

Supplementary Materials: All research instruments

A: Children's Focus Group Discussion Guide (DOs only).

Focus Groups with Children: Draft Discussion Guide

Heather Maggs PhD – On the Value of Donkeys

To be translated into a language that is appropriate and easily understood by participants

Note: the body language of the children will be monitored throughout the Focus Group and these activities will be cut short if any indication is given that the children are tiring*.

+	Activity	1. Introductions – names/how old/any brothers and sisters?
	Story Board	2. Check literacy/writing levels: use only pictures if most appropriate. Assemble your most important thoughts and feelings about a typical day at school into a storyboard. Discuss each picture: aim to answer the following questions: How far do you have to travel to school from your home? How long does it take for you to get here? How do you travel to school? Do you come to school every day? (If possible, probe why not, if they don't attend every day, or check with class teacher if deemed too sensitive).
	Post-it/Graffiti Wall	3. Check literacy/writing levels; if not possible do as a "shout out" and facilitator to capture or ask as ordinary questions: What sort of chores do you have to do before school? What sort of chores do you have to do after school?
	Draw & Tell	4. Draw your donkey Discuss each drawing. Aim to answer the following questions: What have they drawn the donkey doing? Does your family own a donkey? How many do you own? Have you had a donkey as long as you can remember? Who looks after the donkey(s)?
	Emotion Cards	5. Get the children to range along a line between happy, medium and frowny emoji-type faces – where if they think a donkey is useful they stand by the happy face; if they don't think a donkey is useful at all they range near the frowny face and the neutral face is in the middle. Take a photo. Discuss with each child why they have positioned themselves near whichever emoji they have.
	Group Discussion	6. Does your donkey/s have a name(s)? How would you describe your donkey/s? (e.g. naughty/stubborn/cheeky)
	Animal Calendar	7. Check literacy/writing levels; if not possible do a "shout out" with facilitator filling in what children call out for donkey activities in each month
	Mapping – with explanation/narrative	8. Check literacy/writing levels. Use only pictures if appropriate: For those of you who travel to the market with your family and your donkey on market day please can you map your journey with pictures? Starting at home and what you have to do to get out of the door, to get on the road, your journey, what you do when you get there; your journey home and what needs to be done when you get home. Discuss each map and what's happening with each child.

Picture recognition	9. Do you have any of the following: either owned by you, or owned by your household – hand each child an individual sheet with pictures of each item for them to mark the answers and hand back: mobile phone/radio/TV/computer/laptop/motorbike/car/tractor
Discussion	10. What do you think life would be like without a donkey?
Emotion Cards	11. Get the children to range along a line between happy, medium and frowny emoji-type faces. If they think a donkey reduces a child's workload they stand by the happy face – but if they don't think a donkey reduces a child's workload at all they range near the frowny face and the medium face is in the middle. Take a photo. Discuss with each child why they have positioned themselves near whichever emoji they have.

* NB: The activities in grey are "nice to have", rather than "must have" and are only to be undertaken if it is deemed on the day that the children are up to participate for the full length of time it takes to include these activities.

Supplementary Materials: All research instruments

C: Children's Donkey Activity per Month Form (FGD).

Participant ID

How old are you?

IDIO001



October



November



December



January



February



March

Donkey
Activity 1

Donkey
Activity 2

Donkey
Activity 3

Donkey
Activity 4

Donkey
Activity 5

Supplementary Materials: All research instruments

D: DO Children's Semi-structured interview guide (wet season).

DO Children's interviews – wet season (2 girls together and 2 boys together) Ask them to say their names before they speak.	
1.	What's your name? How old are you? Who else is in your family? (Brothers/sisters + their ages)
2.	Where do you go to school?
3.	Are you in primary, JHS or SHS? <ul style="list-style-type: none"> What would you like to do when you leave school?
4.	Talk us through one of your typical school days, from the time you get up to the time you go to bed – probe re time go to school, time school finishes, whether they help on the farm every day, how long it takes them to get to their farm, what they do when they get there, what time they go to bed, how big their farm is, how far away is it? (Aim: to find out how children in a one donkey family use/rest the animal compared with those children whose family own two or more)
5.	Talk us through a typical market day for you, from the time you get up to the time you go to bed What's the most versatile type of animal owned by your family? Why do you think it's the most versatile?
6.	How many donkeys have you got? Have they got names? Have you always had donkeys? Is it fair to say generally that you don't undertake chores with your donkey either before school or while you're in school?
7.	What do donkeys do for you?
8.	What do you do with your donkeys during the wet season that you don't do during the dry season?
9.	What's different about donkeys? Probe if have difficulty in answering the question: e.g. what do they do that other animals don't?
10.	Do donkeys enrich your lives – if so, how?
11.	Are donkeys important to your family? Are donkeys important to you? Probe
12.	Do donkeys add value to your life? If yes, how?
13.	Who uses the donkey most in your household? Your Mum, Dad, you or your brothers or sisters?

