

Darwin Initiative Main/Post/D+ Project Half Year Report (due 31st October 2017)

| | |
|---|---|
| Project reference | 23-026 |
| Project title | Domestication of the Mulanje Cedar for improved livelihoods |
| Country(ies)/territory(ies) | Malawi |
| Lead organisation | Botanic Gardens Conservation International |
| Partner(s) | Mulanje Mountain Conservation Trust, Forestry Research Institute of Malawi |
| Project leader | <i>Paul Smith</i> |
| Report date and number (e.g., HYR3) | <i>HYR2</i> |
| Project website/blog/social media etc. | Website: http://globaltrees.org/projects/save-our-cedar-malawis-national-tree/ Twitter: #SaveOurCedar |

1. Outline progress over the last 6 months (April – Sept) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up to end September).

Good progress has been made since the year 1 report was submitted to the Darwin Initiative. Progress over the past six months is reported against each activity.

1.2 International study carried out on microbial associations and pathology of cedar in years 1 and 2. Results published by end of year 2

BGCI has identified an appropriate consultant to undertake this work: Louise Egerton-Warburton a mycologist from Chicago Botanic Garden. We suspect that the cedar has an ectomycorrhizal symbiont but no studies have been carried out to confirm this. Louise will travel to Malawi in the first quarter of 2018 to work with FRIM to take samples for analysis and set up trials in the community nurseries, e.g. using soils from cedar stands, exotic conifer plantations and testing a commercially available inoculum.

1.3 Edaphic and climatic conditions measured for in situ populations of cedar on Mulanje Mountain and ex situ stands in Malawi and in botanic gardens around the world.

1.3. Cedar growth rates monitored in all trial sites (years 2 and 3), and optimal requirements for cedar growth determined by end of year 3.

Cedar trial plots were set up in edaphically and climatically diverse sites across Malawi by the end of year 1. Data loggers have been placed at trial plots to measure climatic conditions and the first growth rate measurements will be taken in November 2017. Additional data loggers have been supplied to FRIM and will be placed in nurseries and planting sites on the mountain.

2.2 Seedling establishment, survival and growth baselines measured and monitored in nursery trials throughout the project.

Each of the ten community nurseries is recording survival and growth rates. A random sample of seedlings from the same cohort was measured in each nursery prior to reporting, showing that seedlings ranged from 6 cm to 18 cm in height. Fertiliser has been applied to later cohorts to ensure all seedlings reach a suitable height for planting in the December 2017 – January 2018 rainy season. Further measurements of growth rate will be taken prior to planting.

3.4. At least 10 kg of cedar seed collected and sown by the 10 nurseries in the fourth quarter of each year (equivalent to 900,000 seedlings).

3.4. Seed collected and sown from at least five other useful tree species in local demand, equivalent to at least a further 10,000 seedlings in the 10 nurseries.

3.5. At least 500,000 cedar seedlings and 10,000 seedlings of other species produced by the 10 nurseries per annum in years 2 and 3.

Each nursery received 2.2 kg of cedar seed over four phases (total 22 kg). Collectively, the ten community nurseries now have 413,063 Mulanje Cedar seedlings ready for planting in December 2017 - January 2018 planting season.

Community nursery groups have requested seed of *Eucalyptus* which they can sell as poles or firewood within a short time (3-4 years) and grafted fruits which ripen faster. Communities have requested a new variety of *Eucalyptus* from South Africa, which is known to be disease resistant and matures faster, as Malawi is currently facing a disease called "Bunchy top" which affects bananas and *Eucalyptus*. However, given the current workload of raising 50,000 Mulanje Cedar seedlings per nursery, the Forestry Department and MMCT have deliberately delayed this activity to make sure people focus on cedar management. Sufficient seed of *Eucalyptus* and grafted fruits will be procured and planted in early November, ensuring that 10,000 seedlings are produced collectively by the ten nurseries by the end of year 2.

