

## Final Project Evaluation Report

Your Details	
Full Name	Andrew Chilombo
Project Title	Understanding Biodiversity and Socio-Economic Implications of Large Scale Land Acquisitions in Zambia: Case Study of Nansanga Farm Block
Application ID	24217-1
Grant Amount	£5,000
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Date of this Report	August 07, 2018

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
To understand the floral and faunal composition of species in Nansanga farm block area				Through forest survey, transect walks, resource mapping, the project led to an estimation of 30 different families of >5mm DBH of plant species dominated by Fabaceae, Dipterocarpaceae and Euphorbiaceae families, in that order. At the faunal level, the corridor and footprints of <i>Alcelaphinae</i> were established. The existence of hippos ( <i>Hippopotamus amphibious</i> ) on Munte River from Luombwa River which flows from Kasanka National Park was also established. Other animals include puku ( <i>Kobus vardonii</i> ), sitatunga ( <i>Tragelaphus spekii</i> ), lechwe ( <i>Kobus leche</i> ) and grysbok ( <i>Raphicerus sharpie</i> ). An extended study using camera traps that is more focussed on animals alone is more likely to establish their abundance and map better their movements. This study has however, established their existence in Nansanga.
To establish land cover change following the establishment of the farm block				Through transect walks (for ground-truthing) that helped in resource mapping, descriptive recalls and Zambia land cover maps for 2000, 2010 and 2017, as well as the Zambia Sentinel 2 Land Use Land Change map 2016, the land cover was established in Nansanga. Currently, because the farm block is in limbo of development, the greatest land cover change is being occasioned by tobacco production.
To understand the socio-economic well-being of communities in				Through community wealth ranking, the asset portfolio for both farm and non-farm use was established of

Nansanga farm block			community members, divided into three social classes. Away from the epicentre of meaningful socio-economic activities, the community households have lean portfolio assets. By local community account, mobile phone, iron sheet-roofed houses and involvement in tobacco production are characteristics of the high class households while an axe, hoe and mud and grass-thatched houses are common features of low class households.
To understand the adaptation abilities of communities in Nansanga farm block.			Through the same community wealth ranking approach, the political ecology of large scale land acquisition was put in better perspective. While the high class as described above, have taken advantage of emerging opportunities, only a fraction of the middle class has. The other, including the low class households are not able to adapt and cope to the new dynamics of Nansanga farm block. Some are selling land thereby becoming landless, while others are working for tobacco producers, thereby spending less or no time to produce food crops for household consumption.
To understand the policy landscape that determines winners and losers when land use changes owners			Through focus group discussions and key informant interviews within the study site, key informant interviews with policy makers and secondary sources of data, the policy landscape was established and the extent to which its current structure and form contribute to the skewed impacts of large scale land acquisitions in rural areas.
Community involvement as co-producers of knowledge from research			As has been detailed in the sections below, the involvement of community was pivotal in registering the level of success of this project. They were sensitised about this project and conservation in general, and fully involved in participatory rural

				appraisal methods that were deployed in this project. One of the members involved in the research is an ex-poacher and helped in mapping the animal seasonal corridors and habitats.
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**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled.**

- Community expectations - This was at two levels: the establishment of Nansanga farm block entailed land tenure conversion from customary to leasehold. This conversion meant some communities have had to relocate to other places. Asking questions pertaining to perceived socio-economic wellbeing was often perceived as if the researcher was bringing solution to their sense of insecurity of land dispossession. This was surmounted by repeatedly explaining to the community members that this was a study in which they were to be fully involved to generate knowledge about their socio-ecological system. Approaching the community through their traditional leadership helped to pass this message across to community members.
- Within a space of 7 years, two senior chiefs of the same area have died for reasons alleged to be linked to family succession disputes. Being a senior chief has benefits that come with land ownership. During the study, the chieftdom was experiencing cultural tension that researchers were alerted to. Getting communities talking about their experiences was not easy because of lack of trust on their part to talk about land to people (researchers) that they did not know. Once again, traditional leadership helped to surmount this challenge.
- The 2017-2018 rainy season had prolonged more than usual. Sometimes it rained during fieldwork, making the conditions difficult for data collection especially for species identification and resource mapping from established plots because doing so meant walking long distances.

As a lesson regarding the first two points above, community level studies can benefit so much from involving communities into the research project. Respecting the cultural practices, including traditional leadership is extremely paramount. People need to feel respected and valued to cooperate and support. The success of conservation efforts (at both floral and faunal levels) in communities that actually depend on the same species for livelihoods, depend on getting their buy-in.

In addition, the rainy season is not the best time for fieldwork for two important reasons: communities are farmers and need to be farming. They often work long hours. Meeting them is not only always easy. Second, roads become impassable. Breakdowns can be frequent and getting stuck becomes normal part of field experience. These were exhausting and time consuming.

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

- a) Mapping of species habitats and animal migration corridors that has also led to the recognition of different strategies of poaching animals from Kasanka National Park.
- b) Data collection and forest survey: for the ecological zone I in central Zambia, this project has done a detailed forest survey that has inventoried and established the level of tree biodiversity in miombo woodlands.
- c) Awareness raising of the value of conservation within a wealth ranked community. This is a precursor to future efforts to address the drivers of biodiversity loss, poaching and impacts of land use change where community participation will remain critical and pivotal to ensure success. In addition, there are no extension services or any policy implementation efforts. Conservation therefore, depends on community awareness. This was done thanks to this project.

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

An understanding of the biodiversity and socio-economic implications of large scale land acquisitions (LSLAs) at community level depended on community members who are experiencing the implications. The rural participatory appraisal approaches that were used allowed them to reflect on the experiences and then, together with researchers, generate knowledge about the phenomenon. They played a role as co-producers of knowledge, much more than mere interviewees during focus group discussions, key informants and transect walks.