14.	What are your roles and responsibilities related to your donkey?
15.	Is there a general routine as to when you and your brothers and sisters use your donkey(s) during the day? (Aim: trying to find out diplomatically if boys get first pick of times and the girls have to work round them?)
16.	Do donkeys save you time? If yes, <ul style="list-style-type: none"> How do they save you time?
17.	How much time do you think your donkey saves you per day? Probe if possible re how much time does your donkey save you re. your one or two key chores with donkeys (fetching water and firewood). Let's work through it: e.g. how much water do you collect each day – with/without donkey. Quantify: time saved? Size of bowls of water and size of jerry cans/number of trips with bowl vs. with donkey pulling a cart. (volume)
18.	What do you do with the time your donkey saves you? Probe and probe and probe, including whether they think having a donkey reduces their daily chores – and what activities they undertake instead.
19.	When I was here last I was told some children helped their parents by accompanying their donkey when it was lent to non-donkey owning households. Do you help your parents in this way? Yes/No
19a.	If yes: talk us through going out with your donkey when it's rented out by your Mum and Dad to a NDO? What types of things do the NDOs get your donkey to help them with? Do they pay your parents for the use of your donkey? If yes, do they give the money to you? (Probe – or do they give it to your parents, or do they give the money to you to give to your parents? If given to the child do they give it to their Mum or their Dad? Do you get any of that money, either at the time, or later? If yes, what do you do with it? Probe re saving and/or spending
20.	Do you carry water or other loads on your head? How long have you been able to do this? What are the advantages of being able to do this? What are the disadvantages?
21.	What does the word wellbeing mean to you?
22.	Do you think the use of mechanized tricycles will ever result in donkeys not being needed in your community?
23.	Are there any disadvantages to owning a donkey?
	Are there any questions you'd like to ask us? Thank you very much

Supplementary Materials: All research instruments

E: NDO Children's Semi-structured interview guide (wet season).

NDO Children's Interviews – wet season (2 girls together and 2 boys together) Ask them to say their names before they speak.	
1.	What's your name? How old are you? Who else is in your family? (Brothers/sisters + their ages)
2.	Where do you go to school?
3.	Are you in primary, JHS or SHS? What would you like to do when you leave school?
4.	How does your life differ between the wet and dry seasons?
5.	Talk us through a typical market day for you, from the time you get up to the time you go to bed. What's the most versatile type of animal owned by your family?
6.	What are the key chores you have to do for your Mum and Dad? Do these differ between the wet and dry seasons?
7.	Do you have any way of earning money to buy things you want? If yes, what sort of things do you buy? Do you save any of it? If yes, what for?
8.	Talk us through one of your typical school days during the wet season, from the time you get up to the time you go to bed – probe re time go to school, time school finishes, whether they help on the farm every day, how long it takes them to get to their farm, what they do when they get there, what time they go to bed, how big their farm is, how far away is it? How does this differ during the dry season?
9.	Do you carry water or other loads on your head? How long have you been able to do this? What are the advantages of being able to do this? What are the disadvantages?
10.	How much time does it take you to undertake one or two of your key chores (from list gave us earlier e.g. fetching water and firewood). Let's work through it: how much water/firewood/other do you collect each day? Size of bowls of water and approximate amount of item collected
11.	Are there any advantages to not owning a donkey? Are there any disadvantages to not owning a donkey?

