Final Evaluation Report

Your Details	
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Project Title	Human Wildlife Conflict in Conservancies in Mara Ecosystem
Application ID	23464-1
Grant Amount	4999
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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
To establish the forms of Human Wildlife Conflicts (HWC) in Mara Conservancies			■	Forms established included human death and injury, livestock depredation, disease spread.
To establish he Causes of HWC in Mara conservancies			■	The main cause of HWC identifies was human encroachment into wildlife habitats.
To determine Seasonality of HWC occurrence		■		The wet season was expected to start in April-June, but there were changes in weather conditions. The long rains delayed thus affecting the data collection for the wet season; however, data for short rains (October-December) were used as the short rains prolonged. The severity of HWC occurrence in Maasai Mara conservancies was different across different seasons. During the dry season Jan-March 112 cases were recorded while during the wet season (short rains October-December) 96 cases were recorded.
To establish active mitigation measures			■	The mitigation measures identifies were: conducting education and awareness among the residents on ways of controlling HWC; equitable sharing of benefit accruing from wildlife conservation among community members; quick response to HWC cases by KWS; compensation of all HWC cases.

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

Season Pattern/change in climate: The expected wet season (long rains April -June.) delayed than usual thus affecting the second phase of data collection. The second phase of data collection was to start in late Mach but due to delay in rains it started in late April. Data for short rains (October-December) was therefore used as wet season since prolonged rain was experienced during this period.

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

Human Wildlife Conflict: Human Wildlife Conflict (HWC) incidences are common and eminent in Mara conservancies with 99% of respondents having experienced it.

Types of HWC: The Major form of HWC experienced is livestock depredation (89%), followed by human threat, injury and death and spread of diseases. Majority of those who experienced HWC as a result of livestock depredation also experienced human threat, injury or death. This is resulted when one tried to defend and protect the livestock from being attacked and so exposed to risk of being attacked by wildlife too. A total of 261 incidences of wildlife attack on livestock were reported. Hyena is the most problematic wild animal species in livestock depredation in the region. A total of 162 incidences involving hyena were reported (Figure 2), this was followed by lion with a total of 72 incidents. Regarding distribution of cases in terms of location where attacks took place whether inside or outside the "boma" (homestead), majority of attacks (51%), took place inside bomas, whereas 49% outside homesteads. The largest number of livestock species killed were 488 sheep in 8 months (August 2018- March 2019). This was followed by cattle (126). The largest number of livestock lost in a single attack was 84 sheep Figure 1. Wild animals are also killed during defence or as revenge
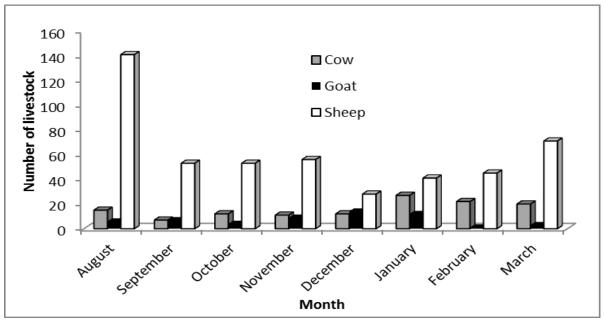

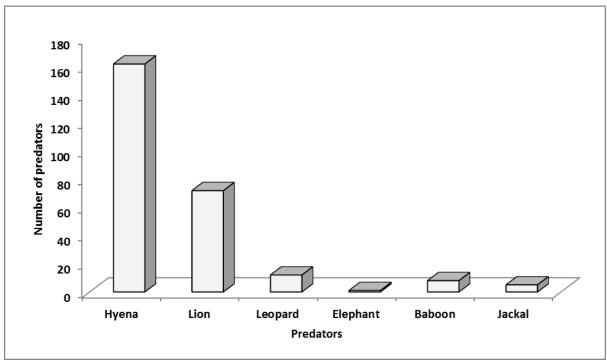**Figure 1:** Livestock killed by widlife

