



Livelihood options preferred by communities and threats to Red Colobus in Itwara and Matiri forests, Uganda

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Meet our team



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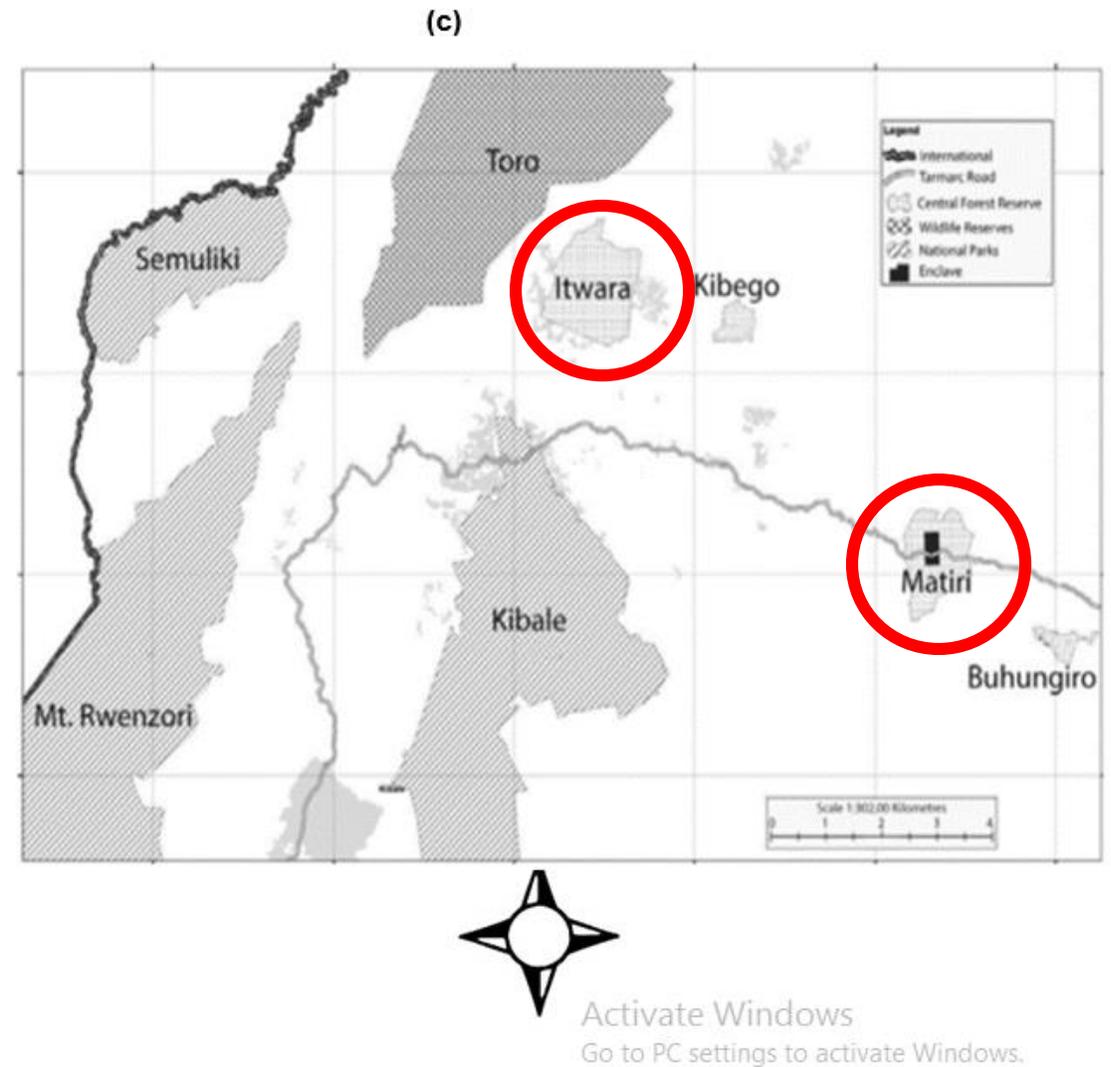
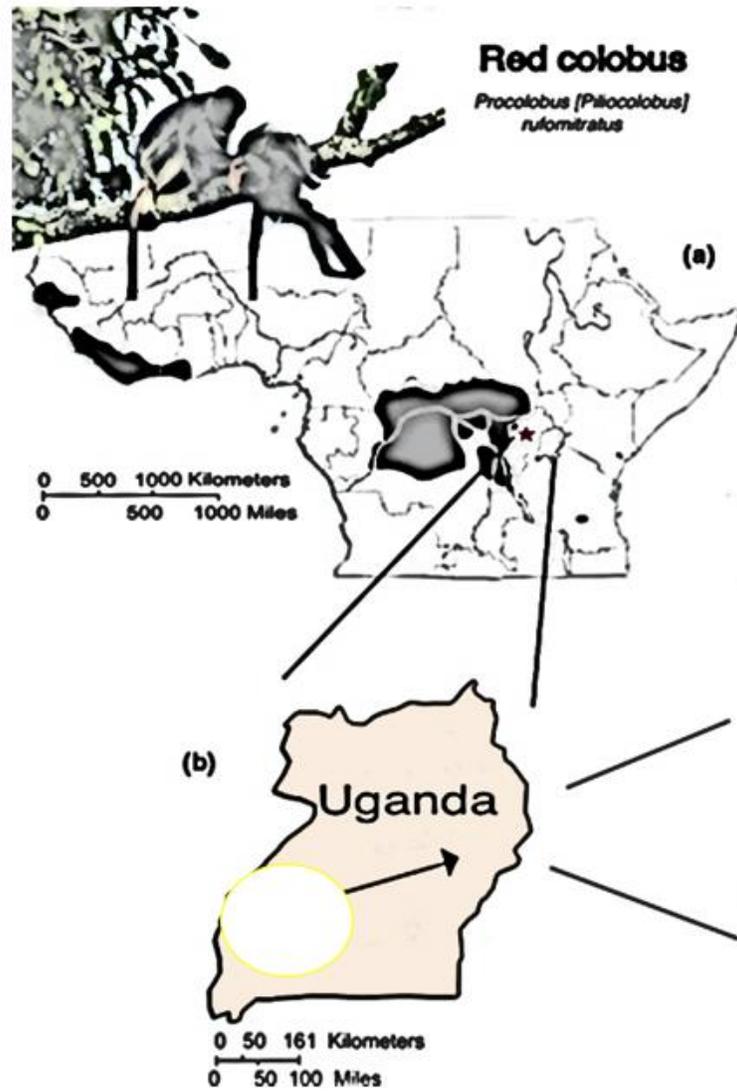
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Introduction



