

# Dynamics and underlying causes of illegal bushmeat trade in Zimbabwe

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## APPENDIX 1 Questionnaire survey used to interview buyers of wild meat.

EVALUATOR (asking questions)

Name: .....

Date of Survey: .....

1. Respondent's age.....
2. Gender:     Male     Female
3. What is your position in the community?.....
  - Chief
  - Headman
  - Village head
  - Councillor
  - Church leader
  - Traditional healer
  - Farmer
  - Council employee
  - Other, please specify.....
4. Does your position give you an opportunity to interact with Conservancy management?
  - Yes, specify.....
  - No
5. Where are you from and where do you live at present?  
From.....Live at present..... (province, district, chief, village, in or out of Savé Valley Conservancy)
6. How many years education do you have?.....
7. How many people are in your household?.....
8. How many children are going to school?.....
9. How many dropped out of school in the last year?.....
10. Are you employed?
  - No     Yes,
  - Permanent position, as.....
  - Part time position, as.....
  - Seasonal work, as.....
  - Self employed, as.....
11. What is your income from the following sources?
  - From employment, per month.....
  - How much do you harvest per year in bags?.....
  - How much of that do you sell?.....
  - From remittances from relatives/friends, per month.....
  - Other, specify what and how much per month.....
12. During which months do you receive the most income?.....
13. During which months do you receive the least income?.....
14. How many livestock do you own, and how many have you sold, bartered or slaughtered, and how many died in the last year?

Species	How many do you currently own?	How many did you sell in the last year?	How many did you barter for other goods last year?	How many did you slaughter in the last year?	How many died last year?
Cows					
Goats					
Sheep					
Donkeys					
Chickens					
Pigs					
Other (specify)					

**Food security**

15. In the last 12 months, since last (name of current month), did you or any other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?

- Yes     No (skip next question)     Don't know (skip next question)

16. [IF YES ABOVE, ASK] How often did this happen?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- Don't know

17. If yes to Q15, during which months of the year do you skip meals/reduce meal size most often?

.....

18. In the last 12 months, since (current month) of last year, did you ever cut the size of your children's meals or did they have to skip meals because there wasn't enough food available or money for food?

- Yes     No (skip next question)     Don't know (skip next question)

19. [IF YES ABOVE, ASK] How often did they have reduced meal size or have to skip meals?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- Don't know

20. If yes to 18, during which months of the year did your children have reduced meal sizes or have to skip meals most often?.....

21. In the times when you are confronted with a food shortage in the household, what steps do you take to access food?.....

22. Please list everything that you have eaten during the last 24 hours (morning, afternoon and evening).....

.....

23. Please denote the number of meals comprising the following food types that were cooked on each day during the last week (7 days)

Protein type	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Beef							
Goat							
Sheep							
Chicken							
Pork							
Fish							
Eggs							
Milk							
Bushmeat (wild non-rodent mammal meat)							
Rodents							
Mopane worms							
Red-billed quelea							
Other birds (specify)							
Reptiles							
Other types of protein (please specify)							

24. If you ate the following kinds of protein during the last 7 days, please indicate whether it was wet or dry, where you got it from, and how much it cost

	Dry or wet?	Where/how did you get it?	How much did each meal cost?
Beef			
Goat			
Sheep			
Chicken			
Pork			
Fish			
Eggs			
Milk			
Bushmeat (wild mammal meat)			
Rodents			
Mopane worms			
Red-billed quelea			
Other birds (specify)			
Reptiles			

**Bushmeat**

25. How often do you buy meat?

- Never
- Every day
- Once a week
- Once a month
- Other, please specify how often.....

26. How often do you eat meat?

- Never
- Every day
- Once a week
- Once a month
- Other, please specify how often.....

27. How often do you buy bushmeat?

- Never
- Every day
- Once a week
- Once a month
- Other, please specify how often.....

28. How often do you eat bushmeat?

- Never
- Every day
- Once a week
- Once a month
- Other, please specify how often.....

