Human–African buffalo conflict: perceptions of damage, and mitigation strategies, in villages bordering Ngorongoro Conservation Area, Tanzania

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SUPPLEMENTARY MATERIAL 1 Questionnaire.

FORM ID NO...... Village..... Sub-village ------

Dear Sir/Madam,

I am a student pursuing a Bachelor's Degree in Wildlife Management at the College of African Wildlife Management (**MWEKA**). I am conducting research on assessing the Human-Buffalo conflict in villages surrounding the Ngorongoro Conservation Area. The purpose of this research is to assess how local communities are affected by African Buffaloes and the mitigation methods used. This questionnaire has been designed to gather information from households and key informants from selected villages surrounding the Ngorongoro Conservation Area. Your response is very important to the success of the study. You may leave some of the questions blank if you do not wish to answer. Also, your answers will remain private and secret, as well as information from this research will be kept under control of researchers who will only report overall findings. Individual names will not be included in the report. Other researchers will never know your individual answers to this questionnaire. If you agree to participate in this research, I am requesting you to please answer all questions on the questionnaire form provided. This form will take 10 to 15 minutes of your time to complete.

Personal Information

Choose the correct answer and put a circle in the correct answer.

- **1.** Sex:
- a) Male **b**) Female
- 2. Age; a) 18-30 years b) 31-45 years c) 46-60 years d) Above 60 years
- **3.** What is your level of education?
- a) No formal education c) Completed secondary education
- b) Completed primary education d) Completed university/ college education
- 4. Which economic activity are you engaging in?
- a) Agriculture **d**) Casual labor

5. Are you a resident of this areas?

- a) Yes b) No
- 6. If yes, how long have you stayed in this area?
- a) 1-5 years **b**) 6-10 years **c**) 11-15 years **d**) 15 years and above

b) Livestock keeping e) business f) Others (specify)

A. Form / Nature of Conflict

No.	Question	Yes	No
i	Are there any Human-African buffalo conflicts in your village?		
ii	Have you ever faced an attack/threat from African buffalo during the period 2016-2022?		
iii	Has anyone in your family been attacked by an African buffalo?		
iv	Has any part of your farm ever been destroyed by African buffalo?		

Please tick your answer for each of the following questions.

Circle letter of the best answer each of the following:

7. What is/are the cause(s) of the human-African buffalo conflict in your village?
a) Competition over resources; b) Human encroachment on wildlife corridor; c) Human population increases; d) Others (specify)
8. What is the frequency of occurrence of the conflict encountered?
a) Once a week; b) Once a month; c) Once a year; d) Other (specify)

9. Do you see other effects of African buffalo in the village?

Destruction of **a**) Water facilities **b**) Buildings **c**) Infrastructure **d**) Other (specify)

10. In what season are attacks and raids more prevalent?

a) Dry season; b) Wet season; c) Both wet and dry season

11. How is the problem distributed between men and women?

a) Men are more affected; b) Women are more affected; c) All are equally affected; d) I do not know

12. Which age group of people is more affected by wild animals?

a) 0-5 years; **b**) 6-15 years; **c**)16-35 years; **c**) 36-50 years; **d**) >50 years

13. In your opinion, to what extent is the human-African buffalo conflict a problem for the village as a whole?

a) Not a problem; b) Moderate problem; c) Severe problem; d) I do not know

14. Please support your opinion with an explanation.

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Fill in the blanks with the appropriate answer.

Ranking the raiding species, from 'most' to 'least' troublesome species.

(1)

(2)

(3)

16.	What is the harvesting time of most of your crops?
	(Months for minor season)
	(Months for major season)

- 17. Rank crops with respect to their vulnerability to crop damage by African buffalo
 - a)
 - b)
 - c)

B. Mitigation strategies applied by local communities to cope with human-African buffalo conflicts (HBC)

Pleas	se circle your answer for the following:
18.	Do you have personal measures to mitigate conflicts?
a)	Yes; b) No
••••	If Yes, please describe them
meas	What are the challenges you face in implementing your mitigation sure?
••••	Does the wildlife authority help you manage conflicts in this area?
20.	a); Yes b) No
•••••	If yes, which strategies or measures have, they used?
22.	Have the strategies or measures used by the authority helped to reduce conflicts?
a)	Yes b) No
23.	Please explain your answer
••••	
	25 Please provide any comment related to this research.
••••	

THE END.....

We extend our sincere thanks for your support and fully appreciate your time and effort.

SUPPLEMENTARY MATERIAL 2 Semi-structured interview questions guide.

Village name	and Ward
Date of interview	

PERSONAL INFORMATION OF RESPONDENT

Age of respondent	
Sex of respondent	
Education level of the respondent	•
Occupation of respondent	

- 1. What is the situation of the human-African buffalo conflict in your area?
- 2. What are the main causes of the conflict between human and African buffalo in your area?
- 3. To what extent does the damage caused by African buffalo affect communities?
- 4. What is the trend of these damages caused by African buffalo in the period of 2016 to 2022?
- 5. Can you remember the number of human injuries and deaths caused by African buffalo during the period 2016-2022?
- 6. What are the solutions/ mitigation strategies adopted by local communities for the reduction of Human-African buffalo conflicts?
- 7. Are the measures developed by local communities helping to reduce human-African buffalo conflicts?
- 8. What challenges do you face when employing local mitigation approaches to eliminate the conflict between human-African buffalo?
- 9. What do you suggest to the wildlife management authority to do to reduce the conflict between humans and African buffalo in your village?