



Darwin Initiative Main/Post/D+ Project Half Year Report (due 31 October 2016)

Project Ref No	23-018
Project Title	Alleviating rural poverty through conflict mitigation and improved crop yields
Country(ies)/Territory(ies)	Zimbabwe, Botswana
Lead Organisation	WildCRU, University of Oxford
Partner(s)	Victoria Falls Wildlife Trust
Project Leader	<i>Andrew Loveridge</i>
Report date and number (e.g., HYR3)	<i>HYR1</i>
Project website/ Twitter/ Blog/ Instagram etc	www.wildcru.org
Funder (DFID/Defra)	<i>DFID</i>

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).

At a national and international scale the project trials and showcases the effectiveness of novel livestock protection techniques to mitigate impacts of biodiversity and reduce the need of lethal control of globally threatened predators, while highlighting the economic and ecological value of viable predator populations and improving food security for local communities. The project comprises four anticipated outputs, the progress of which will be detailed in the below.

Output 1: Showcasing benefits of the project: To ensure long-term and larger scale impacts of this project the success of mitigation strategies will be showcased to national and international conservation bodies. Through workshops, presentations, newsletters, reports, online resources and peer-reviewed literature the project will disseminate information and ensure handover of know-how and technology to both local stakeholders and the wider public is achieved.

In September 2016, challenges and successes of the Lion Guardian & Mobile Boma Programme as a tool to mitigate livestock predation and improve food security were presented at the international Cecil Lion Summit in Oxford, UK. In November 2016, the programme was featured in a collaborative talk of the KAZA Carnivore Conservation Coalition as well as two separate poster presentations at the State of KAZA Symposium in Victoria Falls, Zimbabwe.

The first workshop to discuss the programme with stakeholders and decision makers is being planned for the first quarter of 2017, for which we have started discussing possible dates with involved stakeholders. There is considerable interest in this model of community conservation, such that the project has been showcased to two other conservation NGOs who wish to run similar programmes.

Output 2: Decreasing levels of human-predator conflict: As livestock predation has a high impact on local livelihoods we aim to eliminate livestock loss for households, with early results suggesting this is feasible if bomas are correctly used. The “Lion Guardians” have been renamed “Community Guardians” (CGs) to emphasize the project’s goal to protect predator populations by supporting local communities to coexist with wild predators. This also presents the opportunity to expand conflict mitigation efforts to other wildlife species in future.

Since early 2016 we have had in place 10 CGs in village communities directly adjacent to Hwange National Park, Zimbabwe (Tsholotsho and Mabale). We have deployed 12 mobile bomas (housing 808 cattle) in these areas and will be monitoring the effects of mobile boma

use on the fertilisation of crop fields in the coming rainy season (November 2016 - March/April 2017). In preparation of the cropping season, 56 local families participating in the boma project are currently being provided with 160 kg of maize seed. So far more than 225 warning alerts were sent in 2016 (~1010 warning alerts since we started in 2012), however this number is expected to increase with the onset of the rainy season. The team tracked 266 km of transect, completed 577 herd sightings, recovered and safely returned 19 cattle, conducted 30 lion chases and fitted/replaced three new satellite collars on potential conflict lions to allow monitoring. So far, 20 cattle, 25 donkeys and 77 goats were killed by lions and a total of seven lions were killed in retaliation in our project sites adjacent to Hwange National Park in 2016 (5 destroyed as problem animals, 2 snared). More than 60% of livestock depredation incidences occurred at night, while no livestock was killed inside mobile bomas, showcasing the effectiveness of the enclosures.