29. If never, do your neighbours eat bushmeat?

- No
- Yes, if so, how often...
  - Never
  - Every day
  - Once a week
  - Once a month
  - Other, please specify how often.....

30. If your neighbours do eat bushmeat, where do they get it from?

.....

**If never, then finish survey. If they do buy bushmeat, carry on**

31. Please indicate whether you obtain bushmeat from the following sources:

Source of bushmeat you eat	Yes	No
From hunting yourself inside Savé Valley Conservancy (SVC)	<input type="checkbox"/>	<input type="checkbox"/>
From hunting outside SVC (specify where.....)	<input type="checkbox"/>	<input type="checkbox"/>
Buying from hunters who hunt in SVC	<input type="checkbox"/>	<input type="checkbox"/>
Buying from hunters who hunt outside SVC (specify where.....)	<input type="checkbox"/>	<input type="checkbox"/>
Buying from SVC workers		
Buying from SVC butcheries	<input type="checkbox"/>	<input type="checkbox"/>
Buying from butcheries outside SVC	<input type="checkbox"/>	<input type="checkbox"/>
Buying from individuals, don't know source	<input type="checkbox"/>	<input type="checkbox"/>

**If they never buy bushmeat from poachers, then stop here**

32. How many kg of bushmeat do you typically buy when making a purchase?  
 .....

33. When buying bushmeat, do you:

- Always pay with cash
- Sometimes pay with cash, sometimes barter with goods (if so, what goods do you trade for meat?)  
 .....
- Always barter with goods (if so, what goods do you trade for meat?)  
 .....

34. Do you ever buy wildlife products (e.g. skins, horns, tail, fat) other than meat for consumption?

- No     Yes
- If yes, please list examples.....

**Meat preferences**

35. What species of bushmeat do you prefer?

1.....2.....3.....

36. Are there any species that you would NOT buy the meat of from poachers?

- Yes     No

If yes, please list and say why.....

37. When poachers bring bushmeat for you to buy, how do you identify the species?  
 .....

38. When poachers sell meat, is it generally sold as wet meat or dried meat?

- Always wet
- Sometimes wet, sometimes dry:  More dry     More wet
- Always dry

39. Do you prefer wet or dried meat?

- Wet     Dry
- Why.....

**Steps to reduce poaching**

40. Is wildlife important to you?

- Yes  No

41. Where are the nearest populations of wildlife from here?.....

42. Do you derive any benefits from wildlife in Savé Valley Conservancy other than meat?

- Yes, what?.....
- No.....

43. Do you bear any costs from wildlife in Savé Valley Conservancy?

- Yes, what?.....
- No.....

44. Do you any of your friends or neighbours bear any costs from wildlife in Savé Valley Conservancy?  
 Yes, what.....  
 No.....
45. What do you think that Savé Valley Conservancy could do to reduce illegal hunting of wildlife?.....  
 .....
46. If Savé Valley Conservancy made fresh frozen elephant meat available for sale on the boundary of the Conservancy at a price equal to the price of meat sold in butcheries close to Savé Valley Conservancy, would you buy it?  
 Yes  
 No, because.....

**Only ask next question if in Q31 they indicated that they sometimes buy meat from poachers**

47. Would the availability of elephant meat for sale on the boundary of Savé Valley Conservancy at a price equal to the price of meat sold in butcheries close to the Conservancy reduce the amount of meat that you bought from illegal hunters?  
 No  Yes,  
 Why?.....
48. If Savé Valley Conservancy made fresh frozen meat from other wildlife species available for sale on the boundary of the Conservancy at a price equal to the price of meat sold in butcheries close to Savé Valley Conservancy, would you buy it?  
 Yes  
 No

**Next question only ask if in Q31 they indicated that they sometimes buy meat from poachers**

49. Would the availability of meat from other wildlife species for sale on the boundary of Savé Valley Conservancy at a price equal to the price of meat sold in butcheries close to the Conservancy reduce the amount of meat that you bought from illegal hunters?  
 No  Yes  
 Any other comments.....

**APPENDIX 2** Questionnaire survey used to interview illegal wild meat hunters.

EVALUATOR (asking questions)

Name: .....

