

CEPF SMALL GRANT FINAL PROJECT COMPLETION REPORT

I. BASIC DATA

Organization Legal Name: Adansonia – Consulting, www.adansonia-consulting.ch

Project Title (as stated in the grant agreement): Threatened Plant Species of not yet Surveyed Coastal Forest Patches in Handeni District, Tanzania

Implementation Partners for This Project: Botany Department, University of Dar es Salaam

Project Dates (as stated in the grant agreement): May 1, 2006 – December 31, 2007

Date of Report (month/year): February 2008

II. OPENING REMARKS

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

Previous activity dealing with coastal forests in Handeni District have been supported financially by Adansonia-Consulting and Albers Co. (Zurich, Switzerland) and logistically by GTZ and Saadani NP.

III. NARRATIVE QUESTIONS

1. What was the initial objective of this project?

The initial overall aim of the Project was to assess the threatened plant species within the Kwedijela Forest and the other not yet surveyed forest patches in Handeni District in Tanzania in view to promote sustainable management for their conservation.

2. Did the objectives of your project change during implementation? If so, please explain why and how.

There was no change in the objectives during the implementation.

3. How was your project successful in achieving the expected objectives?

We underestimated the workload for carrying out additional 21 vegetation plots for completing the plant biodiversity assessment / forest inventory of Kwedijela Forest (S 5°55'27" / E 38°36'26") having a surface of about 2.5 km². In total 51 plots were surveyed outlined along 8 parallel transects (aligned 20°; 250m between two transects). Along the transect every 150m a vegetation plot was located, the first plot 50m from the edge. In each plot the following data were recorded:

- Canopy height, cover value of the canopy, mid-storey and herbaceous layer, landform, aspect and slope angle.
- Within a radius of 10m: all trees and shrubs having a diameter at breast height of $\geq 10\text{cm}$; cover-abundance value of all lianas of the canopy layer.
- Within a radius of 5m: all trees and shrubs with a diameter at breast height $< 10\text{cm}$ and having a height of at least 1.3m considering three diameter classes (I: $< 3\text{cm}$; II: $\geq 3\text{cm}$ and $< 6\text{cm}$; III: $\geq 6\text{cm}$ and $< 10\text{cm}$); cover-abundance value of all lianas of the mid-storey layer.
- Within a square of $2 \times 2\text{m}$: cover-abundance value of all plants having a height of less than 1.3m.

In addition, between two vegetation plots along each transect vegetation structure and topography was briefly described, recording every 50m dominating canopy trees and their height, cover value of the canopy, mid-storey and herbaceous layer, landform, aspect and slope angle. Opportunistic collection and observations of tree, shrub and ground floras throughout the fieldwork completed our data from the vegetation plots. In particular we focused on plant communities of restricted distribution such as those on dry rock outcrops.

Moreover, all signs of former logging activities were recorded within a 40m wide belt along the transects (20m on both sides of the transect). Tree species and approximate date of tree felling was estimated by the local guide. This will allow us to assess the former logging pressure on a particular tree species and its impact on the vegetation structure. Once the data of the botanical survey of Kwedijela Forest will have been analysed, the different forest types will be defined quantitatively and their structure described.

Two third of Kwedijela Forest are within the recently gazetted Saadani NP. Based on our inventory a GPS map of the forest has been produced which we gave to the park authorities. Since TANAPA became functional poaching and in particular logging got sensibly reduced.

The expected outputs of the project were:

- Assessment of area of occupancy and size of population of the threatened species in Kwedijela Forest and in the adjacent forest patches.

Once the forest types of Kwedijela (Mgulwi and Ruhanga Forests under the new project, see below) have been characterised and the current Red List assessments of the Eastern Arc Mountains and Coastal Forests plant taxa are completed, occupancy and size of population of the threatened species in the studied coastal forest patches will be defined.

According to Kew Botanical Gardens we have found a new *Annonaceae* shrub/small tree species which is most probably new to science (*Uvariadendron* sp. nov.)

- Increased knowledge about biologically important habitat patches in Handeni District and their connectivity.