Red colobus: *Procolobus rufomitratu tephrosceles*

➤ Threatened primate species



Distribution of Red colobus across north central Africa (black shading; Ting 2008), with the black star highlighting Kibale National Park (KNP). (b) Uganda with the location of major conservation areas in yellow circle (c) Location of the two conservation areas and other major conservation areas

Introduction

➤ Red colobus distribution in Uganda

- Kibale National Park
- Matiri and Itwara Central Forest Reserves (Mugume et al. 2015)
- Semliki National Park and Wildlife Reserve?

➤ Red colobus threats

- Human activities
- Chimpanzee hunting

Need to protect isolated populations of Red colobus



Chimpanzee eating a monkey

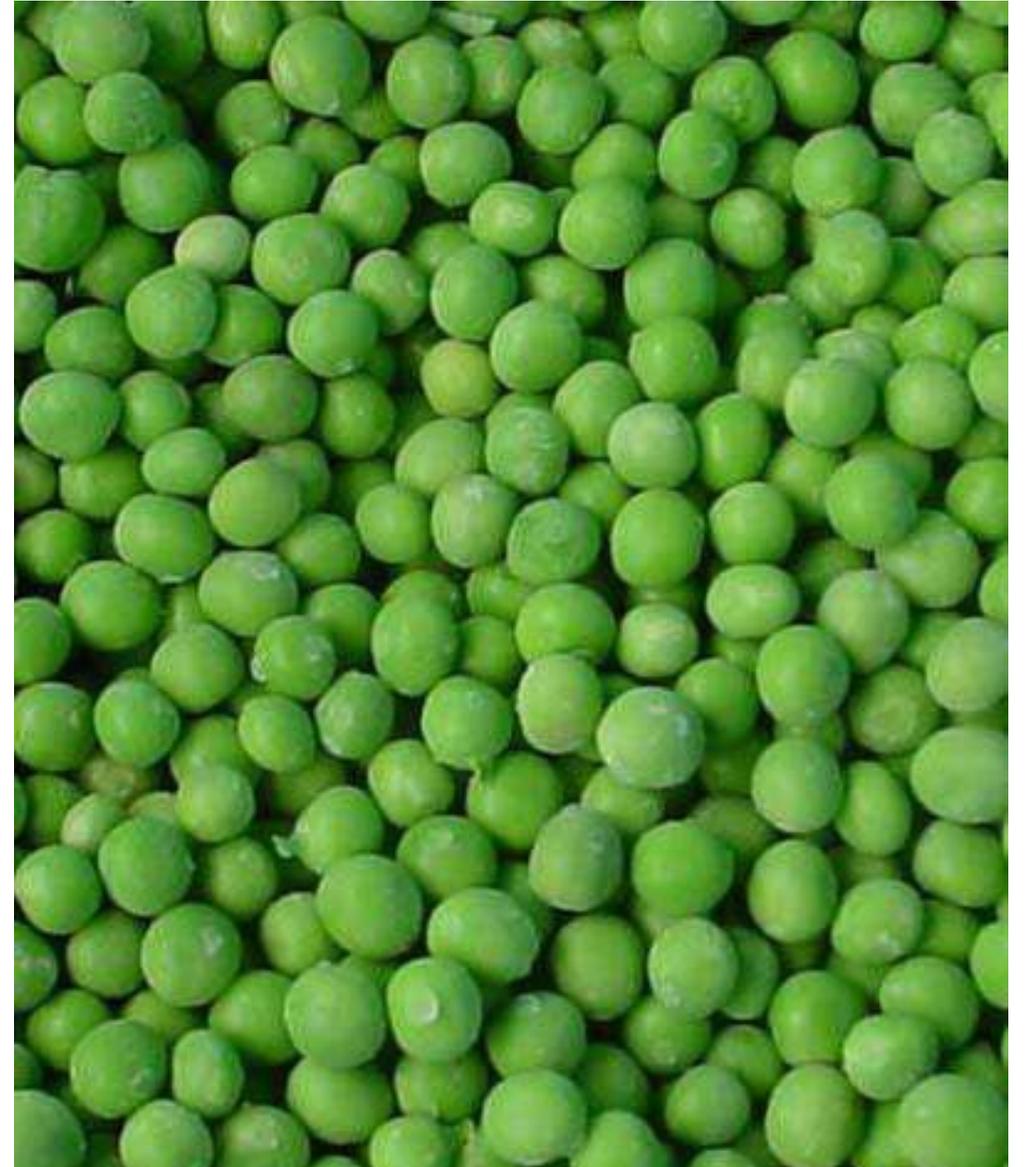
Introduction: Project Goal

