

Mitigating the impact of the illegal bushmeat trade:

*Awareness and alternative proteins in
Katavi-Rukwa ecosystem of western Tanzania*

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The **bushmeat** trade is the illegal and unsustainable over-hunting of wildlife for food and income





2008-2009

USFWS MENTOR Fellowship Program

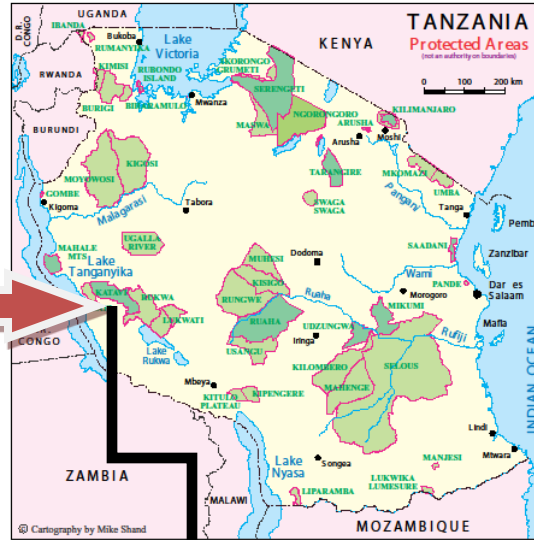
USFWS Signature Initiative and cooperative agreement with the **College of African Wildlife Management-Mweka**, Tanzania, and Africa Biodiversity Collaborative Group (**ABCG**) to:

- build the capacity of a **team** of eight **eastern African wildlife professionals** and four mentors
- lead efforts to reduce illegal **bushmeat exploitation**
- build conservation **partnerships** at local and regional levels in eastern Africa.





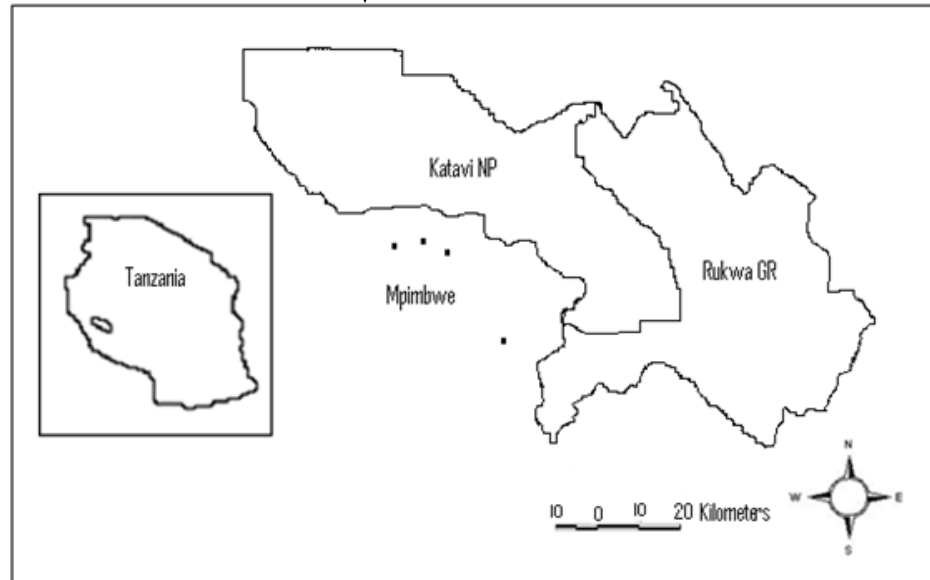
Implementation site



The **Katavi-Rukwa ecosystem** in the Great Lakes Region of East Africa north of Lake Rukwa in Mpanda District, Rukwa Region, Tanzania.

Four villages

1. Vaccination and education
2. Vaccination only
3. Education only
4. None



Background

(USFWS MENTOR Fellowship Program)

Surveyed

82 hunters

193 consumers



Findings

- Hunters in Katavi Region hunt primarily to **sell**
- Majority of the bushmeat consumed is obtained either directly **from hunters (for cash)** or through **middlemen**.
- Bushmeat is nearly **half the price of domestic meat**
 - \$0.5 to \$1 bushmeat
 - \$2-\$3 domestic
- Hunting technology
 - muzzle loaders, spears and dogs**
- Hunting focused mostly on:
 - buffalo (*Syncerus caffer*)
 - impala (*Aepyceros melampus*)
 - bush pig (*Potamochoerus porcus*)
 - warthog (*Aepyceros melampus*).