12.	Do you ever feel that your friends who own donkeys have more free time than you do? Probe re. whether they are still undertaking chores but their donkey-owning friends have finished theirs and have run off to do other things (e.g. play/football)
13.	Does your farm grow enough produce to sell at the market? (Aim to diplomatically find out whether only grow enough to feed their family)
14.	What does the word wellbeing mean to you?
15.	Do you think the use of mechanised tricycles will ever result in donkeys not being needed in your community? Why? Are there any questions you'd like to ask us? Thank you very much

Supplementary Materials: All research instruments

F: Adult DO Focus Group Discussion Guide.

H. Maggs, PhD – On the Value of Donkeys

Adult Focus Groups: Discussion Guide

To be translated into a language that is appropriate and easily understood by participants

Introduction

1. Have you always owned donkeys?
 - Probe since childhood? Since married?

(Trying to find out whether experienced in handling donkeys)
2. Are there any disadvantages to owning a donkey?

Theme 1: Livelihoods

1. Could you manage without a donkey?
 - personal and household level
2. What would your life be like if you didn't have a donkey/s?
3. How would your life be different if your household didn't have a donkey?
4. What or who could do the work of the donkey/s, if you didn't have one?
 - Probe gender/wellbeing/children and school/any associated costs with not having a donkey
5. Do you use your donkey for the production of milk or meat?
 - If yes, is this to sell, or for home consumption only?

Theme 2: The Work of Donkeys

1. Does owning/managing a donkey save you any time?
2. What do you do with the time your donkey/s saves you?
3. Does owning/managing a donkey save your children any time?
4. What do they do with the time your donkey/s saves them?
 - Probe gender/wellbeing
5. How much is your donkey worth to you, in terms of the help it gives you?
 - Probe value/gender/children/wellbeing

Theme 3: Wellbeing/Welfare

1. Do you think that donkeys contribute to the wellbeing of your household
 - And the health of its members? How?
2. Do you think that a looked after donkey will be able to work for you for longer than one that isn't?
3. Sensitive probe who takes care of your donkey generally?
 - And when they are ill?

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Theme 4: Asset Ownership

6. Have you seen a change in the price of donkeys over time?
 - Both locally and further afield?
 - To what do you attribute this change in price?
1. Do you think households owning a donkey/s are wealthier than those that don't own a donkey?
 - if a household owns many donkeys, is that household richer than a household that only owns one?
2. How can you tell if a household has influence within your community?
3. Does owning a donkey increase a household's influence?
 - Sensitive probe whether there is a belief that owning a donkey can help households lift themselves out of (chronic) poverty.

Theme 5: Loss/Theft of donkeys

1. Would you sell your donkey?
 - Probe re why/why not
 - If yes, who would you sell it to?
2. Do donkeys go missing in your community?
3. Do you know anyone whose donkey has gone missing?
 - If yes, was it lost or stolen?
 - a) How do you know if a donkey has been stolen, rather than just got lost?
 - b) Probe regarding the impact of this loss/theft on the family
 - Why would someone want to steal a donkey?
 - a) sensitively probe whether there is any knowledge of the donkey skin trade for Traditional Chinese Medicine (e'jiao)
4. Could Ghana run out of donkeys?
 - If yes, how soon do they think this could be?

Theme 7: Other

What are the main social changes that have taken place in your community since you were young? Do you have the same roles & responsibilities now compared to 3 years ago/5 years ago/10 years ago? What can your daughter do today that wouldn't have been acceptable for girls when you were her age?

Anything else they think I need to know about the use/ownership of donkeys in their community?

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Supplementary Materials: All research instruments

G: Adult DO Semi-structured In-depth Interview guide and 7DTB (continued).

5. WELLBEING/WELFARE

- a) How important are donkeys to the wellbeing of your community?
- b) How important are donkeys to the wellbeing of your family/household?
Probe how and why they think this. If yes, can they put a value on the work their donkey does?
- c) Who looks after the donkey when it is ill?
- d) How do you maximise how much work your donkey(s) does for you?
- e) Do you think that wealthy households look after their donkeys better than poorer households? Why? What are the reasons for this belief?
- f) How do poorer households look after their donkeys when times are difficult?
- g) What would be the impact on the overall wellbeing of your family if you lost your donkey?

6. LOSS/THEFT OF DONKEYS

- a) Do donkeys go missing in your community?
- b) Do you know anyone whose donkey has gone missing?
- If yes, was it lost or stolen?
- Probe regarding the impact of this loss/theft on the family
- c) Why would someone want to steal a donkey?
- sensitively probe whether there is any knowledge of the donkey skin trade for Traditional Chinese Medicine (e'jiao)
- d) Could Ghana run out of donkeys?
- If yes, how soon do they think this could be?