- ❖ Promote Red Colobus conservation in Matiri and Itwara Central Forest Reserves in Uganda
 - Population monitoring and habitat quality assessment
 - Promoting environmentally friendly IGAs e.g. beekeeping

Introduction: Why beekeeping

Bees are a key component of agriculture worldwide

- About 80% of Uganda's population is involved in agriculture
- Beekeeping: source of household incomes, food & employment
 - ✓ Annual pollination value: \$ 0.49 billion from crops valued at \$ 1.16 billion

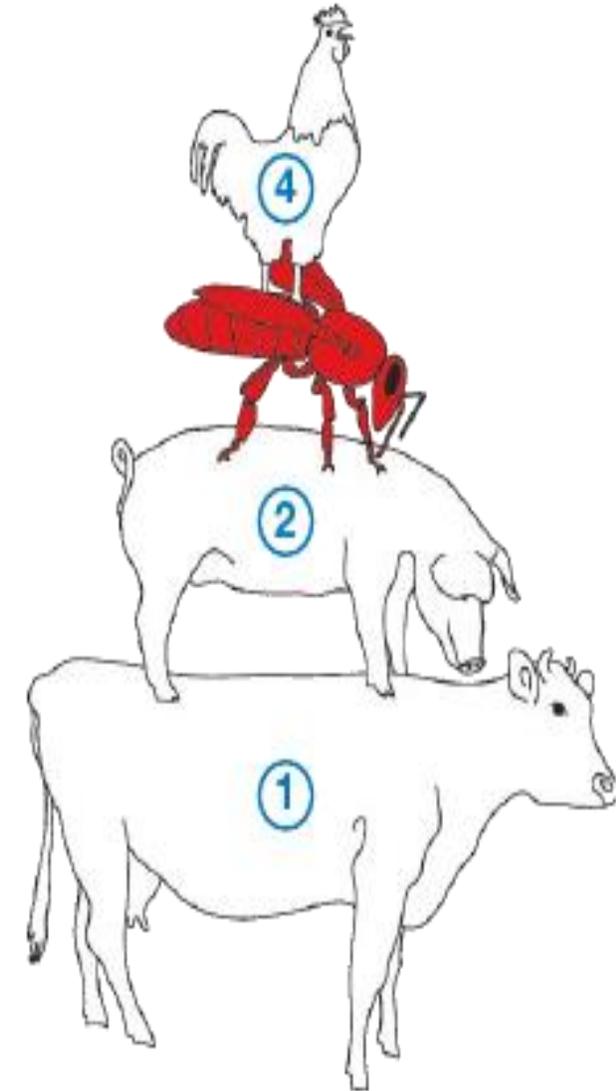


Introduction

Economics of beekeeping

Livestock	Economic importance (\$)
CATTLE (meat, milk, skin)	331,407,538,000
Honeybees (products, pollination)	180,990,944,120
Pigs (meat)	173,423,160,000
Poultry (meat, eggs)	144,241,789,000
Sheep (meat, milk, wool, skin)	41,319,473,000
Goat (meat, milk, skin)	25,331,724,000