Date of Survey: .....

1. Respondent's age.....
2. Gender:  Male  Female
3. What is your position in the community?.....  
 Chief  
 Headman  
 Village head  
 Councillor  
 Church leader  
 Traditional healer  
 Farmer  
 Council employee  
 Other, please specify.....
4. Does your position give you an opportunity to interact with Conservancy management?  
 Yes, specify how.....  
 No
5. Where are you from and where do you live at present?  
 from.....live at present..... (province, district, chief, village, in or out of Savé Valley Conservancy)
6. How many years education do you have?.....
7. How many people are in your household?.....
8. How many children are going to school?.....

9. How many have dropped out of school in the last year?.....
10. Are you employed?
  - No  Yes,
  - Permanent position, as.....
  - Part time position, as.....
  - Seasonal work, as.....
11. What is your income from the following sources per month?
  - From employment, per month.....
  - How much do you harvest per year in bags?.....
  - How much of that do you sell?.....
  - From remittances from relatives/friends, per month.....
  - Other, specify what and how much per month.....
12. Which months do you receive the most income?.....
13. Which months do you receive the least income?.....
14. Is wildlife important to you?
  - Yes, why?.....
  - No
15. Where are the nearest populations of wildlife from here?.....
16. Do you derive any benefits from wildlife in Savé Valley Conservancy (other than from hunting it)?
  - Yes, specify.....
  - No.....
17. Do you bear any costs from wildlife in Savé Valley Conservancy?
  - Yes, what.....
  - No.....
18. How many livestock do you own, and how many have you sold, bartered or slaughtered, and how many died in the last year?

Species	How many do you currently own?	How many did you sell in the last year?	How many did you barter for other goods last year?	How many did you slaughter in the last year?	How many died last year?
Cows					
Goats					
Sheep					
Donkeys					
Chickens					
Pigs					
Other (specify)					

**Food security**

19. In the last 12 months, since last (name of current month), did you or any other adults in your household ever cut the size of your meals or skip meals because there wasn't enough money for food?
  - Yes
  - No (skip next question)
  - Don't know (skip next question)
20. [IF YES ABOVE, ASK] How often did this happen?
  - Almost every month
  - Some months but not every month
  - Only 1 or 2 months
  - Don't know
21. If yes to Q19, during which months of the year do you skip meals/reduce meal size most often?.....
22. In the last 12 months, since (current month) of last year, did you ever cut the size of your children's meals or did they have to skip meals because there wasn't enough food available or money for food?
  - Yes  No
  - Don't know

23. [IF YES ABOVE, ASK] How often did they have reduced meal size or have to skip meals?

- Almost every month
- Some months but not every month
- Only 1 or 2 months
- Don't know

24. If yes to Q22, during which months of the year did your children have reduced meal sizes or have to skip meals most often?

.....

25. In the times when you are confronted with a food shortage in the household, what steps do you take to access food?

.....

**Protein consumption**

26. Please list everything that you have eaten during the last 24 hours

.....

.....

27. Please denote the number of meals comprising the following protein types that were prepared on each day during the last week (7 days)

Protein type	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Beef							
Goat							
Sheep							
Chicken							
Pork							
Fish							
Eggs							
Milk							
Bushmeat (wild non-rodent mammal meat)							
Rodents							
Mopane worms							
Red billed quelea							
Other birds (specify)							
Reptiles							

**Hunting**

28. Why do you hunt?.....

29. Where do you hunt?.....

30. Do you hunt in Savé Valley Conservancy?

- Yes.....
- No

31. How do you hunt in Savé Valley Conservancy?

- With snares
  - With dogs
  - With dogs and snares at same time
  - Sometimes with dogs, sometimes with snares
  - Other, please specify.....
- Why?.....

**Snaring (only ask if they actually hunt with snares)**

32. Where do you get the wire for the snares?.....

33. When hunting with snares, how many other people do you normally hunt with?

.....

34. When you hunt with snares, what species do you try to catch?.....

35. What species do you end up catching most often when hunting with snares?

.....