7. OTHER (Personal, not donkey-related)

- a) What are the main social changes that have taken place in your community since you were young?
- b) Do you have the same roles & responsibilities now, compared to those you had 3 years ago/5 years ago/10 years ago (*vary time limit to age of person being interviewed?*)
- c) What can your daughter do today that wouldn't have been acceptable for girls when you were her age?
- d) Are you feel you are doing well, or is life a struggle from week to week at the moment?
- e) How do you see your future mapping out (Getting better/staying the same/Getting worse) over:
 - the next 12 months?
 - the next 3 years?
- f) Anything else you think I need to know about the use of donkeys in your community?

8. DAILY TIME BUDGETS

(To cover seven days)

Daily Time Budgets *See larger sheet for writing the responses in, if required*

Time of Day (Complete for 7 continuous days)	Activities of most senior male (include how use donkeys, if applicable)	Activities of most senior female (include how use donkeys, if applicable)	Activities of eldest girl child (include how use donkeys, if applicable)	Activities of eldest boy child (include how use donkeys, if applicable)
Morning				
Afternoon				
Evening				
At the end of the week, can you put a value on the work your donkey does for your household? From this value, can you: a) advise what contribution donkeys make to your income: e.g.10%/20%/30%/40%? b) advise how much time your donkey saves each member of the household every week				

Supplementary Materials: All research instruments

H: Example Questionnaire: NDO version. DO version available upon request from h.c.maggs@pgr.reading.ac.uk

Version 2: Questionnaire for Non-donkey Owners

Enumerators to translate into required language that is appropriate and easily understood by participants whilst interviewing

*NB: undertake this questionnaire with donkey owners first. Collate all the activities that donkey owners specify that their donkey helps with. Incorporate these into the non-donkey owners version of the questionnaire to investigate how non-donkey owners undertake these activities.

INTRODUCTION				
Name of this location				Date
Enumerator name				Time
1. How old are you?	Age	If under 18 Stop survey	Over 18 (if prefer not to give specific age)	
2. a. I have read and understand the Participant Sheet for the above study	Yes	No	If no, go through the Participant Information Sheet if person willing.	
2. b. Do you confirm you consent to participating in this survey?	Yes	No	If no, terminate survey	
3. Gender	M / F			
4. Who is the head of your household?	Me	My spouse	Other (male) <small>(please specify)</small>	Other (female) <small>(please specify)</small>
5. How many adults (everyone 18 and over) are in your household (who share a pot)?	a) How many male children (under 18) are in your household?		aa) How many of them are still at school?	
	b) How many female children (under 18) are in your household?		bb) How many of them are still at school?	
6. What is your religion?	Christian	Muslim	Traditional African Belief	None Other <small>(please specify)</small>
7. What is the main livelihood category the interviewee lives in?	Agro-pastoral	Pastoral	Trade/ small business	Other <small>(please specify)</small>
8. Do you own a donkey? Y / N <i>If no, continue (If yes, use version 1).</i>			Participant ID (e.g. SQNDO001)	
9. Do you have any of the following in your household?	Mobile Phone	Radio	TV	Computer/ Laptop
			Bike	Motorbike/ Quadbike
				Car
				Tractor

10. What is your education level?	No Formal Education	Primary	Secondary	Vocational/ Technical	University/ College	Other <small>(Please specify)</small>
11. Does your community have easy access to:	Primary Education	Secondary Ed' Education	Vocational/ Technical	Higher Education		
a. Yes, in my community	a	a	a	a		
b. Yes, but in a different district	b	b	b	b		
c. No	c	c	c	c		
d. Are donkeys used for transporting your children to school?	Donkeys? Y / N	Donkeys? Y / N	Donkeys? Y / N	Donkeys? Y / N		
12. Do the school-age children in your household go to school?	Yes, all of them	Yes, some of them Which ones?	No			
13. How often do they attend?	Every day	Most days	Occasionally	Other <small>(Please specify)</small>		
14. How do they get to school?	Walk	Cycle	Lift with Others	Donkey Cart	Other <small>(Probe re. use of donkeys)</small>	
15. For the children that don't attend school, or only attend occasionally, why is that?	Can't afford fees <small>(please specify)</small>	Cultural Reasons	Needed to help with household chores <small>(Probe re. use of donkeys)</small>	Work in income generation <small>(Probe re. use of donkeys)</small>		
	Migrated Away from school	School too far	Education not necessary	Completed compulsory education	Other <small>(Please specify)</small>	