Other bushmeat species:

- bushbuck (*Tragelaphus scriptus*)
- eland (*Taurotragus oryx*)
- elephant (*Loxodonta africana*)
- giraffe (*Giraffa camelopardalis*)
- hartebeest (*Alcelaphus buselaphus*),
- hippo (*Hippopotamus amphibius*),
- topi (*Damaliscus lunatus*)
- waterbuck (*Kobus ellipsiprymnus*)
- zebra (*Equus quagga*)
- reedbuck (*Redunca redunca*)
- roan antelope (*Hippotragus equinus*)
- sable antelope (*Hippotragus niger*)
- greater kudu (*Tragelaphus strepsiceros*)
- small antelopes: duiker, dik dik etc



For 1-3 days hunting small game for the pot

Accompanied by porters or send for porters, if successful

Nearly 65% of the local population consumed bushmeat

Of the households that hunted, 70% did so for income and 30% for food

Bushmeat poaching believed to be an important driver of population declines of both herbivores and carnivores



The estimated number of individual animals reportedly killed per year

899 impala
679 common duiker
677 warthog
473 buffalo
431 bushbuck
346 bush pig
346 zebra

220 eland
215 topi
209 sable antelope
98 giraffe,
83 roan antelope
77 hippopotamus
69 waterbuck

