

Final Project Evaluation Report

Your Details	
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Project Title	Integration of the Local Community and Schools in the Conservation of Wild Orchids in Kenya
Application ID	23012-B
Grant Amount	£10,000
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1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Community and School Visitation to Recruit Participants				Six schools and three Community Based Groups (CBGs) took part in the project. Wild Orchid Conservation Groups (WOCGs) and School Orchid Conservation Clubs were formed
Forest Surveys and Wild Orchid Inventory				Schools and community representatives took part in the in the identification and rescue of orchids in the forest.
Capacity Building, Training, Sensitization and Awareness Creation				Capacity building for community and school children through training, sensitisation and awareness creation workshops was successfully conducted.
Nature Trails, Gardens and Seed Banks				Nature trails, gardens and seed banks in homes and school was set up Community groups and schools were trained on establishing ex-situ nature trails, gardens and seed banks in their schools and homes.
Landscaping and nature-scaping programmes				We set up orchid flower beds, pots and vessels along community/school streets and buildings.
Note: Having learnt from the challenges in our previous projects, we were able to address those weaknesses and successfully implemented all our activities as outlined in our work plan in the current project.				

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled.

a) Demand for a similar project in the northern block

We received several requests from the County Education Officials, Local Government Administrators, School Heads and community representatives to extend the wild orchid conservation project among schools and communities living in the northern block of the MFC. The local leaders suggested that the project should be introduced to all the communities and schools around three blocks (Western, Southern and Northern) to ensure successful long lasting conservation of orchids in the entire MFC. We conducted publicity talk shows on community radio and community outreach programmes where more people got information about wild orchid and forest conservation. So far our project has been successful in the western and southern blocks of the forest, it is therefore important to focus on the remaining Northern block. The local schools, NGOs and community representatives from the

northern block of the forest petitioned their county leaders and administrators to make a formal request to the research team to consider introducing similar conservation programme/model in northern block. In response the local county administrators have formally pledged to provide in-kind support in form of transport to the local community and schools for the conservation model be introduced to the northern forest block. The research team was excited about the in kind support offered by the leaders and promised to continue with resource mobilisation to support a similar conservation model.

3. Briefly describe the three most important outcomes of your project.

a) An inventory of wild orchids in the western block of MFC

Reports and publications on the distribution and conservation status of wild orchids in Western block of MFC were produced and shared with the local community, schools and all the collaborating partners. In these publications, we clearly highlighted recommendations on the activities that should be adopted to promote orchid and forest biodiversity conservation.

b) School Wild Orchid Conservation Clubs (WOCCs) and community based Wild Orchid Conservation Groups (WOCGs).

The project initiated and facilitated the formation of school WOCCs and WOCGs with the support of the teachers, school administrators and local community representatives. The clubs and groups will be guided by the local teachers and community leaders respectively who will also serve as their patron. The main role of the groups will be to promote the conservation of wild orchids and take care of the gardens and nature trails in schools and communities. The groups will further increase community and school awareness about wild orchid conservation and the importance of *in situ* conservation.

c) Wild Orchid Conservation Awareness in Local Schools and Community

There is increased local school and community awareness and knowledge on wild orchid conservation including benefits associated with forest conservation. The young learners, teachers and community were given information on wild orchid conservation and this increased their knowledge on the need and importance of protecting forest biodiversity. Conservation brochures, posters, technical manuals and information booklets were produced and made available in local school and community libraries and shared with other conservation stakeholders as well as other scientists. During our forest surveys, we were excited to observe an increased population of wild orchids in the forest which resulted from our previous project of integrating the local community and schools on the importance of *in situ* conservation of wild orchids and forest biodiversity.

d) School and Community Orchid Nature Trails, Seed Banks, Gardens, Flower Beds, Pots and Vessels

The wild orchid nature trails, seed banks, gardens, flower beds, pots and vessels were successfully set up in the community and local schools. The school and community gardens will serve as *ex situ* conservation and demonstration points for the school, community and other learners. The gardens and nature trails will be taken care of by

members of the school Wild Orchid Conservation Clubs and community Wild Orchid Conservation Groups. In addition, the nature trails, seed banks, gardens, flower beds, pots and vessels will serve as points of ecotourism. The home and school gardens are currently serving as sources of planting for the other community members and schools.