16. Do you have easy access to: a. Do you have to pay for these services? b. Have you used this facility in the past 12 months? c. How far away is it (km)? d. What are the three main barriers to you using these facilities? e. How do get you there? f. Are donkeys used at all?	A Health Care Centre? Y / N	A Hospital? Y / N
	Y / N	Y / N
	Y / N	Y / N
	1.	1.
	2.	2.
	3.	3.
Y / N	Y / N	
17. Do you have access to:	Road Transport Y / N	
18. Do you have access to:	Electricity Y / N	
19. Do you have easy access to Agricultural Extension Services a. Do you have to pay for these services? b. What are the three main barriers to you using these facilities? c. How often have you used the facility in the past 12 months? d. Do they come to you?	For Crops Y / N	For Livestock Y / N
	Y / N	Y / N
	1.	1.
	2.	2.
3.	3.	
Y / N	Y / N	

e. If no, how far away are they (km)?		
f. How do you get there?		
g. Are donkeys used to help transport you to and from the AES at all?	Y / N	Y / N
20. Do you have easy access to Veterinary Services? b. Do the veterinary services come to you? d. What are the three main barriers to you using these facilities?	Y / N	a. Do you have to pay for these services? Y / N
	Y / N	c. If no, how far away are they (km)?
	1.	
	2.	
3.		
21. Do you use these veterinary services when your animals are ill?	Yes / Sometimes / No	
-	If Yes or Sometimes: Y 3a. How often have you used vets in the past 12 months? Y 3b. How much have you spent on vets in the last month? Y 3c. For which of your livestock? Y 3d. How much did you spend on that occasion? Y 3e. How do you get your animals to the vets?	If No: Na. If no: how do you treat your animals? Nb. What medications do you use? Nc. Any specific medications for specific animals?

	Y/N Are donkeys used to help at all? Y / N			
				(Go to Q22)
22. Do you sell any of your own produce in your village?				
Y / N (If Yes, continue, if No go to Q23)	a. If yes, what items do you sell? Please specify		b. What items do you buy? Please specify	
c. Do donkeys enable you to engage in your village market?	Y / N How?			
23. Do you buy and sell goods at any other market(s)?				
Y / N (If Yes, continue, if No go to Q24)	a. If yes, which one do you attend most often?		b. How far away is it (km)?	
	c. How often do you go?		d. How do you get there?	
e. Is market access good or bad in relation to your household?	Y / N		f. Why? (e.g. good/bad roads, close to/far from an urban centre, security)	
	g. Do donkeys enable you to engage in this market?		Y / N	
h. During a normal year, is trade affected seasonally?	Y / N If yes, When?		Y or N: Why?	
ASSETS & LIVELIHOODS				
24. Land Holdings Profile	Now	12 months ago	3 years ago	
a. Land owned in acres				

b. Land rented in acres					
c. Any irrigated land?	Y / N	Y / N	Y / N		
d. % Land cultivated for food crops					
e. % Land cultivated for cash crops					
f. Any share cropped land?	Y / N	Y / N	Y / N		
25. What livestock are owned by your household?	Animal (write down animals in order they're mentioned by respondent)	Quantity Now	Quantity 12 months ago	Quantity 3 years ago	
	e.g.: Oxen				
	Sheep				
	Goats				
	Pigs				
	Donkeys				
	Poultry				
				
26. Are any of your animals borrowed?	Y / N If yes, which ones? Who have you borrowed them from?				
27. Are there any animals you wished your household did own?	Y / N If yes, which one(s)? Why?				
28. Is there an animal you like handling/ managing* more than others? (*Correct word to be confirmed with enumerators)	Y / N If yes, which one(s)? Why?				
29. Do you have a favourite farm animal?	Y / N If yes, which one(s)? Why?				
30. What livestock and livestock products do you sell?	Type (write down in order they're mentioned by respondent)	How often do you sell your livestock products?	On average, what quantity of each product do you sell every time?	Where do you sell your livestock products?	Most recent price per unit sold
	E.g. Milk				
	Eggs				
	Honey				