They led the identification and mapping of species and habitats, including the identification of footprints of animals, the corridors and snares. Awareness talks were given in different in different villages in Nansanga to explain the project and its relevance to understanding and conserving biodiversity in Nansanga that has been threatened by establishing the farm block in the area. Besides raising conservation awareness and deepening their level of knowledge about the species' relative abundance and occurrence within Nansanga, this level of involving community has paved a way for future efforts and research that will build on the current project. The traditional leaders have fully realised the importance of conservation in the area, and fully supportive of efforts to establish community level conservation groups.

**5. Are there any plans to continue this work?**

Yes. This project has created biodiversity baseline data in the area that is necessary but not sufficient to reduce or reverse the biodiversity and socio-economic implications of LSLAs. Moving forward, and based on the lessons learned, community mobilisation and getting institutions involved hold great promise to addressing the biodiversity impacts that the farm block is having in Nansanga. Continuing this work will therefore, focus on community conservation efforts and working with Kasanka

Trust and Department of National Parks and Wildlife in an area that is far from any government policy influence.

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

- The sharing of the results has already begun through public talks at the University of Lusaka and the University of Zambia, and the Copperbelt University through one of the Research Assistant's thesis.
- For consideration, the first article from the results of the work has just been submitted to a peer reviewed journal, the Journal of Modern Agricultural Science and Technology. The RF has been duly acknowledged. The next one will be submitted to the journal of Biodiversity and Conservation. The plan is to submit two or three more articles to peer-reviewed journals to share the results of the work with the global community. The RF will be acknowledged.
- As indicated below under the next steps sections, the results obtained will also be shared with Kasanka Trust with a view to feeding into a new project concept to build on the current results. Institutionalising results in this way will make it easier to strengthen the conservation voice within the government system among policy makers.

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

The project was planned over 5 months. The grant was used between March 2018 and July 2018. The fieldwork was initially planned to take between January 2018 and June 2018, however the grant was received in February 2018. Given the research support, the period during which the grant was used compares well with the actual planned project length.

**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
Accommodation and food	£1,750	£1,850	£-100	The initially planned team did not include the driver. His inclusion led to the upward adjustment of the costs.
Local transport (car hire)	£925	£1,050	£-125	The cost went up because of fuel prices that were adjusted upwards. Equally the cost of

				the car itself went up because of the terrain and the rainy season road conditions.
Return ticket Edinburgh - Lusaka	£1,000	£1,000	£0	Within budget
Batteries, External hard drive, stationary	£250	£253	£-3	Cost up by £3
5 Multi-Functional Voice Recorders	£150	£120	£30	4 required multi-functional voice recorders were procured for the four research assistants instead of 5. The saving on this item was spent on accommodation and food and care hire costs.
5 Garmin eTrex Touch 25 GPS	£925	£740	£185	4 Garmin etrex touch 25 GPS were procured for the four research assistants instead of 5. The saving on this item was added to the saving from the voice recorders and spent on accommodation and food and car hire costs.
Total	£5,000	£5,013	£-13	Exchange rate as at the of application 1£ = ~K12.60

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

After the political hype that followed the establishment of Nansanga farm block between 2009 and 2012, the place has again slipped into national policy doldrums that it was in before. In this regard, safeguarding the biodiversity integrity of the area lies in community level efforts with traditional authorities as key players. Community mobilisation through community conservation groups is one of the next steps.

When animals leave Kasanka National Park in the north during their seasonal movements, they rarely return to the park because they get poached. The next step will be to establish collaborative partnerships between the communities in Nansanga farm block and the Kasanka Trust. This will build on the first point above.

The recipient of the grant will seek to apply for the next level Rufford fund to implement in collaboration with Kasanka Trust, focusing on reversing community drivers of poaching, removal of snares in animal corridors, involvement of the Department of National Parks and Wildlife, among others.

**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?**

Consistent with the planned avenues for results dissemination, public talks were given at the University of University and the University of Zambia. The Rufford Foundation logo was used at these talks, and the foundation received publicity. The foundation also received publicity through meetings held with the Provincial Ministry of Agriculture, Central province as well as with the District Agriculture Officer and his team in Serenje. Finally, as detailed below, one of the Research Assistant has written a BSc thesis on Nansanga farm block. He had to give a presentation at the Copperbelt University, School of Natural Resources about his participation in this Rufford funded fieldwork.

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

**Andrew Chilombo** – Project Coordinator

**Edwin Shiaka, Moses Chiposa, Mweemba Sunya and Ezekiah Kabamba:** Research assistants from the Copperbelt University who were trained in research design and sampling techniques. They took part in data collection. After fieldwork experience, Edwin has decided to write his BSc Forestry thesis on Nansanga farm block.

**Simon Mwape, Herald Mwape, Rodrick Muwandu and Albert Lumande:** Sulutanis and Chilolos (village heads and senior chief advisors, respectively) who supported the organisation of community participation in the project, including conducting transect walks for community resource mapping, species identification and habitat mapping and community wealth ranking.

**Mutale Chembo:** logistics and driver

**12. Any other comments?**

This grant enabled an understanding of the biodiversity and socio-economic implications of large scale land acquisitions (LSLAs) that have plagued rural Zambia. It was first of its kind to investigate a government-spearheaded LSLAs in a community with chronic lack of published data on biodiversity at both faunal and floral levels. I would like to very sincerely thank the Rufford Grant Team, particularly Jane that I have constantly been in touch with. She has been excellent at providing guidance and handling communications.