Report is available for review and feed back at www. (will provide)

III. ACHIEVEMENT OF PROJECT PURPOSE

Project Purpose*:* To identify the trends in the health of trees, saplings and seedlings. Positive trends will indicate that current protection/management guidelines are working. Negative trends will call for modification in the above mentioned guidelines. Forest Departments will respond with the appropriate NGO's, village Environment Councils etc.

Planned vs. Actual Performance

Indicator	Actual at Completion
Purpose-level: Management plans will be modified to reflect the trend analysis findings. The Forest Department/local plans will be reviewed at the forest locations	
1.1 *Information presented and discussed at the forest/village level. Agreed upon changes will be made*	All data were made available to the Kenya Forest Service and Forestry and Beekeeping. Except for Chawia, the data have not been discussed at the local level

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

There is a current management plan in place for Ngangao. A draft plan is in process for the Amani Nature reserve. No other plans are in progress. Data were not used for the Ngangao plan and Mr. Sawe has informed us that they will consider our data as the plan has not been finalized. Dr Madoffe will discuss with Mr. Sawe.

Were there any unexpected impacts (positive or negative)?

IV. PROJECT OUTPUTS

Project Outputs*:*

Planned vs. Actual Performance

Indicator	Actual at Completion
Output 1: Re-measurement of the permanent forest health plots	
1.1 Field work is completed-see output description for locations and measurements being made. Data sets turned over to in-country stakeholders	Field work was completed in October 2006. Electronic database was completed and QA/QC'd by April 2007. Electronic field methods manual and data base were provided in May 2007 to data managers for CEPF in Kenya (Nature Kenya) and Tanzania (Wildlife Conservation Society), to the Conservation and management of Eastern Arc Forest Project and Antje Ahrends, PhD candidate, University of Your, UK.
1.2 A minimum of 4 and maximum of 6 crew members (from each country) from 2000/01 will be re-certified in field by certified USDA Forest Service personnel	Five Kenyans and four Tanzanians were re-certified in 2006
Output 2: Analyses of these data	

Contribution to Red Listing process in partnership with Missouri Botanical Garden and IUCN SSC	
2.1 Analyses of these data completed by USA/Kenyan & Tanzanian analysts	General data analyses have been completed and are presented in a draft general report.
2.2 Data on Red Listed species provided to proper organization	13 red listed tree species have been identified in the final report as well as six non-native tree species
Output 3: Publications on forest health trends and management implications	
3.1 Report provided to partners and stakeholders	Report has been provided to all project partners. EAWLS and Sokoine will make their portions available at the local level
Output 4: Dissemination of these data and conclusions to relevant audiences	
4.1 Report summarized for and provided to various audiences (scientists, policy makers & administrators, media, foresters, village-level environmental committees	This still need to be done by our local partners. Data summaries have been provided

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

The field operations of the survey went very well as all the plots were re-located and the team worked seven days a week to get everything completed in a short period of time and to keep the cost of the project to a minimum. Five thousand dollars were not used.

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

Getting the information distributed at the local level has not been realized and that affects the overall impact of the project. CEPF partner meetings in country should be made aware of what is available and at least look at and determine the worth of these data

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.

A research project should have a technology transfer built in and agreed to up front. Not only a plan that all partners in the project agree to but also one that key stakeholder have bought into. This would assure that the data were expected by the stakeholders and there was a plan in place on how they would deliver it to others

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

No changes in design were planned as only the original plots were to be re-measured. Because protocols were developed in Indonesia for epiphytes it was decided to include during our re-measure

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

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
USDA Forest Service	A	17,600	Travel and salaries contributed for 3
West Chester University of Pennsylvania	A	7,800	Salary contributed for 1
Philadelphia Zoo	B	1,200	Grant for travel
Sokoine University of Agriculture	A	2,000	Salary contributed for 1
Kenya Forest Service & National Museums of Kenya	A	5,000	Salaries contributed for 5
Forestry & Beekeeping/TAFORI	A	6,000	Salaries contributed for 3
East African Wild Life Society	A	2,000	Salaries (for 2) and vehicle contributed
Total	x		

*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 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 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.

All current partners have all agreed that we will re-measure the plots in 2011 (end of next 5-yr cycle). The USDA Forest Service in principle will be co-funders of the project as will West Chester University of Pennsylvania

VIII. ADDITIONAL COMMENTS AND RECOMMENDATIONS

An agreed to mechanism and resources should be in place so that the appropriate Government agencies, along with their local partners, investigate any illegal removal of products from the forest

VIII. INFORMATION SHARING

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned and results. One way we do this is by making programmatic project documents available on our Web site, www.cepf.net, and by marketing these in our newsletter and other communications.

These documents are accessed frequently by other CEPF grantees, potential partners, and the wider conservation community.

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Page numbers in Specific column refer to on line document at www.