31. What crops are grown by your H-Hold? (weight of bags to be confirmed by enumerators) E.g.: Maize		Type (write down in order they're mentioned by respondent)	Quantity (No. of bags) Now	Quantity (No. of bags) 12 months ago	Quantity (No. of bags) 3 years ago		
Yam							
Cowpea							
Millet							
Cassava							
Banbara nut							
Sorghum							
Ground nut							
Rice							
Sweet Potato							
Dawa-dawa							
Shea							
32. Do you think your H-hold would have greater food security if your crop yields were bigger?		Y / N	a. Do you think your H-Hold would have greater income if your crop yields were bigger?			Y / N	
33. What methods have you used to increase your crop yields this season?							
a. What methods did you use to increase your crop yields last season?							
b. Did they work?		Y / N					
34. Do you use any of the following agricultural inputs?	Y / N (If no go to Q34)	Now (tick)	Do you use donkeys in the application of any of these inputs?	12 months ago (tick)	Do you use donkeys in the application of any of these inputs?	3 years ago (tick)	Do you use donkeys in the application of any of these inputs?
Hybrid seeds		Y / N	Y / N		Y / N		Y / N
Fertilizers		Y / N	Y / N		Y / N		Y / N
Pesticide		Y / N	Y / N		Y / N		Y / N
Hired labour		Y / N	Y / N		Y / N		Y / N

35. What is the source of the feed for your animals?	Description:																																																																																																																																					
	Communal/clan grazing land	Y / N																																																																																																																																				
	Crop residue																																																																																																																																					
	• Own production?	Y / N																																																																																																																																				
	• Purchased?	Y / N																																																																																																																																				
	Green forage production																																																																																																																																					
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	• Purchase?	Y / N																																																																																																																																				
	Purchased Concentrates	Y / N																																																																																																																																				
36. Are there any other productive assets owned by your household?	Item: (write down in order they're mentioned by respondent)	Quantity Now	Quantity 12 months ago	Quantity 3 years ago																																																																																																																																		
	E.g. Ploughs																																																																																																																																					
	Other machinery (please specify)																																																																																																																																					
	DAP harness																																																																																																																																					
	Water bore-holes																																																																																																																																					
	Grain storage																																																																																																																																					
	Tractor																																																																																																																																					
	Rotavator																																																																																																																																					
																																																																																																																																					
37. Water sources available for your livestock: (Please tick as many as apply)	Type: Stream River beds Trough Borehole Other (please specify)	How often do you access water sources for your livestock?	Payment/Unit																																																																																																																																			
38: How many household members currently earn income for the household? Go to Separate Sheet for full table																																																																																																																																						
<table border="1"> <tr> <td colspan="5">How many household members currently earn income for the household?</td> </tr> <tr> <td>1 - self</td> <td>Y/N</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2 - spouse</td> <td>Y/N</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3 - self female</td> <td>Y/N</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4 - 1st children</td> <td>Y/N</td> <td>How many</td> <td></td> <td></td> </tr> <tr> <td>5 - 2nd children</td> <td>Y/N</td> <td>How many</td> <td></td> <td></td> </tr> <tr> <td>6 - Other</td> <td>Y/N</td> <td>How many</td> <td></td> <td></td> </tr> <tr> <td colspan="5">What sources of income does your HH have? 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39. Who has control over how your household income is spent?																																																																																																																																						