3.6. Based on survey carried out in activity 1.2. (ecological baseline survey reported on in year 1 annual report) MMCT and FRIM identify suitable sites for reintroduction of cedar.

In August 2017, a meeting was held to identify suitable sites for cedar planting in year 2 involving BGCI, MMCT, FRIM and Forestry Department plantation managers from Phalombe and Mulanje. Information from the ecological baseline survey and expert knowledge was used to rank candidate planting sites in each basin using a set of criteria approved by the project steering committee; Success of previous plantings, Protection from fire or malicious activity, Fire risk, Hydropower benefits can also be realised, Enthusiasm of planting groups and nurseries, Access (carrying seedlings from nurseries to planting sites), High profile sites (e.g. high number of tourists), Not controversial (e.g. no clearance of trees required), Soil conditions (depth and type), Micro-climatic conditions, How much site clearance is required.

One planting site was selected in each basin, based on the score received. Site preparation has commenced, led by fire protection teams that are currently based on the mountain.

3.7. Baseline socio-economic survey of recruited staff (disaggregated by gender) carried out by socio-economic researcher, assessing household income levels, income sources, use of natural resources and attitudes to cedar and natural resource conservation and management. Survey repeated in years 2 & 3.

A new contract with updated terms of reference has been prepared for Charles Jumbe, the socio-economic consultant who carried out the baseline survey in year 1. The socio-economic survey will be repeated in November 2017.

4.1. Mulanje Cedar Growers and Planters Association formed from nursery staff, cedar planters and local community leaders.

MMCT staff have designed a survey for nursery groups to identify remaining capacity gaps so that further training can be carried out, to gather ideas for the Mulanje Cedar Growers and Planters Association (CGPA) and to identify nursery workers interested to join the CGPA.

4.2. National cedar publicity campaign launched by FRIM and EAD with support from the Eden Project, targeted at areas of Malawi where the cedar will grow successfully.

The national publicity campaign will be fully launched in year 3. MMCT's Communication Officer, Kondwani Chamwala, has developed a timetable of activities for year 2 to raise local awareness of the status of Mulanje Cedar and to generate local support for cedar planting. Activities commenced in August 2017 and are ongoing. These include awareness raising campaigns led by each nursery group and radio and TV tours of the nurseries, felled cedar stands and planting sites on the mountain. BGCI's Education Coordinator, Liliana Derewnicka, is working with Kondwani to monitor the impact of publicity campaign activities.

4.3. Consultant works with Cedar Growers and Planters Association to develop licensing and benefit-sharing models for selling certified cedar stocks nationwide.

Charles Jumbe (socio-economic consultant) will work with MMCT to develop licensing and benefit-sharing models for selling certified cedar stocks nationwide. Mr. Jumbe's contract has been prepared and work will commence in November 2017.

5.2. At least 150 people employed at US\$ 1.50 per day to plant 500,000 cedar seedlings per annum on Mulanje Mountain in years 2 and 3 as stipulated in the Cedar Management Plan (2014-2019).

MMCT is working with forestry extension workers and community leaders to identify people to plant the cedar seedlings on the mountain in December 2017 – January 2018. The cedar planters will be encouraged to sign up to the CGPA.

2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

N/A

2b. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS: No

Formal change request submitted: No

Received confirmation of change acceptance N/A

3a. Do you currently expect to have any significant (e.g., more than £5,000) underspend in your budget for this year?

Yes No Estimated underspend: £

3b. If yes, then you need to consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget so please ensure you have enough time to make appropriate changes if necessary.

N/A

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

MMCT employed a new Biodiversity Conservation, Research & Monitoring Officer in July 2017. Ibrahim Mitole is working with the MMCT team to ensure successful delivery of this project.

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document. Additionally, if you were funded under R23 and asked to provide further information by your first half year report, please attach your response as a separate document.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also be raised with LTS International through a Change Request.**

Please send your **completed report by email** to Eilidh Young at Darwin-Projects@ltsi.co.uk. The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g. Subject: 22-035 Darwin Half Year Report**