The Rufford Foundation
Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Mr Krisztián Gyöngyi
Project title	Conservation ecology of black rhino in Liwonde National Park (LNP)
RSG reference	14592-1
Reporting period	
Amount of grant	£6,000
Your email address	kg62@kentforlife.net , krisz@malawianrhinos.com
Date of this report	24th April 2015

1. Please 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 better understand the habitat ecology and forage choice (i.e. principal and highly preferred diet items) of LNP's black rhino.		X		The research arm is organic part of the on-going programme with still un- or partially completed chapters. 72 browse plants selected by black rhino in LNP have been recorded along feeding trails (58 taxonomically identified to date). Browse importance (principal diet items) and preference rankings (highly sought-after diet items) are being refined as the project progresses. Over 1000 GPS fixes recorded on rhino habitat use.
To appraise availability of standing browse biomass in the vegetation types.		X		Cross-seasonal browse availability assessments (sampling) are still in progress.
To inform park management of LNP's dry season holding capacity of black rhino.	X			Not yet reached that point.
To identify effects of elephant pressure on rhino resources and their overall habitat use during the resource poor dry season months.		X		Turned out to be difficult to assess due to elephants free ranging ability over the 70 cm high 3 strand rhino sanctuary fence, i.e. defining population figure of and thus exerted impact by permanent sanctuary resident elephants on rhino resources is challenging, yet slow progress has been reached.
To acquire a better understanding of the consequences of the planned removal of the rhino sanctuary fence on the ranging and habitat choice of sanctuary resident black rhinos in LNP.	X			Sanctuary fence is still in operation and now planned to remain erect for another 2-3 years.
To build and motivate an efficient rhino monitoring team capable of close-monitoring black rhinos			X	Achieved between November 2012 and November 2014. 3x2 rhino trackers are deployed in a 5-day rotational scheme. Three of them I trained on VHF telemetry

with modern devices.				and GPS usage. Two officers I taught how to drive 4WD. One passed official test. Ordered binoculars (2), handheld Garmin GPS (2) for team and supplied rechargeable batteries and some other extra incentives. Rhino trackers teach me tracking, I teach them ecological principles.
To deliver strong conservation messages to people (e.g. local, visitor, stakeholder), to make them aware of the rhinos' plight and help them garner a deeper understanding of challenges in conserving them.			X	Done through presentations at schools, safari camps and city clubs. Occasionally assisting my wife, Orsi, during her wildlife club sessions, e.g. joint lecture and snare demonstrations with rhino tracker colleagues; wildlife poster drawing and composting with kids; tree planting. Meetings with MPs, ambassadors, village chiefs; presentations to tourists, local children and stakeholders.
To mount large scale darting operations to fit rhinos with detection devices for maximised monitoring effectiveness; and organise rescues (de-snaring) to treat poached or injured rhinos and other large-bodied species (e.g. caused by gin trap or snare).			X	Eleven rhino darting operations; three elephant, one eland, several impala and one crocodile rescue (de-snaring + treatment) interventions have been successfully coordinated by me in LNP since 2012. Leading teams of 8-14 national parks scouts and working with eco-volunteers and respected wildlife veterinarians like Drs Pete Morkel, Dave Cooper and Amanda Lee Salb. Aerial searches have also been adopted (Cluny Wildlife Trust). All Liwonde rhinos have been fitted with VHF transmitters by Oct 2014.

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

Often politics take too much scope in conservation decision making, which can often be tough to handle in the short term and frustrating to manage in the long term. Twisted conservation priorities, paying lip service to grand schemes or green-washing discovered in colleagues' and well-wishers' motives are disappointing and such factors can undermine or even paralyse overall progress.

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

A, Better monitoring (each individual rhino tagged) → enhanced sanctuary security & better research:

Modern VHF tracking boosts overall monitoring efficiency thereby betters security and contribute to achieving research goals. Consequently, ecological baseline data provide lucid pictures on population performance, ranging and will have meaningful inferences in browse preference, habitat suitability and maximum dry season holding capacity of LNP. Results will shed light on facilitation and competition dynamics between rhinos and elephants. The project informs the National Rhino Strategy and influence management decisions on the ecological feasibility of future population augmentation measures. Intensified protection and monitoring will contribute to better understanding of LNP's rhino stock, assure calf survival and help us grasp rhino habitat quality and holding capacity. Key lessons will be attempted to be fed into community-based education curricula in schools surrounding the park.