We started also to map the sacred Mgulwi Forest (S $5^{\circ}51'48''$ / E $38^{\circ}36'21''$) adjacent to Kwamsisi village, about 7 km north of Kwedijela Forest. The Mgulwi Riverine Forest is traditionally protected and intact. Even valuable timber species such as *Milicia excelsa* (Mvule) or *Khaya anthotheca* (Mahogany) of considerable size (diameter breast height $\geq 100\text{ cm}$) are not cut. The forest fulfill an essential function as water reservoir for the

stream which provides water to the local communities all over the year. We estimate the size of the forest to be about 5 km².

We visited also briefly the *Brachylaena huillensis* forest adjacent to Ruhanga village (S 5°57'23.8" / E 38°33'19.2"), about 12 km Southwest of Kwamsisi village. This coastal forest patch is worth to be surveyed in future.

➤ Improvement of the IUCN Red List.

The Missouri Botanical Garden, in collaboration with IUCN is currently conducting Red List Assessments for 2,128 plant taxa in the Eastern Arc Mountains and Coastal Forests. We sent Roy Gereau from Missouri Botanical Garden a provisional plant checklist for Kwedijela Forest. We will provide them with an updated checklist for Kwedijela and Mgulwi Forest with full specimen label data.

➤ Assessment of the socio-economic values of these forest patches for the local communities and identification of the current threats of the threatened species.

We have started to collect ethnobotanical information about the plant species of Kwamsisi from our guide which is a local herbalist and the chairman of the Village Environmental Committee. We are planning to do a socio-economic study about the current and potential use of indigenous plant species in view of assessing additional income opportunities for the local communities.

➤ Increased awareness of the local communities of the biodiversity values of these forest patches.

We are carrying out the botanical survey in close collaboration with the Village Environmental Committee what gave us the opportunity to discuss the high conservation values of the coastal forest patches and the importance of sustainable land use in the area.

➤ Publication of the results in a scientific journal as well as in a national newspaper for the general public.

We are planning to publish an annotated plant checklist of Kwedijela Forest in the Journal of East African Natural History. Another article presenting mainly the different vegetation types and their dynamics will be submitted to an international journal.

4. Did your team experience any disappointments or failures during implementation? If so, please explain and comment on how the team addressed these disappointments and/or failures.

5. Describe any positive or negative lessons learned from this project that would be useful to share with other organizations interested in implementing a similar project.

The fieldwork was carried out in an interdisciplinary team (generalist, botanist, student, herbalist). The complementary knowledge and cultural background of each member was in profit/benefit of the project. Communication in one common language (Swahili) facilitated greatly the work.

6. Describe any follow-up activities related to this project.

Ongoing population growth and the arrival of numerous immigrants within the last years from the Lake Victoria area in search for arable land, will further accelerate the pressure on the natural resources in general and on the coastal forests in particular. Therefore, the Syngenta Foundation for Sustainable Agriculture will support the completion of the botanical survey of Mgulwi Forest as well as the inventory of the *Brachystegia huillensis* forest adjacent to Ruhanga village (S 5°57'23.8" / E 38°33'19.2"). This study will in particular focus on the field application of our research findings in profit of sustainable land-use by the local adjacent communities. A methodology for a self-standing and community-based sustainable land-use of coastal forest patches and their surroundings taking in consideration their current threats will be elaborate together with all stakeholders. Assisted by local herbalists the forest plant species and their domestic uses as well as their commercialization potential will be further assessed.

7. Please provide any additional information to assist CEPF in understanding any other aspects of your completed project.

IV. 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
Syngenta Foundation for Sustainable Agriculture	C	25,850 US\$	
Adansonia-Consulting	A	3,000 US\$	

****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.)*

V. ADDITIONAL COMMENTS AND RECOMMENDATIONS

VI. 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.

Please include your full contact details below:

Name: Dr. Urs Bloesch

Organization name: Adansonia-Consulting, www.adansonia-consulting.ch

Mailing address: Mittelstr. 26, 2502 Biel, Switzerland

Tel: +41 32 341 63 27

Fax:

E-mail: bloesch@swissonline.ch