4. Briefly describe the involvement of local communities and how they have benefitted from the project.

We have successfully built the capacity of the local schools and community living around the western and southern block of the MFC on orchid conservation, setting up nature trails, home gardens and seed banks in our previously Rufford Foundation supported projects. To ensure sustainability and successful community and school ownership/uptake of the project, we selected four representatives from each of the Wild Orchid Conservation Groups (WOCGs) and Wild Orchid Conservation Clubs (WOCCs) who took part in the project. The initial schools and communities from the previous project provided planting materials. In addition, the WOCGs and WOCCs explained to us the steps that they had taken to minimize and reduce destructive activities such as logging and charcoal that threaten the survival of wild orchids in the forest. The community can now rely on the wilds orchids planted on their own home gardens and nature trails for food and medicinal use. This has led to reduced pressure on over harvesting and over exploitation of wild orchids from the forest. The project therefore has not only promoted orchid conservation but also improved the local community livelihood. The WOCGs and WOCCs are currently selling clean planting materials to the other local residents to set up home gardens and nature trails thus earning income.

5. Are there any plans to continue this work?

Yes. The research team needs to continue with the following activities to ensure sustainability of this conservation work:

a) Monitoring and Evaluation:

There is need for continuous monitoring the progress and activities of the local community and local schools in protecting orchids and forests to provide technical advice and guidance. In this regard, the project team has volunteered to regularly visit the schools and the community to offer technical assistance every time they are called upon as a follow up and sustainability strategy.

b) Introduction of a similar conservation model on the Southern Western block

There is an urgent need to introduce a similar conservation model on the Northern block of MFC. This will ensure that wild orchids in the entire MFC are protected and the local community and schools living around the complex are integrated in forest biodiversity conservation. Again, this would be in response to several requests from the County Education Officials, school heads, NGOs, conservation stakeholders and the local community to ensure that we replicate the same conservation model in the entire MFC. Based from our previous experience, we have noted that simultaneous integration of both the schools and community reduces

implementation cost and time. So far the project team has been promised in kind support from the local community and schools. The other conservation stakeholders have also stressed the need to introduce orchid conservation awareness, empower local schools, community and other organisations in setting up home gardens, nature trails and seed banks in the northern block for holistic conservation of wild orchids.

6. How do you plan to share the results of your work with others?

We will share our results through the following avenues:

- a) Brochures, posters, technical manuals and information booklets to be shared with the local schools, learners, the community and relevant conservation stakeholders.
- b) The collaborating partners have been requested to avail the same publicity materials in their institutional libraries.
- c) Publicise our findings through local community radio and television to increase conservation awareness.
- d) Project stakeholders and partners have also been requested to link the project reports, findings and publicity materials on to their institutional websites to increase national and international online awareness and visibility among users.
- e) Publications in scientific journals, online magazines and social media forums

7. Timescale: Over what period was the grant used? How does this compare to the anticipated or actual length of the project?

We received the Booster grant in August, 2017 and immediately started carrying out project activities as outlined in our work plan. At the end of July, 2018 we had successfully completed all the planned activities and started writing the final report.

8. Budget: Provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used. It is important that you retain the management accounts and all paid invoices relating to the project for at least 2 years as these may be required for inspection at our discretion.

Item	Budgeted Amount	Actual Amount	Difference	Comments
SCHOOL VISITATION AND RECRUITMENT				
Transport Four wheel drive vehicle hired for 2 days	120	120	0	No variation
Subsistence and accommodation for 4 scientists for 2 days	360	360	0	No variation
Subsistence and accommodation	70	70	0	No variation