Data	Specific	General Comments
Overall	Tree Death (page 13)	Tree death over the 5 –year period ranged from 6% (in Kwarmkoro) to 17% at the Teachers College. Man-caused death occurred on Ngangao saplings, Chawia trees, Teachers College trees and saplings and Sigi Trail trees and saplings
	Tree Density (page 14)	Tree density raged from 257/ha (Kimbosa) to 508 in Ngangao. Saplings ranged from 961/ha (Mbomole) to 2932 in Kwamkoro. Seedlings ranged from 9308 (Mbomole) to 15,846 in Sigi Trail
	Growth Rates (pages 37-41)	There were enough trees with accurate tree diameters to look at the relationship between tree diameter and growth for *Albizia gummifera* & *Tabernaemontana stapfiana* (Ngangao, Chawia), *Allanblackia stuhmannii* (Mbomole, Turaco), *Cephalosphaera usambarensis* (Kwamkoro, Sigi) and *Maesopsis eminii* (Mbomole, Kwamkoro, Sigi)
	Epiphytes (2006 only) (pages 42,43)	For the first time in 2006 we noted the presence of epiphytes. Twenty four tree species contained epiphytes. Ten percent of all trees in the Mbomole plots has epiphytes
	Invasive non-native species	*Cedrela odorata*-seedling (Kimboza); tree (Kimboza) *Celtis africana*-sapling (Turaco),tree (Kwamkoro, Mbomole, Turaco) *Cinnamomum camphora*-seedling (Mbomole), sapling(Mbomole),tree (Mbomole) *Elaeis guineensis*-tree (Sigi) *Maesopsis eminii*-sapling (Kwamkoro),tree (Chawia, Kwamkoro, Mbomole, Sigi, Turaco, Teachers) *Psidium cattleianum*-seedling (Mbomole) *Alchornea hirtella*- seedlings (Kwamkoro, Mbomole, Turaco), sapling (Kwamkoro, Mbomole, Turaco)
Area	Specific Forest	
Taitas	Ngangao (page 15)	9 species make up 48% of sampled trees 7 species make up 61 % of sampled saplings 8 species make up 65% of seedlings sampled Trees without damage went down to 50% from 56% Sapling condition improved from 91% average and good to 98% (61% good, 37% average)
	Chawia (page 18)	6 species make up 83 % of trees sampled 3 species made up 70% of saplings sampled 5 species make up 82% of seedlings sampled Trees without damages went down from 60% to 53% There was no change in sapling health-100% good at both times

Amani Nature Reserve	Mbomole Trail (page 21)	5 species made up 56% of trees sampled 4 species made up 36% of the saplings sampled 10 species made up 79% of seedlings sampled 55% of trees with no damages up from 55% Sapling condition improved from 96% to 100% average (20%)& good (80%)
	Turaco Trail (page 24)	6 species made up 58% of trees sampled 5 species made up 65% of saplings sampled 8 species made up 76% of seedlings sampled 66% of trees without damages from 55% Saplings condition improved from 94% to 97% (73% good, 24% average)
	Kwamkoro Guard Station (page 26)	6 species made up 67% of trees sampled 5 species made up 59% of saplings sampled 5 species made up 85% of seedlings sampled 61% of trees without damages from 58% Seedling condition decreased from 98% to 90% (49% good,41% average)
	Sigi Trail (page 29)	5 species made up 66% of trees sampled 2 species made up 67% of the saplings sampled 7 species made up 89% of seedlings sampled 74% of trees without damages from 67% Sapling condition went down from 97% to 90% (67% good, 23% average)
Teachers College-Morogoro	Riverine forest (page 32)	3 species made up 73% of trees sampled 1 species made up 65% of saplings sampled 5 species made up 97% of seedlings sampled 10% of trees without damages from 18% Sapling condition improved from 83% aver and good to 97% (85% good, 12% average)
Kimboza	Forest along main road (page 60)	4 species made up 50% of trees sampled 4 species made up 71% of saplings sampled 5 species made up 84% of seedlings sampled 69% of trees without damages from 65% Sapling condition from 96%-95% (76% good, 19% average)

Scientific Paper #1
(page 60)
	11 plots established
	      numbers of mature trees ranged from 27-53 (aver 39)
	      numbers of mature tree species ranged from 8-16 (aver 13)
	      basal area (cubic meters/ha) 32-59 (aver 52)
	      Shannon's diversity index: 1.5-2.7 (aver 2.1)
	      Simpson's diversity index: 0.7-0.9 (aver 0.8)
	Tree damage (mature trees)
	      No damages decreased from 55% to 49% (-6.3%)
	          Conks, decay, fruiting bodies 26% to 32% (+6.4%)
	          Vines in crown 8.5% - 10.1% (+1.6%)
	Change in tree growth as % of total growth (4 plots have 55% of the growth)-range for 11 plots is 3-18%
	Six of most common species make up 68% of the growth
	Only *Albizia gummifera* displayed a marked decrease in crown density and increases in dieback and transparency

Scientific Paper #2 (page 93)	In preparation