

Name: _____ Period: _____

Tusklessness: Problem or Solution?
Part I

Using the data in Table 2 from Nyirenda, et al. (2015), answer the questions that follow.

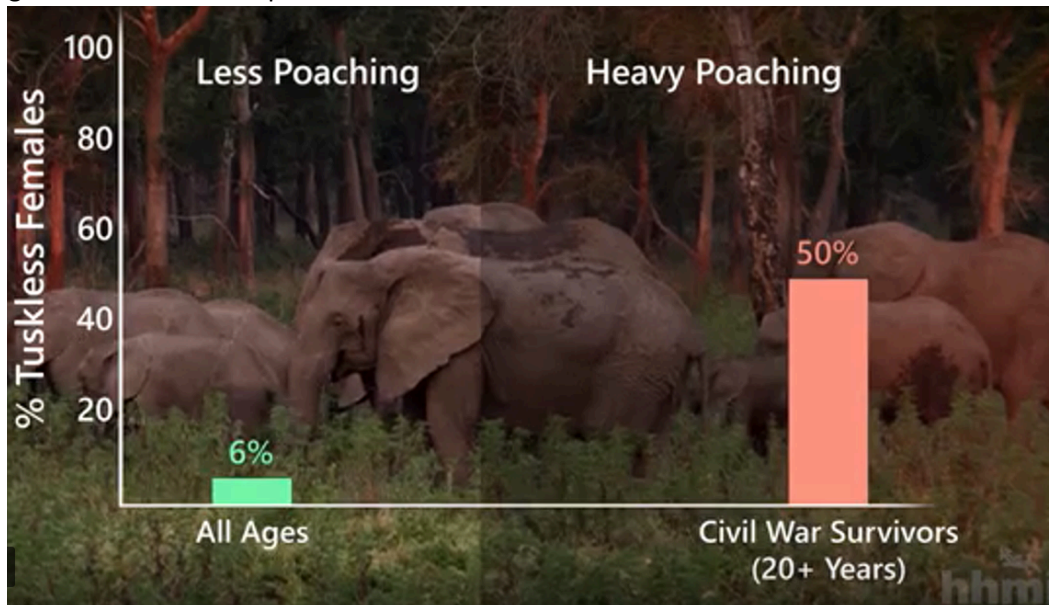
Table 2. Percentage of meat and ivory extracted and a total number of illegally killed elephants in Luangwa Valley, eastern Zambia, 2007-2013

Parameter	Lower Zambezi, 2012-2013			North Luangwa, 2007-2013								South Luangwa MIKE site, 2010-2013				
	Year		Total No. Killed	Year								Year				Total No. Killed
	2012	2013		2007	2008	2009	2010	2011	2012	2013		2010	2011	2012	2013	
Meat and ivory poached	50.00	0	5	75.00	33.33	16.67	33.33	31.58	18.18	9.30	27	54.17	60.98	0	29.27	50
Meat and ivory intact	0	33.33	3	0	0	0	16.67	5.26	0	11.63	8	8.33	14.63	37.50	12.20	25
Meat intact but ivory poached	40.00	22.22	6	25.00	66.67	58.33	33.33	36.84	81.82	58.14	75	20.83	12.20	3.13	29.27	23
Meat poached but ivory intact	10.00	44.44	5	0	0	16.67	16.67	15.79	0	18.60	15	12.50	2.44	59.38	29.27	35
Meat poached but ivory absent (tusklessness)	0	0	0	0	0	8.33	0	10.53	0	2.33	4	4.17	4.88	0	0	3
Meat intact but ivory naturally absent (tusklessness)	0	0	0	0	0	0	0	0	0	0	0	0	4.88	0	0	3
Total %	100.00	100.00	-	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-	100.00	100.00	100.00	100.00	-
Total number of illegally killed elephants	10	9	19	4	6	12	12	19	33	43	129	24	41	33	41	139

From Nyirenda, V. R., P. A. Lindsey, E. Phiri, I. Stevenson, C. Chomba, N. Namukonde, W. J. Myburgh, and B. K. Reilly. (2015). Trends in Illegal Killing of African Elephants (*Loxodonta africana*) in the Luangwa and Zambezi Ecosystems of Zambia. *Environment and Natural Resources Research*.

1. In what three sites were poached elephants surveyed? _____
2. From all three sites surveyed, what was the total number killed for their ivory? _____
 - a. What percent of the total elephants killed does this number represent? Show your work.
3. From all three sites surveyed, what was the total number of tuskless elephants killed? _____
 - a. What percent of the total elephants killed does this number represent? Show your work.
 - b. Predict why these tuskless individuals were killed? _____
4. Calculate the **percent difference** between the totals in questions 2 and 3. Show your work.
 - a. Why do you think this difference exists? _____

Use the following data to answer the questions that follow.



5. What does the bar on the left tell you? _____

6. What does the bar on the right tell you? _____

7. Describe the main idea of this graph. _____

8. In areas of less poaching, why do you think tusklessness is rare?

9. In areas of heavy poaching why do you think tusklessness is more common?

10. What do you think causes an elephant to be tuskless? _____
11. The civil war in Mozambique ended about 20 years ago. Make a prediction as to whether you think there is more or less tusklessness among elephants who are younger than 20 years old.