36. How many snares do you set in total on average on a single hunting trip into Savé Valley Conservancy?

.....

- 37. How many different snare lines do you set up on average on a single hunting trip into Savé Valley Conservancy?  
.....
- 38. On a single hunting trip, how many animals do you normally catch per 10 snares set?  
.....
- 39. Have you ever hunted with snares and not caught anything?  
 Yes, if so, why?.....  
 No
- 40. Are there any species that you would not take if you caught them?.....
- 41. Do you think the risk of being caught when hunting with snares in the Conservancy is:  
 High     Medium     Low  
 Why.....

**Hunting with dogs (only ask if they actually hunt with dogs)**

- 42. How many dogs do you normally hunt with? .....
- 43. How many other people do you normally hunt with when hunting with dogs? .....
- 44. What species do you mostly try to hunt with dogs?.....
- 45. What species do you end up catching most often when hunting with dogs?.....
- 46. If you were to go hunting with dogs on 10 occasions, on how many of those trips would you catch any animals, on average?  
.....
- 47. How many animals do you catch on average per hunting trip?  
.....
- 48. Have you ever hunted with dogs and not caught anything?  
 Yes, if so, why?.....  
 No
- 49. Do you think the risk of being caught hunting with dogs in the Conservancy is:  
 High     Medium     Low  
 Why.....
- 50. Do you think that there is a higher risk of being caught if you hunt with snares or with dogs?  
 Snares    Dogs  
 Why?.....

**Sale of game meat**

- 51. When you get game meat from hunting, what proportion of it do you sell?.....  
 Zero  
 25%  
 50%  
 75%  
 100%
- 52. If you sell < 100%, what do you do with the remainder?  
.....
- 53. Do you ever hunt wildlife in Savé Valley Conservancy for reasons other than getting meat to eat or meat to sell?  
 Yes, explain and provide examples.....  
 No
- 54. When selling game meat, do you:  
 Always sell for cash  
 Sometimes sell for cash, sometimes barter for goods (if so, what goods do you trade for meat?)  
 .....  
 Always barter for goods (if so, what goods do you trade for meat?).....
- 55. When you sell game meat, what price do you get per kg?.....
- 56. How much money do you make from hunting in Savé Valley Conservancy and selling meat per month on average?.....
- 57. When you sell bushmeat, what do you use the money for?  
.....



58. What species of bushmeat are most favoured by buyers?  
 1..... 2..... 3.....
59. Do you ever lie to buyers about the species of meat you are selling?  
 No  
 Yes, provide examples.....
60. Do you normally sell meat that you obtained by hunting within Savé Valley Conservancy as dried meat or wet meat?  
 Always wet  
 Sometimes wet, sometimes dry.....  Most dry.....  Most wet.....  
 Always dry
61. How long does it normally take you to sell meat when you return from a hunting trip?.....  
 .....
62. Where do you sell meat that you hunt in Savé Valley Conservancy?.....
63. What is the average age of people who buy game meat from you?  
 .....
64. What proportion of the people who buy game meat from you are males?  
 .....
65. What are the most common professions of the people who buy meat from you?  
 .....
66. Do people who buy meat from you tend to have any particular standing in the community?  
 .....
67. Where are most of the people who buy meat from you from?  
 .....