Figure 2: Livestock predators

Causes of HWC: Majority of the residents (83.2%) felt that HWC was caused by competition for resources such as water and pastures between wild animals and humans, followed by human encroachment into wildlife territory and lack of good coexistence with wildlife. From field observations there were allegations that victims of HWC had resorted to poisoning animals in protest against the government's failure to compensate them. Livestock farmers resorted to lacing their dead livestock with easily accessible poison like agro-chemicals with the intention to kill predators, but vultures that scavenge gregariously on dead animals succumbed to the poison, while some local communities opted to killing wildlife in defence to attacking their livestock or as a revenge after they have killed their livestock

HWC Mitigation measures: The results show that 96.1% of respondents feel that conflicts between humans and wild animals could be resolved by conducting education and awareness among the residents on ways of controlling HWC. 94.5% believed that conflicts could be resolved if benefits accruing from wildlife conservation was equitably shared among members of the community. 87.2% felt that HWC could be minimised if Kenya Wildlife Service (KWS) could respond to cases promptly, and lastly 85.6% believe that conflicts could be resolved through compensation of all HWC cases. In addition to the mentioned solutions, respondents felt that HWC could be solved effectively if both the national government through Kenya Wildlife Service and county governments were involved. Community members involvement in decision making process particularly wildlife conservation, enacting policies to minimize HWC, quick response from community scout and sharing information to game rangers on citing predators near residential area, would also play key role in minimising HWC in the area.

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

Data Collection: The project selected two local community members to help in data collection through monitoring and questionnaires. The field assistants were engaged for a period of 7 Months. In some conservancies the area chiefs were also involved in organising the Focus Group Discussion (FGDs) meetings since local communities had confidence in them.

Awareness: During Focus Group Discussions education and awareness was also conducted on how local community can live with wildlife and manage HWC. The area chiefs took advantage of the meetings and encouraged researchers to do awareness creation after the interviews.

5. Are there any plans to continue this work?

Yes, the research identified hyena as the most problematic animal in conflicts cases recorded in sampled conservancies. The phase two of research plans to focus on human-hyena conflict (HHC). Look at the threats faced by hyenas from local community since there were cases of poisoning livestock carcasses to kill hyenas which fed on them. Some community members carried out revenge on predators where vultures and hyenas fell victims of carcass poisoning. The second phase will also come up with conflict specific mitigation measures.

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

Having worked closely with the management of wildlife conservancies in Maasai Mara, the information has already been shared with conservancies to enhance better understanding and prevalence of HWC. It is now clear that the most problematic animal is hyena, and the rate of livestock depredation is not different in both outside and inside livestock bomas. However more information will still be shared with the affected local community members, national and county government for sound and efficient decision making and planning purposes by wildlife stakeholders. The information endeavours to establish means through which conservancies can work jointly in mitigating conflicts.

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

In the first 2 months of the project, little funds were used as the researchers were still setting up the required licenses, training the field assistants and informing the conservancy management on the type of research to be carried out. More research grants were utilised during the third to ninth month for data collection through monitoring, interviews, administration of questionnaires and conducting focus group discussions. In general the funds were used throughout the project cycle.

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
Facilitation and Field Work				
Focus Group Discussions (FGD's)	168	170	-2	More people attended than expected, this is because the area chiefs helped in mobilising the community to attend, however only sampled ones were interviewed.
Field allowance for research Assistants	700	705	-5	The budget was supposed to cater for field assistants only, but after realising that the area chiefs are handy in community mobilizing and the local community members have a lot of confidence/trust in them, they were also included in the budget for the few days that they assisted.
Permits and Licenses (Kenya Wildlife Services, National Council for Science and Technology, County Government of Narok)	135	35	100	Only one permit (National Council for Science and Technology) was acquired contrary to what had been budgeted for.
Questionnaire photocopying	32	33	-1	
Sub-total	**1035**	**943**	**92**	
Printing papers	35	34	1	There was an offer in patmatt bookshop where printing papers were bought in bulk.
Coloured Cartridge	42	45	-3	The research used more Cartridges than budgeted for printing monitoring forms, questionnaires and interview guides.
Black Cartridge	84	85	-1	
Pens	16.4	16	0.4	
Flip Charts	42	41	1	