Source: Jacobs et al. 2005



➤ Economically, beekeeping is ranked 2nd or 3rd among livestock world wide

Introduction: Beekeeping in Uganda

Relatively low-cost & low labour intensive enterprise that does not require a lot of land

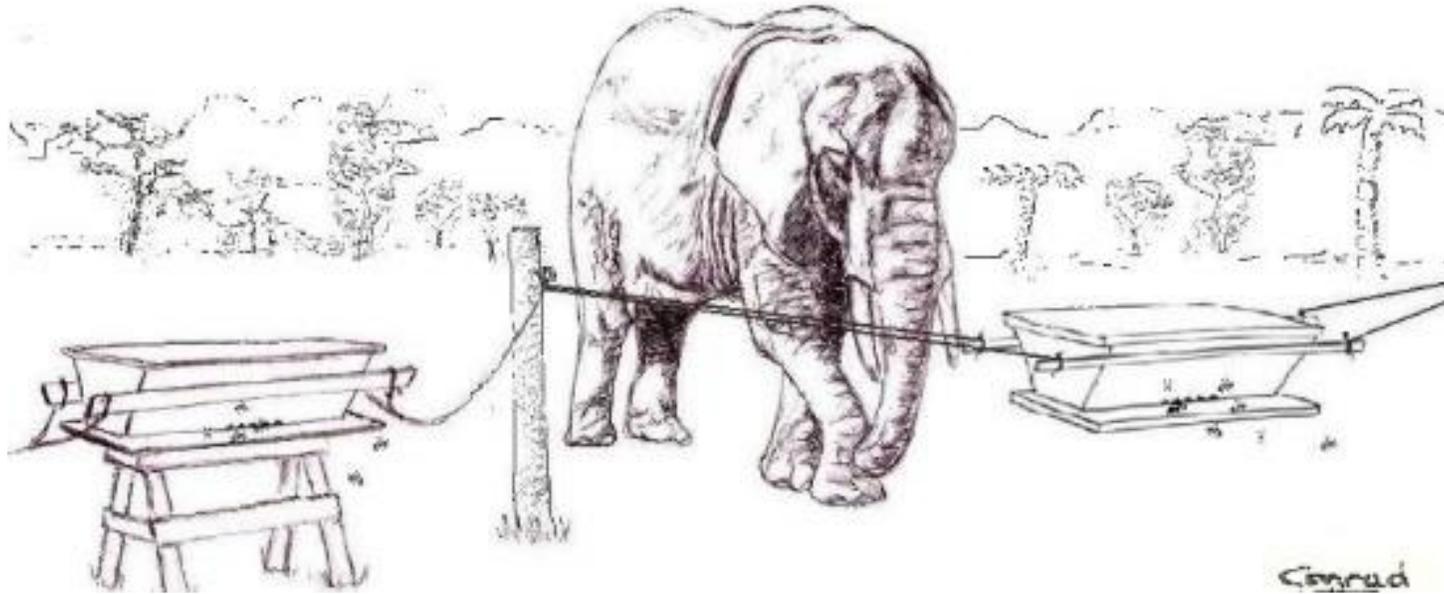


Beekeeping can be practiced in unproductive lands

Viable for people like women & youth who are least likely to have access to resources

Introduction: Beekeeping and conservation

- Pollination of wild plants: food for wildlife
- Controlling elephant crop raiding
- **Earnings from tourism: \$ 979 million in 2013; largest foreign exchange earner**



Beekeeping and Red colobus: Beekeeping at the edge of Red colobus habitat can help protect the habitat for this threatened species: economic incentive

