

## PROGRESS REPORT

27/11/2021

### PROJECT TITLE:

**Assessment of Human Elephant Interaction, Land Cover, and Land Use Changes and Potential Need for Citizen Science Around the Rukwa-Lwafi Game Reserve, Tanzania**

### LOCATION:

**KATAVI AND RUKWA REGION – TANZANIA**

**GRANT ID: 33228-1**



Part of the surveying team during data collection in three respective areas; Kabwe udachi, Kabwe camp and China villages

Photo: ©Emmanuel Stephens

### Project

My project focused to investigate the impact of human elephant conflicts (HEC) on agro-based livelihoods, analyse land cover and land use changes for the period 1972-2019, community willingness to participate in citizen science to understand trends in HEC, and find solutions to this problem. Outcomes of this study will provide an understanding the complex conflicts between elephant conservation and human livelihoods around RLGR and inform strategies to mitigate human elephant conflict in this and other areas.

### Updates

The project was scheduled to immediately start around June but permit delays from COSTECH and respective District Councils pushed some activities to September. I was awarded a permit from Tanzania Wildlife Research Institute/Tanzania Commission for Science and Technology on June 28, 2021 and received the document officially on July 20, 2021. We also applied for

local permits from the District Councils and received approval on mid-September. Data collection started in September 18, 2021 and ended in October 15 and we managed to DIRECTLY visit 12 villages and consulted through phone, in person meeting with Game Reserve officers to consult about the situation of HEC in 25 other villages. Out of all these, nine villages showed high incidences of Human elephant conflict whereas others just reported incidences of elephants passing through the village land. We are currently doing data entry which will be followed by data analysis. We have also visited different parts of the surveyed villages especially those along the wildlife buffer zone to see and record different human activities that are contributing to land use and land cover changes.

During the survey, we keenly recorded incidences of changes in land use and land cover and we noted new areas being established and closely bordering wildlife areas. There is a high rate incidences of new human activities in areas adjacent to the two protected areas; Rukwa and Lwafi Game Reserve. Increasing incidences of human elephant and other wildlife conflict in the area are related to increasing human activities along these two reserves.

During accessing online maps for land cover and land use changes analysis, we noticed many new villages are not yet recorded even in the National Bureau of Statistics and it was hard accessing its information but my technological team is working on this. This will cause a slight change in the overall results of the analysis.

We also observed some existing methods used by the locals to prevent crop raiding elephants in their farms. Below are some photos captured during the survey across villages bordering these reserves:

### **1. INCIDENCES OF CROP RAIDING CAPTURED DURING THE SURVEY**



## 2. METHODS USED TO DETER ELEPHANTS FROM ENTERING INTO FARMS



WATCHTOWER IN FARMS AND USING STRONG TORCHES



USING ANIMALS (DOGS) AT NIGHT



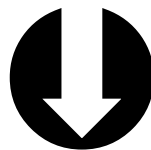
USING PLASTIC BAGS (FORMERLY USED FOR WATER PACKAGING) AND ATTACHED ON A LONG STRING ACROSS THE FARM



USING TEMPORARY CAMPS IN FARMS



HARVESTING MAIZE BEFORE FULLY DRY AND PILING IN A SINGLE POINT TO REDUCE



SOME MAIZE FORCED TO DRY CAPTURED IN ONE OF THE FARM CAMPS VISITED

**3. EXISTENCE OF A TRADITIONAL BEEKEEPING INDUSTRY BUT MOST FARMERS ARE NOT AWARE OF USING BEES AS ELEPHANT DETERRENTS**



**4. SOME CAPTURED HUMAN ACTIVITIES ACROSS THE RESERVE BOUNDARY – LAND USE CHANGES**



**CHARCOAL MAKING ALONG THE LWAFI GR**



NEW TEMPORARY SETTLEMENTS ESTABLISHED ALONG THE LWAFI GR BOUNDARY



NEW FARMS RECENTLY CREATED



TREE FELLING FOR FIREWOOD

LIST OF ALL VILLAGES RECORDED FOR THE SURVEY – SOME OF THESE WERE NOT COVERED BECAUSE THEY HAVE NOT RECORDED INCIDENCES OF HEC

LWAFI AND RUKWA GR IS SUROUNDED BY THREE DISTRICTS LISTED BELOW:

<b>SUMBAWANGA VIJIJINI DISTRICT</b>	<b>NKASI DISTRICT</b>	<b>MLELE DISTRICT</b>
<b>VILLAGE NAME</b>	<b>VILLAGE NAME</b>	<b>VILLAGE NAME</b>
Muze	Paramawe	Mawiti
Ilanga	Lyazumbi	Mamba
Kipa	Kakoma	Kasansa
Kalumbaleza	Kizi	Kilida
Mtowisa	China	Mkwajuni
Kasekela	Kate	Luchima
Zimba	King'ombe	King'anda
Mfinga/Mwadui	Korongwe	Majimoto
Nkamba	Itete/Kirando	
Uzia	Mtakuja	
Mpanda Nkwiro	Masolo	
Mapili	Ninde	
Masigo	Namasi	
Ipwaga	Kabwe	
Ilunde	Izinga	
Mgombe	Ng'undwe	
Kanoge	Mkombe	
Wachawaseme	Kalila	
Mtakuja	Kapalamsenga	
Nsenkwa	Itunya	
Kaulolo	Kazovu	
Uzega	Ipanda	
Inyonga	Mkole	
	Isale	
	Mjimwema/ Mbwendi	
	Kasapa	