40. Does your household usually have any disposable income at the end of each week?	Y / N If yes, approximately how much? a. Who has control over how this money is spent?																																																				
41. Do you worry about not having enough income for your needs?	Y / N If yes : All the time Once a week Once a month Every season																																																				
42. Of total household expenditure, what was the % share of each item:	<table border="1"> <thead> <tr> <th>Item (take advice of local enumerators)</th> <th>Yesterday</th> <th>7 days ago</th> <th>4 weeks ago</th> </tr> </thead> <tbody> <tr><td>Food</td><td></td><td></td><td></td></tr> <tr><td>Fuel</td><td></td><td></td><td></td></tr> <tr><td>Water</td><td></td><td></td><td></td></tr> <tr><td>Education</td><td></td><td></td><td></td></tr> <tr><td>Health/healthcare/ medicines</td><td></td><td></td><td></td></tr> <tr><td>Transport</td><td></td><td></td><td></td></tr> <tr><td>Purchase of productive assets (e.g. DAP harness)</td><td></td><td></td><td></td></tr> <tr><td>Purchase of animal fodder</td><td></td><td></td><td></td></tr> <tr><td>Community obligations</td><td></td><td></td><td></td></tr> <tr><td>Reconstruction (of what?)</td><td></td><td></td><td></td></tr> <tr><td>Ceremonies (e.g. burial)</td><td></td><td></td><td></td></tr> <tr><td>Animal medicines</td><td></td><td></td><td></td></tr> </tbody> </table>	Item (take advice of local enumerators)	Yesterday	7 days ago	4 weeks ago	Food				Fuel				Water				Education				Health/healthcare/ medicines				Transport				Purchase of productive assets (e.g. DAP harness)				Purchase of animal fodder				Community obligations				Reconstruction (of what?)				Ceremonies (e.g. burial)				Animal medicines			
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43. Credit/Aid If yes: When did you last receive aid?	<p>Do you find it difficult to access credit? Y / N</p> <p>a. Does your household currently have any outstanding food or money debts? Y / N If yes, to whom do you owe money or food? (<i>tick all that apply</i>) Bank/other formal financial institution/Informal money lender/Local shop/Landlord/Family, friends or community members</p> <p>b. What are the primary uses for the credit? Food/Health/Water/Other (please specify)</p> <p>c. Have you received any aid during the last month? Y / N</p> <p>d. List donating organisation and type of assistance:</p>																																																				
44. Please rank the three main chronic hazards affecting households in this community. (Note: A chronic hazard is one that significantly affects crop or	<table border="1"> <thead> <tr> <th>1.</th> <th>2.</th> <th>3.</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	1.	2.	3.																																																	
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livestock production/other livelihoods almost every year).				
45. What hazards has your household actually suffered from?	Hazard	This season	Last season	3 years ago
	a. Drought			
	b. Conflict			
	c. Flood			
	d. Livestock disease			
	e. Crop disease			
	f. Wild animals			
	g. Market events			
	h. Theft of livestock			
	i. Loss of livestock			
	j. Other (please specify)			
46. a. Do you feel you and your family are doing well at the moment, or is life a struggle from week to week? Please tick		Doing well	A struggle	
b. How do you see the future for yourself and your family? Please tick		Getting better	The same	Getting worse
	The next 12 months			
	In 3 years' time			
	In 5 years' time			
WELLBEING/ WELFARE				
47. In terms of time, who are generally the PRIMARY care givers of the children below 5 in your H-hold; select the 2 most common options:		a. Mother		
		b. Grand-mother		
		c. Sister/brother; <i>specify range of ages: from</i> years old to years old		
		d. Father		
		e. Grandfather		
		f. Uncle/aunt		
		g. Other; please specify		
48. Are you generally available to look after your children below the age of 5?	Y / N If no, explain why you are not available (in which other types of activities are you involved?)			
49. What supports within your community are important to you?	(e.g. family, organizations, mutual aid systems, church, etc.)			
	a. Main water source type:	b. Use:		

50. Water availability/ Usage			Drinking			
			Cooking			
			Washing			
			Bathing			
			Crop Irrigation			
			Livestock			
c. What volume do you collect (specify litres per day or week):	d. Who collects it?	e. How do you collect it?	f. How long does it take you?			
g. How reliable is the water source:	Always reliable		h. How far away is the water source?	i. If not mentioned previously, ask whether donkeys are used to help at all? Y / N		
	Very reliable					
	Occasionally reliable					
	Rarely reliable					
	Very rarely reliable					
Never reliable						
51. What foods have been eaten in the household in: (Tick all that apply)	Yesterday		The last 7 days		The last month	
	A Cereals					
	B Roots and tubers					
	C Vegetables					
	D Fruit					
	E Meat					
	F Eggs					
	G Fish and seafood					
	H Milk					
	I Oil/fats					
	J Sugar					
	K Miscellaneous (tea, coffee, condiments etc)					
52. Do you worry about your family not having enough to eat?	a. Y / N If yes					
	All the time Once a week Once a month Every season					
b. If seasonally, when are the 'lean' months?						
53. In the past 7 days, if there have been times when you did not have enough food or money to buy food, how often has your household had to:				Frequency score: Number of days out of the past seven (0-7)		
	Rely on less preferred and less expensive foods?					
	Borrow food, or rely on help from a friend or relative?					
	Limit portion size at mealtimes?					
	Restrict consumption by adults in order for small children to eat?					
Reduce number of meals eaten in a day?						