- ❖ Beekeeping important for sustainable development

What we have done

Field work



Questionnaire administration



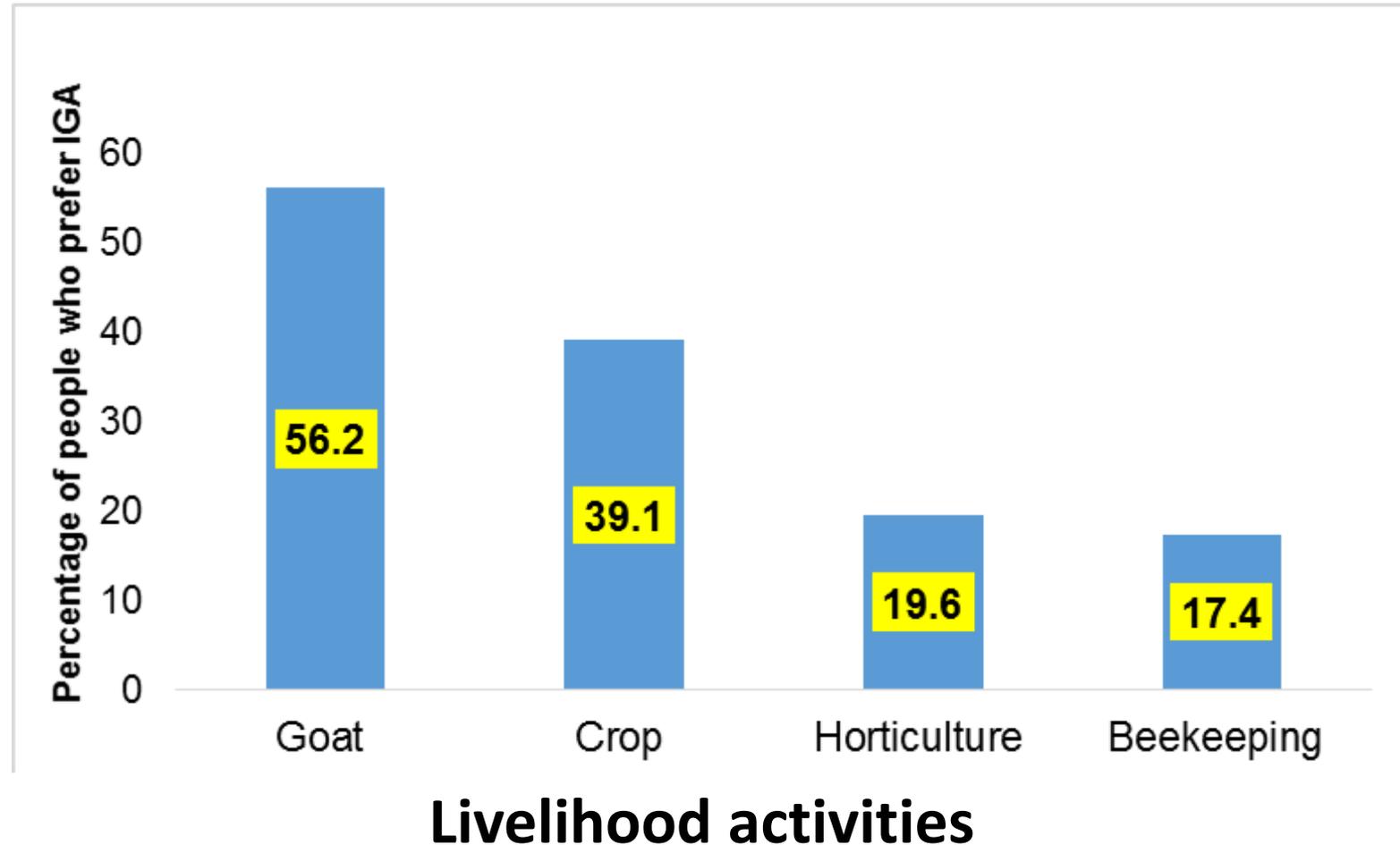
Field surveys



- ❖ Data analyses
- ❖ Sharing the findings with stakeholders

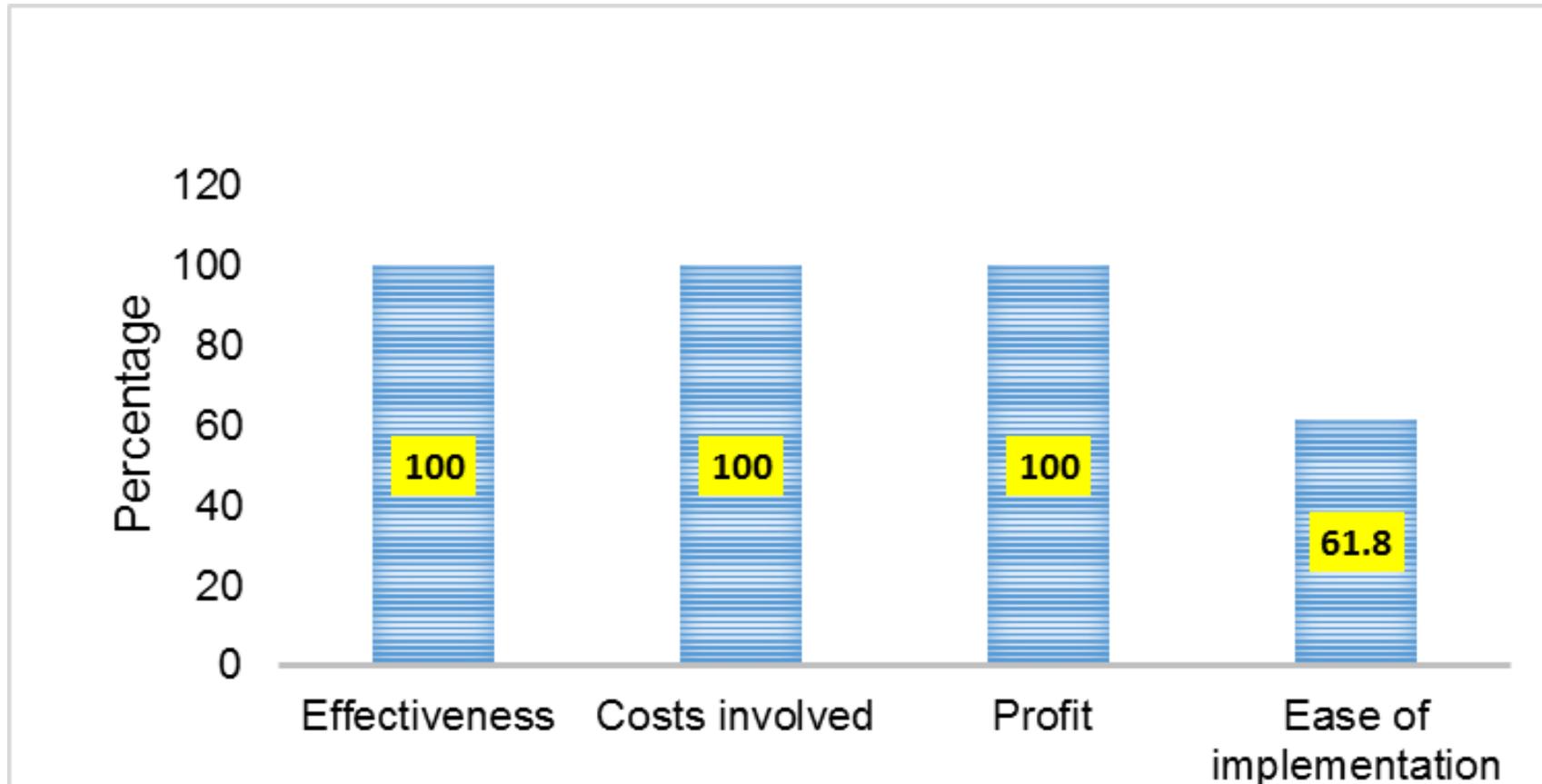