60 hartebeest
34 elephant
32 greater kudu
6 reedbuck



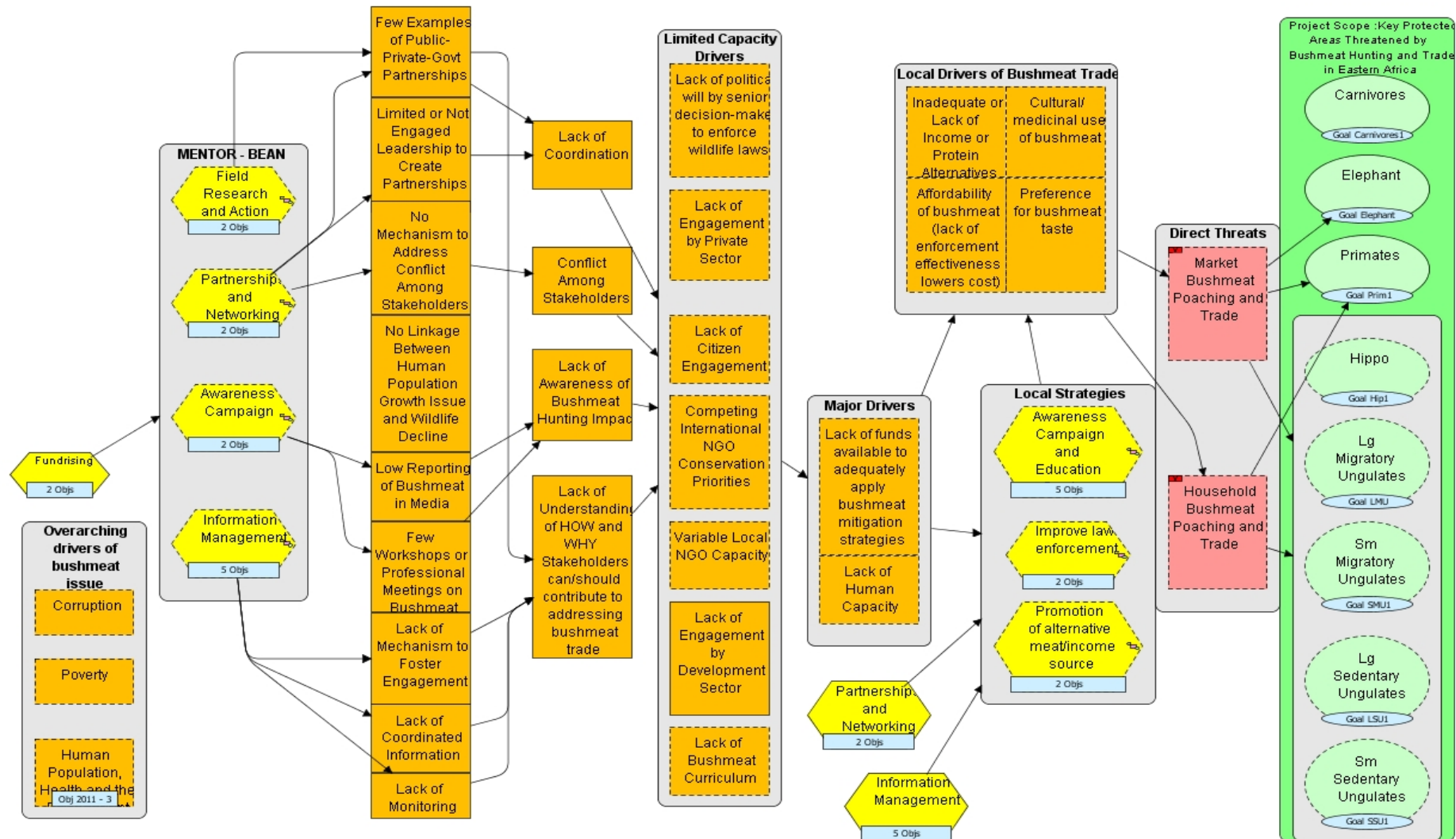
Project planning



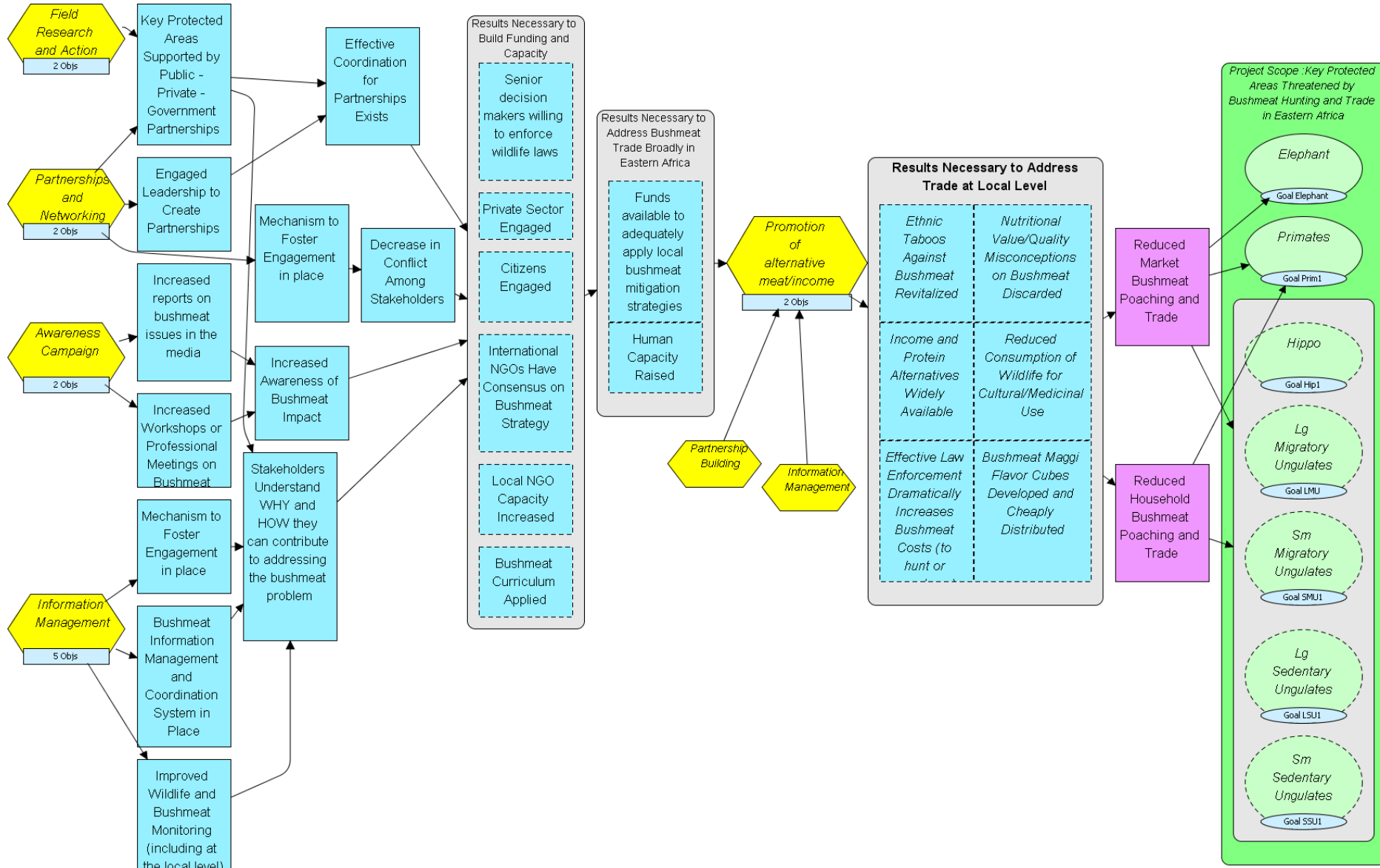
- Regional strategies to deal with bushmeat trade
- Adaptive management-Miradi Software