for 1 driver for 2 days				
Refreshments for students/pupils and teachers in 6 schools	180	180	0	No variation
Subsistence and accommodation for 2 students for 2 days	140	140	0	No variation
COMMUNITY VISITATION AND RECRUITMENT				
Four wheel drive vehicle hired for 2 days	120	120	0	No variation
Subsistence and accommodation for 4 scientists for 2 days	360	360	0	No variation
Subsistence and accommodation for 1 driver for 2 days	70	0	70	Scientists drove themselves to the field
Refreshments for 3 community groups	120	50	70	Part of local community carried their own Refreshments
Subsistence and accommodation for 2 students for 2 days	140	280	-140	Extra cost on two more students joined the research team
SCHOOL FOREST/FIELD SURVEYS				
Transport (Larger Van) for 6 days	480	480	0	No variation
Subsistence and accommodation for 4 scientists for 6 days	1080	1080	0	No variation
Subsistence and accommodation for 2 undergraduate students for 6 days	420	840	-420	Extra const on subsistence and accommodation for two more students
Lunches and refreshments for students and teachers for 6 days	360	360	0	No variation
COMMUNITY FOREST/FIELD SURVEYS				
Transport (Larger Van) for 6 days	480	480	0	No variation
Subsistence and accommodation for 4 scientists for 6 days	1080	1080	0	No variation
Subsistence and accommodation for 2 undergraduate students for 6 days	420	840	-420	Extra const on subsistence and accommodation for two more students
Lunches and refreshments for 3 community groups for 6 days	360	360		
NATURE TRAILS, GARDENS AND SEED BANKS				
Preparation of demonstration plots	235	235	0	No variation
Orchid seedling procurement	140	140	0	No variation

Setting up school nature trails, seed banks and gardens	350	350	0	No variation
Maintenance of the nature trails, seed banks and home gardens	195	195	0	No variation
LANDSCAPING AND NATURESCAPING				
Flower beds and vases	180	190	-10	We bought extra flower vases
Seedlings	120	0	120	Previous community groups donated
Casual labourers	160	0	160	Previous community groups donated
Flower pots	130	140	-10	We bought extra flower pots
CAPACITY BUILDING				
Hiring for workshop venue for 8 days	240	240	0	No variation
Lunches and refreshments for community and schools for 8 days	960	960	0	No variation
Transport for schools (Larger Van) for 4 days	320	0	320	Schools provided free transport
Transport for community (Larger Van) for 4 days	320	0	320	Local leaders provided transport
Subsistence and accommodation for 4 scientists for 8 days	1440	1440	0	No variation
Subsistence and accommodation for 2 students for 8 days	560	560	0	No variation
Training materials	330	330	0	No variation
Training brochures, posters, video clips, and t-shirts	290	290	0	No variation
Training technical manuals and information leaflets	270	270	0	No variation
REAGENTS				
Agar	200			No variation
Liquid nitrogen	275			No variation
PUBLICATIONS AND REPORT WRITING				
Stationeries (Reams of paper)	270	290	-20	No variation
Photocopying services	250	280	-30	More copies were produced to meet the increased demand
Printer	225	225	0	No variation
Cartridge	160	160	0	No variation
Pens, erasers and pencils	190	200	-10	No variation
PROJECT COORDINATION				

1. Communication, Internet, Postage	150	150	0	No variation
TOTAL PROJECT BUDGET (£)	14320	14320	0	No variation
Total In kind Support: £4,320				
TOTAL Booster Grant: £10,000				
Note: We received £10,000 from Booster Grant and extra £ 4320 in kind support from different stakeholders.				

9. Looking ahead, what do you feel are the important next steps?

1. Similar Conservation Model in Northern Block of MFC

Mau forest complex (MFC) is divided into three blocks (Western, Southern and Northern) and so far we have successfully integrated local schools and community living around two blocks (Western and Southern) in orchid and forest biodiversity conservation. There is an urgent need to introduce a similar conservation model on the Northern block of MFC to ensure uniform conservation of orchids in the entire forest complex. We feel that failure to integrate the local schools and community living around this block will make them encroach back into the other blocks where the conservation of orchids has really been improved. These communities and schools should be sensitised on the value of protecting wild orchids and forest biodiversity conservation. In addition, this would be in response to several requests from the County Education Officials, school heads, NGOs, conservation stakeholders and the local community to ensure that we replicate the same conservation model in the entire MFC. Based from our previous experience, we have noted that working with both the schools and community at the same time reduces implementation cost and time. So far the project team has been promised in kind support from the local community and schools through their leaders. The other conservation stakeholders have also stressed the need to introduce orchid conservation awareness, empower local schools, community and other organisations in setting up home gardens, nature trails and seed banks in the northern block for holistic conservation of wild orchids.