Findings

Income generating activities (IGAs) as adaptation strategies to conservation challenges



Communities prefer Goat farming

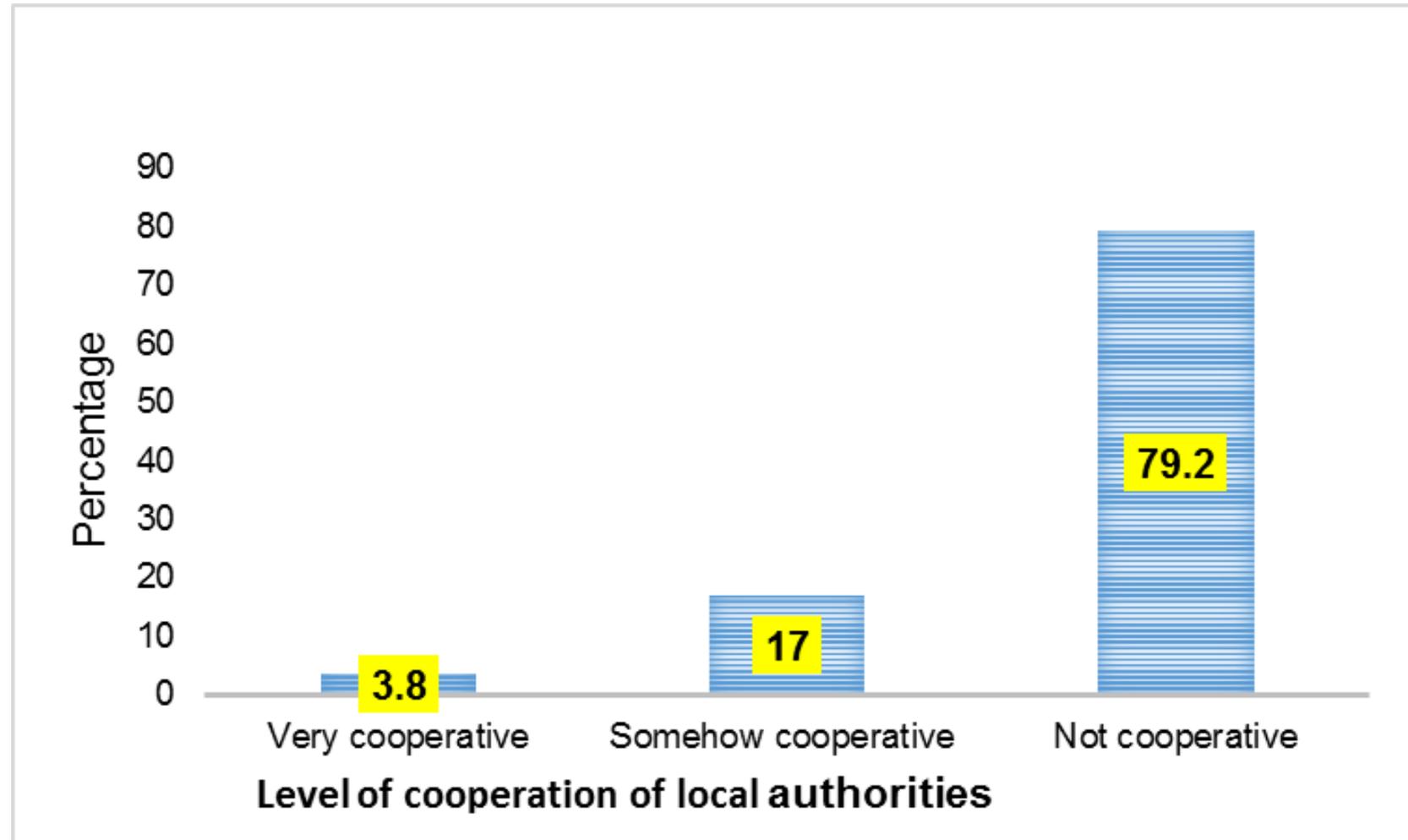
Factors considered by households when selecting livelihood adaptation strategies