Conceptual model



Result Chain





Holistic Approach

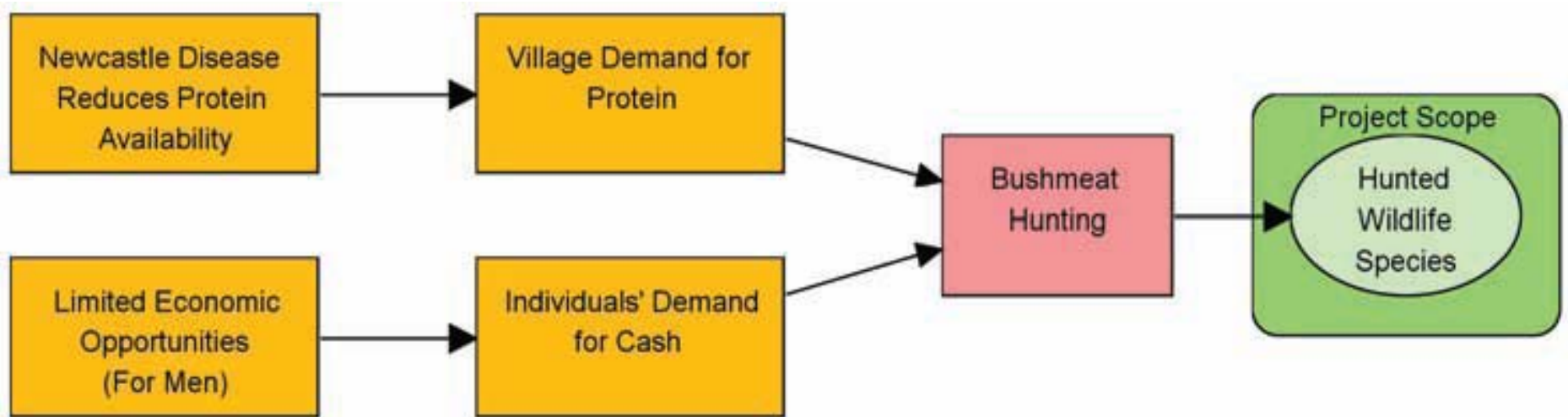
Together:

- Bushmeat Awareness
- Alternatives
- Law Enforcement
- Partnership Building





Chicken Vaccination project



Chickens are among preferred protein source to households throughout the Katavi-Rukwa ecosystem (85% - Martin 2008)

Economic analysis of rural poultry in Tanzania calculated that with minimum input, a family stands to gain between USD \$563–1000 per year (Minga et al. 1996).

Train Community Vaccinators

Chicken Vaccination project

- Collaborate with VETAID, a Tanzanian veterinary NGO
- International Rural Poultry Centre
- Tanzanian Veterinary Services
- Administer Newcastle disease vaccinations three times a year
- Vaccine is locally produced in Tanzania (dropper vials of the I-2)



Results

- Increased production of village chickens
- Fewer poaching incidences
- New technique to deal with the bushmeat problem by improving protein alternatives.
- Results of the vaccination program pertinent to the other protected areas experiencing conflict between poachers and protected wildlife.