2. Monitoring and Evaluation

There is need to continuously monitor the progress of the wild orchid and forest conservation activities in MFC, offer technical advice and guidance to the local community and schools. The purpose of monitoring and evaluation will be to ensure that conservation challenges encountered by the local are addressed in time. It will further support the sustainability and enhance ownership of the projects by the locals.

3. Collaboration and Partnership

There is need to continuously initiate, sustain collaboration and partnership with local conservation stakeholders, county conservation officers, community-based organisations, NGOs and other relevant conservation players to support the conservation of wild orchids and forest biodiversity. Increased stakeholder participation in conservation will boost the protection of MFC and its biodiversity.

4. Training and Sensitisation

It is important to continuously engage in sustainable training, sensitisation and awareness about the importance of protecting wild orchids and their role in biodiversity conservation.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes. In all our meetings with the county officials, schools and the community the Rufford Foundation logo was well displayed. The research team explained that the project was supported by the Rufford Foundation Booster Grant for nature conservation.

Specifically, the Rufford Foundation logo was used on the following:

1. All reports and publications on the conservation status of orchids in Kericho forest.
2. Germination protocol for orchids.
3. Brochures, posters, technical manuals and information booklets
4. All the equipment and laboratory reagents purchased with funds from the RF had stickers with RF logo on them.
5. Rufford Foundation logo was during the community capacity building and awareness activities with RF logo printed on t-shirts and all the stationary materials.
6. Further we will use the RF logo and give acknowledgement on any future publications resulting from this work.
7. All school and community nature trails, gardens, seed banks, landscaping and naturescaping had posters acknowledging support from Rufford Foundation Booster Grant.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

The project was implemented by conservation experts with experience working with the local community and in MFC. The team consisted of:

Project Leader, Dr Fanuel Kawaka:

Dr. Kawaka has extensive experience working with local community and schools in promoting the conservation of wild orchids and forest biodiversity in the MFC. He was in charge of capacity building, providing expertise in establishing nature trails, gardens and sustainable utilization of forest resources.

Taxonomist, Mr. Daniel Miyawa:

Mr. Miyawa is an experienced orchid taxonomist based at the NMK. He provided expertise in orchid identification, developing propagation protocols, processing voucher specimen and rescuing wild orchids (unfortunately, Daniel passed on earlier in the year (2018) after a short illness).

Conservation Scientist, Mr. Obwanga Ojowi:

Mr. Obwanga is a scientist from Laikipia University with long term experience in offering multi-sectoral research capacity. He was instrumental in drafting community /school conservation materials such as brochures, publications, reports, posters and training manuals. He also ensured that the materials are freely accessed through online libraries for learning and teaching.

Plant Breeder, Mrs. Emma Owidi:

Mrs. Emma ensured that orchid germplasm was safely collected and transported from the field. She helped the safe banking of the seeds/germplasm for future research activities.

Kenya Forestry Service Guards and Wardens:

The guards and wardens are the legal custodians mandated to take care of all protected sites and forests in Kenya including the MFC. They provided free access to the forests and offered armed protection to the research team during forest and field surveys.

Local community and schools were the main stakeholder and beneficiaries because the project successfully integrated them in wild orchid and forest conservation programmes.

Undergraduate students from the universities and were trained on practical, field based ecological and conservation research.

12. Any other comments?

On behalf of the research team, local schools and community, conservation stakeholders and collaborating institutions, I wish to thank Rufford Foundation for the generous financial support on the Wild Orchid Conservation project in the Southern and western blocks MFC.

We look forward to further working closely with RF and other conservation partners to complete the work on the northern block of the forest complex to ensure uniform conservation of wild orchids in the entire MFC.



Left to right: Research team paid a courtesy call on the Kericho County Ecosystem Conservator in his office; Research team examining rescued wild orchids in the field; Wild Orchid Conservation Group (WOCG) in the field monitoring the conservation of orchids & Wild orchid plant growing at the bottom of the forest.