In close collaboration with the local traditional leaders, four new CGs were recruited in the Victoria Falls area of Zimbabwe in July 2016, issued with uniforms and equipment (bicycles, GPS units), and trained in spoor recognition and tracking, data collection and validation (conflict report data, spoor transect, boma assessment, herd data), report writing, mobile boma concept, lion chasing, community relations and first aid. A Whatsapp group has been established for daily conflict management and conflict reports have increased since the start of the project, showcasing the acceptance of the project in the communities. Communities to receive mobile bomas are currently being selected and boma rotation schedules will be implemented. We are working with a veterinarian to avoid disease transmission between cattle in bomas and to date 282 cattle have been examined for general health, nutritional status and disease, of which 8 individuals were treated for infectious bovine keratoconjunctivitis (eye infection). Furthermore, over 800 cattle are currently being dewormed and a veterinary kit (tick grease, antibiotics, eye and wound powder etc.) will be provided for each boma.

Nine additional lions have been collared in Botswana and the Victoria Falls area of Zimbabwe and GPS data is being collected continuously. Two out of four lions radio-collared in Botswana have since been killed by farmers in retaliation for livestock predation. We have held several meetings with the Project as well as the Community Manager of Elephants for Africa (EfA) and have set up first meetings with the chiefs of the Boteti region in Botswana. For this region, the project will be combined with a chilli fence project by EfA in order to detain elephants from raiding crop fields fertilized through mobile bomas.

Output 3: Decreasing number of predators killed in retaliation for livestock predation:

Introduction of predator friendly livestock husbandry practices aims to halt decline of globally threatened predators which have an intrinsic value to natural systems as well as an economic value by attracting significant revenue to host countries through tourism, which is frequently the largest and most viable local revenue generator.

Data on retaliatory killing of predators is continuously being collected by the Botswana Department of Wildlife and National Parks (DWNP) and has further been recorded by project scientists in Zimbabwe since 2010. CGs have started to monitor retaliatory killings of predators and a comparison with historical data will determine effectiveness of mitigation strategies.

Baseline surveys to quantify the effect of interventions on attitudes of men and women to predators and conservation have been run in Zimbabwe, with Botswana to follow in early 2017. Furthermore, initial predator surveys to quantify the effects of the project on predator populations have been run in Zimbabwe and will be carried out in Botswana in 2017.

Output 4: Increased crop yields and food security: Subsistence agriculture, followed by livestock ownership, is the most important contributor to livelihoods in rural communities in western Zimbabwe and north-eastern Botswana. Crop failure in poor years often results in chronic malnutrition while simple improvements to cropping methods could greatly improve yields and food security, and reduce land and labour requirements and environmental damage. Manure produced by kraaled animals as well as trampling action prepares and fertilises the field for the planting season, reduces crop failure and increases crop yields and self-sufficiency for participating families by up to 30%.

A baseline household survey to quantify yield and contribution to household food security has been carried out in participating village communities in Zimbabwe and is ongoing in the 2016/2017 cropping season, with Botswana to follow in early 2017.

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.

Due to current amendments to the permit application process, permission to start working in rural communities in Botswana has not yet been given. Even though the Government of Botswana as well as the KAZA TFCA Secretariat are enthusiastic about the project, concerns were raised during meetings and email conversations with the DWNP head office in Gaborone, DWNP Chobe District and DWNP Central District, which included the long-term sustainability of the project, the worry of weeds being introduced to fields by kraaled cattle and the worry of acceptance of new livestock husbandry techniques. In order to address these concerns several workshops with stakeholders from participating communities, governmental departments and our partner NGOs have been planned for early 2017 and we are confident to obtain permission to start working in the communities soon. Due to these developments the Botswana project sites will only be started in early 2017, however the team was able to collar several lions and hold several fruitful stakeholder meetings.

A significant concern is the devaluation of the Pound Sterling against other global currencies. This has effectively reduced available project budgets by around 20%. While we are currently trying to manage the available budgets to take this into account, realistically, we may need to adjust budgets and outputs in order to factor in this unexpected change in circumstances.

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 No

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: £ 00

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.

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

We would like to flag up the unavoidable challenges imposed by the devaluation of the Pound Sterling and the effect of this on project budgets.

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.

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**