B, Improved capacity → better rhino team:
Team building and identifying core members are a must prior to commencing an endangered species rehabilitation programme – which is not always how things get started in projects under pressing financial constraints, especially in state-managed protected areas in Africa. Managing people is often more difficult than managing animals or landscapes. Identifying mid-level leadership among fieldsmen and working with like-minded, dedicated people is a fundamental. Rhino monitors learnt of VHF handling, rhino ecology, GPS usage and some were introduced to 4WD in muddy conditions. Boosting their confidence in overall fieldwork and helping them realise pride in their privileged role are given extra emphasis by senior park officials and coordinators of the rhino programme.

C, Adopting applied science → better biological management:
This evidence-based project has provided meaningful contributions to rebuild the national black rhino population of Malawi and thus facilitate wider regional meta-population goals (e.g. SADC Regional Programme for Rhino Conservation). Results through informed management decisions will advance measures aiming at achieving mid-term genetic viability and can lead to marked population accretion in the long term. Key findings have been presented in national and international forums (shared with IUCN SSC African Rhino Specialist Group) and published in annual reports (e.g. Wilderness Wildlife Trust). Securing stable donors funding to continue saving the rhino and broaden our locally-sourced human capacity are indispensable. Improved relationship between conservation and communities rendered through novel initiatives (e.g. Rhino Project's educational arm and CAWS's Children in the Wilderness programme) keeps conveying strong conservation messages to surrounding communities.

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

Hundreds of park visitors and school groups have been given oral presentations on the black rhino and our conservation efforts in general. My wife, Orsi, runs wildlife clubs in schools surrounding LNP (e.g. particularly Nanthomba Primary School) with particular emphases on value shifts, basic ecology and human-wildlife conflict issues. She is active with kids on tree nursery duties too. Thousands of trees have been planted and distributed out to rural households. Orsi, her colleagues and I organise regular school trips for dozens of pupils to visit to LNP. These sessions involve game drives, education centre discussions and slide

presentations. Field reports keep stakeholders informed about major successes achieved, weaknesses to be eliminated as well as challenges yet to be surmounted.

5. Are there any plans to continue this work?

The research arm of the project will continue until mid/late 2017 with aims of completing the requirements for the PhD by then. Security monitoring and capture operations with due capacity building will continue on-going (i.e. replacing expired transponders, fitting new ones on sub-adults).

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

Through regular monthly or bi-monthly reports, online newsletters of Central African Wilderness Safaris (my research station host), the www.malawianrhinos.com site and published conservation letters as well as articles in peer reviewed journals (e.g. *Pachyderm, Southern African Journal of Wildlife Research*). At current a manuscript I am planning to submit to the journal, *Pachyderm*.

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

The grant was used and spent between late February 2014 and mid February 2015. Funds were set against budgetary items that represented research and monitoring expenses as well as overall project running and living costs. The project is ongoing and thus further funding will be attempted to be raised before long so to ascertain sustainable progress in rebuilding this population.

8. Budget: Please 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.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Purchase of four new censor beam cameras. [modified purchase]	1,180	1,492	+312	As censor beam cameras had just been donated – *unexpectedly*- to the project by an external donor, I have decided to purchase two good quality binoculars and two handheld GPS units for the monitoring team.
Field station running costs and general living expenditure met from RSGF small grant while working in Liwonde NP	2,020	2,020	0	Costs were covered as budgeted in application.

(Feb 2014 – Feb 2015).				
International flight costs of researcher & in-country travels in Malawi.	2,800	2,800	0	Costs were covered as budgeted in application.
TOTAL *1 GBP = MWK 677.44 (as of 23 April 2015)*	6,000	6,312	+312	Difference was balanced from the combination of private savings and other stakeholder's support.

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

Building on current achievements, to let ecological baseline data be fed into management frameworks (Rhino Sanctuary); expanding the core rhino team; building a fast reaction rescue unit (for de-snaring ops); enhancing overall protection levels by further law enforcement training and stronger mid-level leadership; better time management to publish results for broader readership.

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

Logo was displayed in reports and project updates sent on a regular basis to over three dozen stakeholders, sponsors and interested parties. No scientific publication has yet come out since the receipt of the RSGF funds in February 2014 -, still future publications will pay due acknowledgement.

11. Any other comments?

It was great and fruitful to have been associated with Rufford Foundation. Your support made the difference.