**Measures to reduce illegal hunting**

68. Which ranch/ranches have you hunted on?.....why did you hunt on that/those ranches.....  
 Ask 69 for people living inside Savé Valley Conservancy:
- 69a. For hunters living in the Conservancy, if they answer properties other than the one they live on:  
 Why do you not hunt on the ranch you live on?.....
- 69b. Did you previously hunt on the ranch you live on after having settled there?  
 Yes  No
- 69c. When did you stop hunting on the ranch you live on?  
 .....
70. Which ranch in the Conservancy do you think has the best control over illegal hunting?  
 Why.....
71. Which ranch in the Conservancy do you think has least control over illegal hunting?  
 Why.....
72. Do you ever receive assistance with hunting from anti-poaching game scouts or other ranch staff?  
 Yes, if so explain how and how often?.....  
 No
73. Are there any species that you used to find easy to catch but that are now difficult to catch?  
 .....
74. Do you think that illegal hunting is causing any species of wildlife to decline in Savé Valley Conservancy?  
 No  Yes: which species?.....
75. What do you think the Conservancy should do to reduce illegal hunting?.....
76. Do you think the Conservancy would reduce illegal hunting if it were to engage more with neighbouring communities?  
 No  Yes
77. What kind of outreach actions by the Conservancy with local communities could reduce illegal hunting?  
 .....
78. If Savé Valley Conservancy made elephant meat available for sale on the boundary of the Conservancy at a price equal to the price of meat sold in nearby butchereries, do you think that would reduce your ability to sell meat that you hunt from the Conservancy?  
 Yes  No  
 Why.....

79. If Savé Valley Conservancy made meat from other species of wildlife available for sale on the boundary of the Conservancy at a price equal to the price of meat sold in nearby butcheries, do you think that would reduce your ability to sell meat that you hunt from the Conservancy?

- Yes     No

Why.....

**Hunting history**

80. How many times have you hunted in Savé Valley Conservancy before? (defined as individual trips to go fishing, individual trips with dogs, or number of times when snares have been set (not multiple trips to check on the same snare line, or to move the position of the same snare line slightly))

Number of times hunted	Over what time period? (start date, last time)
<input type="checkbox"/> 1	
<input type="checkbox"/> 2	
<input type="checkbox"/> 3	
<input type="checkbox"/> 4	
<input type="checkbox"/> 5	
<input type="checkbox"/> 6	
<input type="checkbox"/> 7	
<input type="checkbox"/> 8	
<input type="checkbox"/> 9	
<input type="checkbox"/> 10	
<input type="checkbox"/> 11–15	
<input type="checkbox"/> 16–20	
<input type="checkbox"/> 21–50	
<input type="checkbox"/> 51–100	
<input type="checkbox"/> >100 TRY TO ESTIMATE NUMBER	

81. How many times have you previously been caught hunting in Savé Valley Conservancy?.....  
 ..... (GIVE EXACT NUMBER)

82. On which ranch(es) were you caught hunting in Savé Valley Conservancy?.....

83. In the last 12 months how many animals have you killed (give species and numbers)?.....

	1	2	3	4	5	6	7	8	9	10	11 to 15	16 to 20	20 to 50	51 to 100	>100 Estimate:
Bushbuck															
Bushpig															
Cheetah															
Duiker															
Eland															
Elephant															
Giraffe															
Grysbok															
Hyaena															
Hyrax															
Impala															
Klipspringer															
Kudu															
Lion															
Nyala															
Rhino															
Sable															
Warthog															
Waterbuck															
Wild dog															
Wildebeest															
Zebra															
Other spp., specify															

84. When did you start hunting in Savé Valley Conservancy?  
 .....

85. When did you last hunt in Savé Valley Conservancy?  
 .....

86. Do you think you will hunt again in Savé Valley Conservancy?

- No       Yes,

Why.....

87. Do you have any other relevant comments?  
 .....  
 .....

**APPENDIX 3** Questionnaire survey used to interview ranchers.

EVALUATOR (asking questions)

Name: .....

Date of Survey: .....

1. Please rate your assessment of the threat of poaching on this ranch to the viability of wildlife populations

- Significant threat
- Moderate threat
- Minor threat
- No threat

If rancher provides answer other than ‘no threat’ or ‘minor threat’ to Q1, ask:

2. Has poaching always been a problem on this ranch?

- Yes       No

3. If no, when did it become a problem?  
 .....

4. Since that date, do you think that the levels of poaching on the ranch are

- Getting worse
- Staying the same
- Getting better

5. How many animals would you estimate that you lose from this ranch per year?.....

6. Which three species are most affected by poaching as a proportion of their population?  
 .....

7. Do you think the numbers of any species in the unsettled portions of your ranch have declined as a result of poaching?

- Yes, which species?.....
- No

8. What proportion of animals killed by poachers on this property do you think is reflected in the monthly poaching statistics collected from this ranch?  
 .....