Considerations for livelihood activities

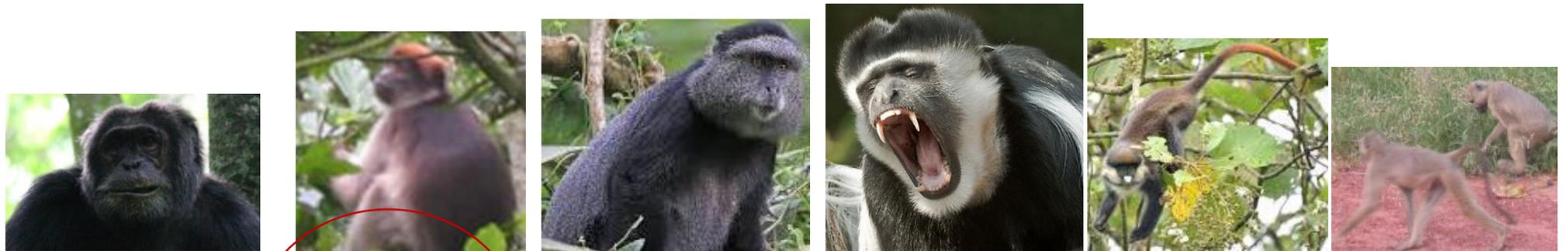
Communities consider most effectiveness, cost and profit of IGA

Cooperation of local authorities with communities in supporting adaptations to conservation challenges



Communities say local authorities are not cooperative in supporting their adaptation to conservation challenges

Relative abundance (no. per km transect) of primates during the survey



Forest	Chimps	Red Colobus	Blue Monkey	Black & White	tailed	Baboons
Itwara	8.6	0	4.2	27.2	21.7	1.3
Matiri	0	0	0	3.7	0	0

Itwara 2015: **0.0034.75/km**

Matiri 2015: **0.0023.5/km**

No record of Red colobus yet in the last 5 months; are they locally extinct?

Frequency of anthropogenic activities per km transect

Anthropogenic activities	Matiri 2015	Matiri 2018	Itwara 2015	Itwara 2018
Traps	0.025	1.7	0.038	3.3
Fuel wood sites	0.025	1.5	0.013	0.3
Pit-sawing sites	0.041	8.7	0.008	6.2

Source of 2015 data: Mugume et al. 2015

- ❖ **Relatively higher frequency of trapping sites for wildlife in Itwara;**
 - ❖ **Matiri trapped out?**
- ❖ **Increased frequencies of anthropogenic activities between 2015 & 2018**
 - ❖ **Human population pressure**