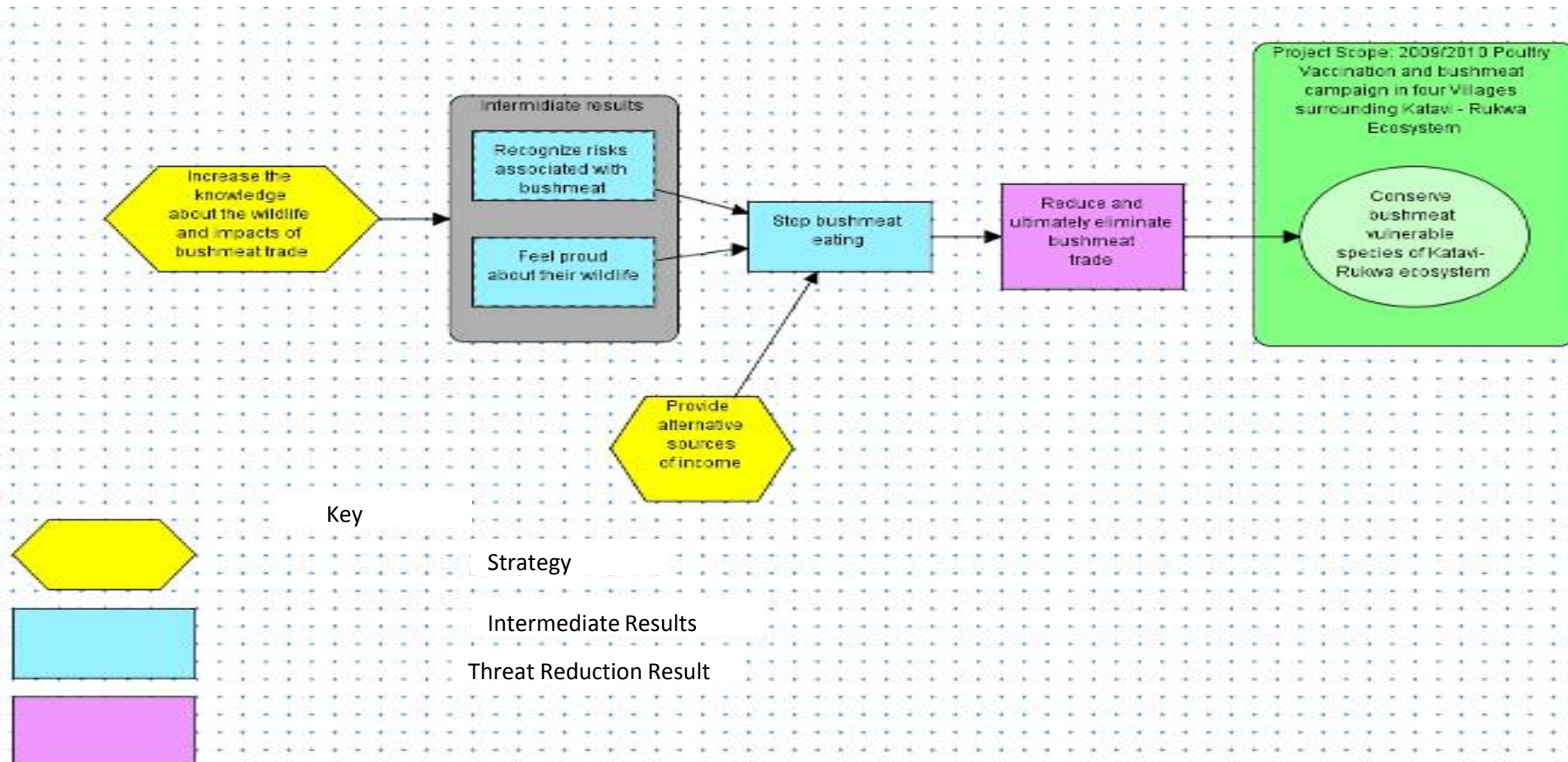
Awareness Campaign

- Conduct bushmeat awareness campaigns through organized village general meetings and workshops.
- Katavi National Park representatives, Mpanda district game and community officers, hunting company representatives, and representatives of the target groups from the four local communities
 - general importance of wildlife conservation
 - effect of bushmeat to wildlife population
 - risks associated with illegal bushmeat hunting, etc