9. Which part of your ranch is most affected by poaching?  
 .....

10. Do you notice any seasonal patterns in the amount of poaching?  
 .....

11. During which months is poaching worst on your property?  
 .....

12. Do you notice any seasonal patterns in the type of poaching?  
 .....

13. Do you notice any other patterns in the amount or type of poaching over time?  
 .....

14. Is the amount or type of poaching affected by levels of rainfall in a year? If so, how?  
 .....

15. Is the amount or type of poaching affected by cycles of the moon? If so, how?  
 .....

16. What other factors influence the amount or type of poaching that occurs on your property in a given year?  
.....
17. Where do most poachers that operate on your ranch come from?  
.....
18. Where do you think that most meat that is poached from your ranch is sold?  
.....
19. How much do you estimate that you spend on anti-poaching per month for the properties under your jurisdiction?  
(stipulate ranches)  
.....
20. How many game scouts do you have?  
.....
21. How much do they get paid per month?  
.....
22. Do the scouts get fed rations? If so, what, how often?  
 Yes.....  
 No
23. Do you provide your scouts with uniforms?  
.....
24. Do you provide your scouts with radios? If so, what proportion of scouts have radios?  
 Yes, proportion.....  
 No
25. Do you provide your scouts with weapons? If so, what proportion of scouts have weapons?  
 Yes, proportion.....  
 No
26. What type of weapons do you provide to your scouts?  
.....
27. Do you provide your scouts with handcuffs? If so, what proportion of scouts have handcuffs?  
 Yes  No
28. Are scouts based at permanent scout camps?  
 Yes  No
29. Do you rotate scouts between camps?  
 Yes.....  
 No
30. How many scout camps are there? (and how far from the Conservancy fence are they?)  
.....
31. How often do you (or the manager) work in the field with the scouts?  
.....
32. In what way do you or the manager work in the field with the scouts?  
.....
33. When employing scouts, what criteria do you use for selection?  
.....
34. Does the location of their home residence affect your selection of individuals as scouts? If so, how?  
 Yes.....  
 No
35. Where do most of the scouts that you employ come from?  
.....
36. What kind of background checks do you do on game scouts before employing them?.....
37. Do you provide your scouts with any training when they commence their duties? If so, what type of training?  
 Yes.....  
 No
38. How could your ranch improve the management of scouts to reduce poaching levels?  
.....
39. How could Savé Valley Conservancy as a whole improve the management of scouts to reduce poaching?  
.....

40. Do you think that the management of scouts within Savé Valley Conservancy should be centralized and become a Conservancy task, rather than the responsibility of individual landowners?

- Yes, because.....
- No, because.....

41. During the last 12 months, have you caught any of your game scouts poaching? If yes, how many?

- Yes.....
- No

42. How did you catch them?.....

43. How could Savé Valley Conservancy reduce the incidence of game scouts or other workers engaging in poaching?

.....

44. Do you use informers in the communities to assist with the control of poaching? If so, how?

- Yes.....
- No

45. Do you conduct follow-up raids at poachers' houses?

- Yes
- No

46. Do you think that improved community outreach efforts on the part of Savé Valley Conservancy would help to reduce poaching?

- Yes, because.....
- No, because.....

47. If yes, what kind of outreach efforts would you recommend?.....

48. How much meat could your ranch provide to a centralized meat distribution system?

.....

49. How much meat could your ranch provide to a centralized meat distribution system?

.....

50. How do you currently utilize meat produced from legal hunting on your property (please provide a % breakdown)?

.....

51. Do you consider the legal framework that governs poaching in Zimbabwe to be effective?

- Yes, because.....
- No, because.....

If not, how do you think it should be changed?

.....

52. Do you feel that the level of support from the police regarding poaching has improved, stayed the same, or declined during the last 3 years?

- Improved
- Stayed the same
- Declined

53. How many times have the Parks and Wildlife Management Authority come to your ranch to assist with anti-poaching in the last 12 months?

.....

Any other comments?