Masking Tapes	2	2		
Mark Pens	17	16	1	
Sub-total	**238**	**239**	**-1**	
Equipment				
GPS	1396	1250	146	Bought them in a research equipment shop where the prices were a bit lower than regular shops.
Hard Disk	49	45	4	
Sub-Total	**1445**	**1295**	**150**	
Fuel and Vehicle Maintenance				
Fuel	909	978	-69	There was continuous fuel price inflation from £ 0.88 in August 2018 to £ 0.91 in June 2019
Vehicle Maintenance	372	347	25	Was low than budgeted, minimal repairs and maintenance were done
Sub-total	**1281**	**1325**	**-44**	
Accommodation and Subsistence				
Researchers	1,000	1200	-200	Accommodation in the months of August, September and December was high in the Maasai Mara due to high peak period for both local and international tourism
Sub-total	**1,000**	**1200**	**-200**	
Grand Total	**4999**	**5002**	**-3**	

Note: Only two transactions were made at the management account (Stanbic Bank Nakuru) and the funds transferred in local currency to Cooperative and SBM bank in Narok. The reason for the transfers was because there was no Stanbic Bank in Narok and Nakuru was far from the study area. Several transactions were then carried out at Cooperative and SBNM bank in Narok. The Local Exchange rate during the first transaction was 1£ sterling = Ksh124.28 while during the second transaction was 1£ sterling = Ksh126.30.

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

The level of HWC is very high in Maasai Mara Conservancies given that in a span of 8 months a total of 670 (488 sheep, 126 cattle and 56 goats) livestock were attacked/killed by wildlife. We (Elizabeth and Dorothy) as the researchers feel that the next important step is focusing on a specific form of conflict which is livestock depredation by hyena and lion. There were 162 and 72 cases reported for hyenas and lions respectively. It would be very important if we now look at the mitigation measures specifically for these two wild animals as they are also threatened by human killing through poisoning and spearing. The population of lions in Maasai Mara Conservancies and Kenya at large is reducing very fast due to various factors and if action is not taken then the small population in Mara could be wiped out through human-lion conflict; nevertheless the hyenas are not left out as they are

victims of carcass poisoning. The project should now come up with ways through which the community can coexist with these wild animals e.g. setting up of predator proof bomas for their livestock among other measures.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project?

Yes, the logo was used on data collection tools (questionnaires, interview guides and monitoring forms). The logo has also been used on the brochures and pamphlets for information disseminations to the local community members and other stakeholders.

Did the Foundation receive any publicity during the course of your work?
Yes, most of the local community members (especially the educated ones) in the study areas wanted to know more about Rufford, its role and activities in relation to conservation after seeing its Logo on the data collection tools. They made inquiries if it is a Kenyan organisation or an international NGO, if it can provide education scholarship to community members and so on. The researchers took advantage of this opportunity to publicise Rufford Foundation on its support for conservation projects in various regions of the world.

For more publicity, two publications are being developed for publication in relevant conservation journals.

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

Member	Role
Elizabeth Naliaka Wakoli	- Team Leader (Principal Researcher) - Carry out Focus Group Discussion - Monitoring of HWC cases - Report writing - Results dissemination
Dorothy Masiga Syallow	- Researcher - Community interviews through Questionnaires - Interviews with Key respondents - Mapping of conflicts - Report Writing - Results dissemination
Philip Rotiken (Research Assistant) Paul Kool (Research Assistant)	- Help in data collection through questionnaires, (in some areas they did translation of the questions from English into Maa Language) interview guides - Recording of HWC incidences on monitoring sheets - They acted as a link between the researchers and the community members in areas where area chiefs were not readily available thus winning the confidence of the locals

	• Guided in the field since they understood the terrain so well
James Oloontorot Yiaile (Area Chief)	• They were the link between the researchers and the local communities
Shakai Ole Seno Benjamin (Area Chief)	• Helped in organizing for community barazas for Focus Group Discussion (FDGs), • Organize the meeting with the key respondents (Village Elders) from the community

12. Any other comments?

We would like to thank Rufford Foundation for research grants which enabled unearth livestock depredation as a severe form of HWC experienced by the local communities in Maasai Mara Conservancies and hyena being the most problematic animal. This has made us (Elizabeth and Dorothy) start thinking of the next cause of action to curb this menace of HWC for the better of local community and wildlife in Mara and Kenya at large. Once the paper is published, it will be shared with Rufford Foundation and any further use of information from this research Rufford will be notified prior.