			Skip meals eaten in a day?	
THE WORK of DONKEYS				
54. Have you ever owned a donkey?				
Yes			No	
Ya. When did you own a donkey?			Na. Why don't you own a donkey?	
Yb. Why don't you own a donkey now?			Nb. Have you ever considered owning a donkey? Y / N	
Yc. Would you like to own a donkey? Y / N If yes, Why?			Nc. If yes, what are the main barriers to you buying one now?	
Yd. If you had a donkey, what would you get it to do for you?			Nd. Would you like to own a donkey? Y / N If Yes, Why? (If No go to Q54)	
Ye. Would this help you and your family? Y/N If yes, how?				
55. *How are the following activities undertaken in your household? Fill in column 2 of the attached table, and then ask by whom they are undertaken, and fill in column 3:				
List of activities	How are they undertaken in your HH?	Who undertakes these activities in your HH?	List of activities collated from the questionnaires previously undertaken with donkey owners:	
Activity 1				
Activity 2				
Activity 3				
Activity 4				
Activity 5				
Activity 6				
Activity 7				
Activity 8				
Activity 9				
Activity 10				

56. Do you believe that donkeys contribute to the overall wellbeing of your community? Y/N	Y / N
57. Can owning a donkey improve the long-term income of a household?	Y/N If yes, how?
58. Is a household with many donkeys wealthier than a household with less, or no donkeys?	Y/N If yes, why?
59. Does owning a donkey increase a household's influence within your community?	Y/N If yes, how?
60. Do you think donkeys reduce the work of women?	Y / N
a. Do you think donkeys reduce the work of men?	Y / N
b. Do you think donkeys reduce the work of children?	Y / N
OTHER	
61. Do donkeys go missing in your community? a. If yes, do you know anyone whose donkey has gone missing? b. If yes, was it lost or stolen? c. If stolen, why would someone want to steal a donkey?	Y / N Y / N Lost / Stolen
62. Do you think Ghana could run out of donkeys? If yes, how soon do you think this might happen?	Y / N

Thank you for your time. We very much appreciate it. Have you anything you would like to advise us of, or ask us?

Supplementary Materials: All research instruments

H (continued) :NDO Questionnaire – Q38 on income in detail.

Q38 Income Assessment (Version 2 NDOs)

A. How many household members currently earn income for the household?	a. Which one is the respondent (please tick)	b. Which ones are children (please tick)
1		
2		
3		
4		
5		
6		



				NOW	12 months ago	3 years ago
What sources of income does your HH have?			Total Income (GCDs)	% contribution of HH members	% contribution of HH members	% contribution of HH members
Agricultural wage income	Agriculture, forestry and fishing	Skilled				
		Unskilled				
		Unknown				
Non-agricultural wage income	All others	Skilled				
		Unskilled				

		Unknown				
On-farm independent income sources	Crops - net of expenses					
	Livestock - net of expenses					
Off-farm independent income sources	Self-employment					
Transfer	Private transfer					
	Public transfer					
Other	Please specify					

- **Notes:**
Please refer to Covarrubias paper for more detail
- The estimation of crop income accounts for the sale of crop production, crop by-product production, sharecropping, the consumption of household crop production, net of all expenditures incurred in realizing these activities
- Sale and barter of LS, LS by-product production (milk, eggs, honey etc.)
- Self-employment income includes all in cash and in kind earnings and non-durable, recurrent expenditures for all non-farm businesses operated by any member of the household over a 12-month period.
- Private transfers primarily refer to remittance income, but they can also include benefits obtained from private organizations and/or associations as well as forms of gifts and contributions not associated with the performance of a job or the provision of a service.
- Public transfers are divided into state-funded pensions and social benefits, which include welfare support, maternity benefits, and educational transfers.
- All other non-labour income components that do not fall into the previous five categories are accounted for in this last grouping