Fresh pit-sawing site in Itwara CFR



Blue dyker trapped in Itwara CFR

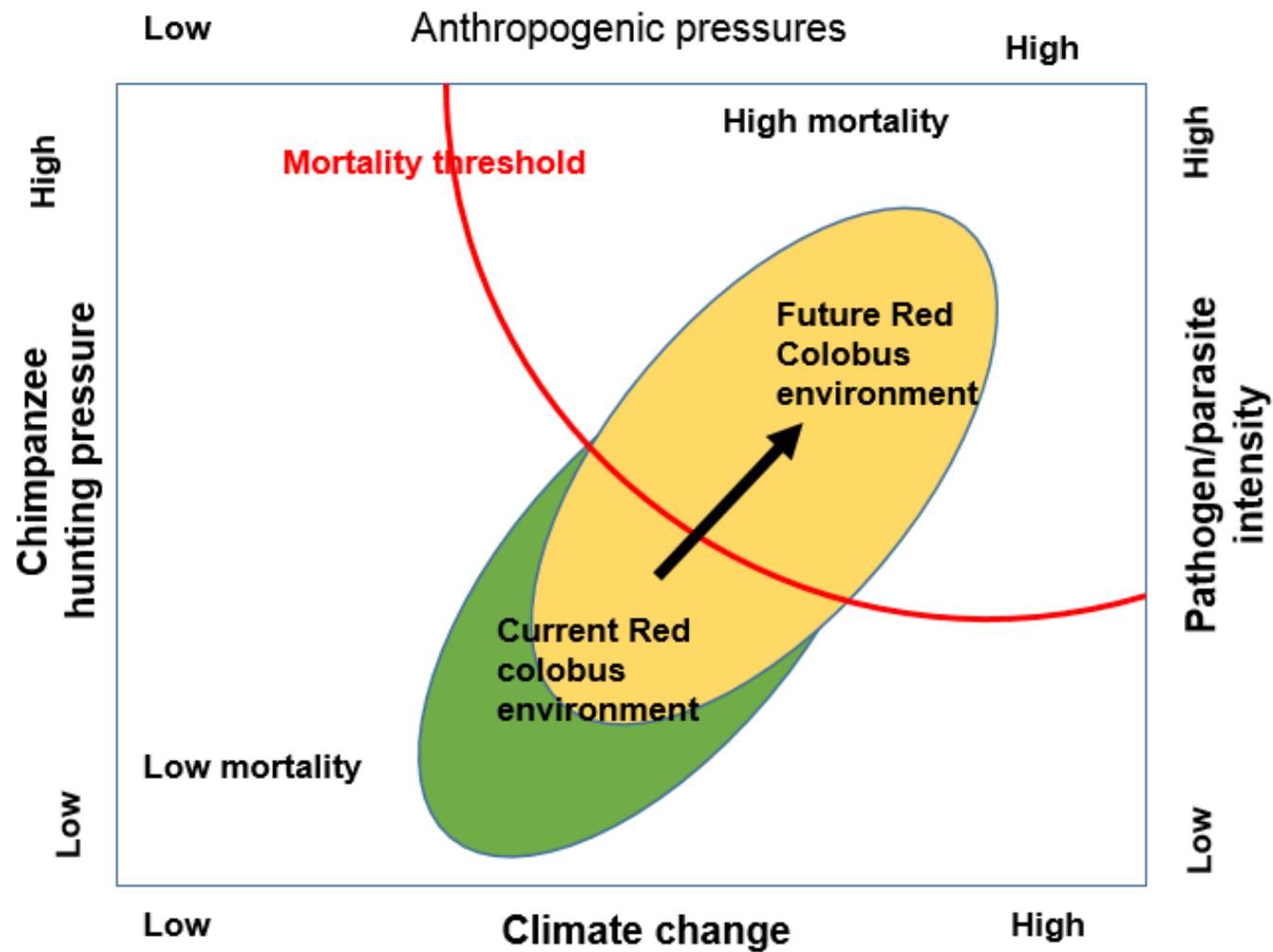








Synthesis



Red colobus vulnerability to changes in the environment: Conceptual diagram, showing the range of variability of “Current Red colobus environment” parameters for anthropogenic pressures, climate change, pathogen intensity and chimpanzee hunting with a small portion of the environment situation “space” currently in the low mortality for Red colobus. “Future colobus environment” shows increases in extreme anthropogenic pressure, increased pathogen intensities, effects of climate change and chimpanzee hunting events associated with **foreseen** environmental changes, indicating increased risks of die-off for current populations.

Recommendations

1. Identification of livelihood options for interventions to address conservation challenges **MUST** involve local communities for ownership
2. Develop effective forest patrolling systems to control illegal activities
3. Regular monitoring of threatened wildlife populations to guide responses to threats and inform adaptive management
4. Survey un-surveyed protected areas for Red Colobus
5. Community awareness on Red Colobus is required

Acknowledgements



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THANK YOU



Thank you for listening

Our homes are getting destroyed! Are we still safe?



Am not sure! Well, how do we find out?

Ugandan primate conversation