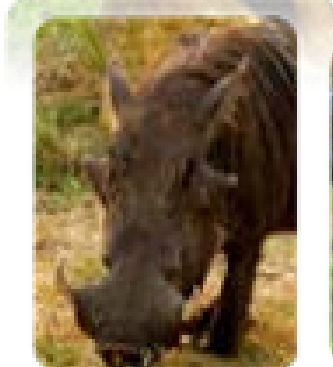
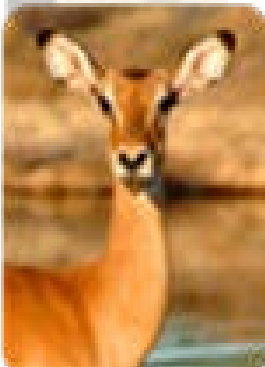
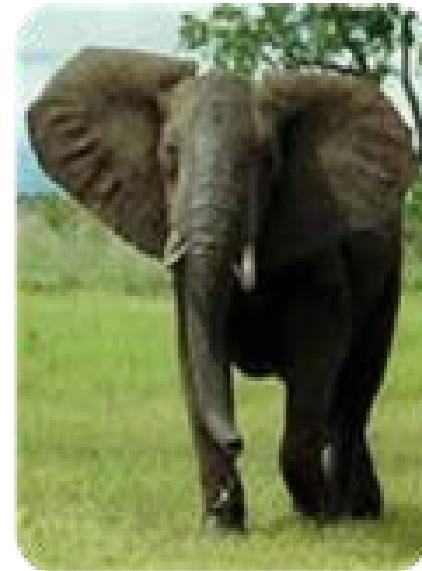
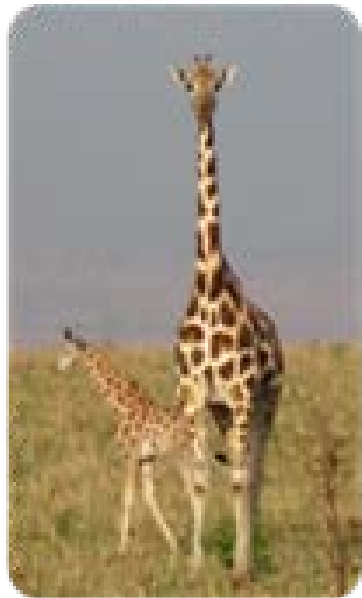
Awareness results

- Increased knowledge of wildlife laws, benefits, and the health and legal risks associated with use of bushmeat
- Improved communication between the local communities and the project implementation partners
- Shift from bushmeat consumption to chickens



Project sustainability

- Community Vaccinators (CVs) given the option of being trained as Community Poultry Health Workers (CPHWs)
- Real cost of one vaccine tube (package) is \$3 that vaccinates an average of four hundred (400) chickens (Minga et al. 1989; Aini, 1990; Bell, 1992)
- Cost is \$0.00625 per chicken
- Matured fowl can be sold at an average of \$6 to \$8
- CPHWs continue vaccination program



Sustainability

- Arrange loan with a smart return mechanism to ensure vested in the project
- Loan for an average of 20 tubes (package) per vaccinator leading to vaccination average of 8000 chicken per CVs issued as an initial capital
- Profit of \$13 will be accrued by vaccinating 400 poultry



Monitoring and Evaluation

- Questionnaire to collect the baseline data on the population of chicken before the vaccination campaign starts and protein consumption
- Same methodology and tool to collect monthly data on the poultry population and protein consumption for project year
- Data on law enforcement efforts on arrest and poaching incidences by the hunting companies and Katavi National Park linked to inform on changes in poaching and arrest incidences



Conservation Outcome

Reduce illegal bushmeat trade in Katavi-Rukwa ecosystem





Thank you!

Asante Ndaga

BEAN Members





www.bushmeatnetwork.org