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APPENDICES

Appendix 1: Study questionnaire

**THE IMPACT OF RURAL INEQUALITY ON MIGRATION, VIEWED AS AN ALTERNATIVE HOUSEHOLD RESPONSE TO
CHANGING RESOURCE RATIOS**

HOUSEHOLD QUESTIONNAIRE

(Respondent: Mainly household head or his/her representative)

SECTION 0: INTRODUCTION

0.1	0.2	0.3	0.4	0.5	0.6
Code of interviewer	Number of community	Name of village	Service Center (sampling unit)	Number of dwelling	Number of household
I._._.	C._._._.		E._._._._.	D._._.	H._._.

0.7	0.8 (only if the household is single-ethnic)		
Is this a single or multiethnic household?	Ethnicity of household		
<input type="checkbox"/> Single →Q.0.8 <input type="checkbox"/> Multi →Q. 0.9	South-Africa: <input type="checkbox"/> 1=MoPedi (N. MoSotho) <input type="checkbox"/> 2=MoVenda <input type="checkbox"/> 3=MoTsonga <input type="checkbox"/> 4=MoXhosa <input type="checkbox"/> 5=MoZulu <input type="checkbox"/> 6=MoSwazi <input type="checkbox"/> 7= Asian <input type="checkbox"/> 8= Coloured <input type="checkbox"/> 9=White <input type="checkbox"/> 10=Other (Specify) _____ _____	India: <input type="checkbox"/> 1=Scheduled castes <input type="checkbox"/> 2=Scheduled tribes <input type="checkbox"/> 3=Other backward castes <input type="checkbox"/> 4=Other	Botswana: <input type="checkbox"/> 1=Motswana <input type="checkbox"/> 2=Mokalanga <input type="checkbox"/> 3=Mokhalagadi <input type="checkbox"/> 4=San <input type="checkbox"/> 5=Coloured <input type="checkbox"/> 6=White <input type="checkbox"/> 7=Other
0.9	0.10 (only if the household has a unique religious affiliation)		
Is this household characterised by a unique religious affiliation?	Which one?		
<input type="checkbox"/> Yes →Q 0.10 <input type="checkbox"/> No →Q 0.11	<input type="checkbox"/> 1= Hindu <input type="checkbox"/> 2= Muslim <input type="checkbox"/> 3= Sikh <input type="checkbox"/> 4= Jain <input type="checkbox"/> 5=Jewish	<input type="checkbox"/> 6= Parsi/Zoroastrian <input type="checkbox"/> 7= Buddhist/Neobuddhist <input type="checkbox"/> 8= Animist/ Traditional/Spirits <input type="checkbox"/> 9= Catholic <input type="checkbox"/> 10= Protestant	<input type="checkbox"/> 11=Zionist <input type="checkbox"/> 12=Apostolic <input type="checkbox"/> 13=Other Christian <input type="checkbox"/> 14=Other (Specify) _____ <input type="checkbox"/> 15=No religion

Please, record the following information			
	First visit	Second visit	Third visit
Date of interview	0.11	0.12	0.13
Time started	0.14	0.15	0.16
Time ended	0.17	0.18	0.19
Result	0.20	0.21	0.22

SECTION 1 - HOUSEHOLD COMPOSITION

List names of all members who are considered part of the household, whether usually residing there or not.*	1.1	1.2	1.3	1.4	1.5	Individual ID*
	Age now	Gender	Marital Status	Relationship to the household head	Is he/she a usual resident member of the household or not?	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	

		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	
		<input type="checkbox"/> M / F <input type="checkbox"/>			<input type="checkbox"/> Yes / No <input type="checkbox"/> /	

<p>Note: We are interested in gathering information about all the people who the interviewed person / head of the household considers part of his/her household. Therefore we want to list all resident and non-resident members (though not all questions are administered to non-residents). These categories are ‘migrants’, but we want to avoid this term as much as possible. What is important is who is considered a member, whether absent or not. (See interviews instructions)</p>	<p>Enter raw number of age at last birthday</p>		<p>1=Single 2=Civil marriage 3=Customary marriage 4=Divorced 5=Separated 6=Widowed not married 7=Living together /in process to get married</p>	<p>1= Resident head 2= Absent head 3= Wife / husband /partner 4= Son / daughter 5= Father / mother 6= Grandchild 7= Grandparent</p>	<p>8= Brother / sister 9= Brother/ sister in law 10= Son/daughter in law 11= Other relative 12= Household help 13= Other (e.g. lodger) (Specify)_____</p>	<p>1=Yes 2=No In all cases fill next column; if resident go to Q.1.6, else skip to next member or, if last member, go to next section</p>	<p>* Note: R._._. (usual Resident member within that Hh: e.g. R01; R02; etc.) N._._. (usual Non resident member within that Hh: e.g. N01; N02; etc.)</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------

ONLY FOR RESIDENT MEMBERS

ID	1.6	1.7 (Only if the household is multi-religious, cf. Q.0.9)	1.8 (Only if the household is multiethnic, cf. Q.0.7)
	Highest school standard passed	Religion	Ethnicity
R.0.0.1			
R.			
R.			
R.			
R.			
R.			
R.			

ONLY FOR RESIDENT MEMBERS

ID	1.9	1.10 Only for employed and self-emp.	1.11 Only for students and workers	1.12		1.13	
	Main vocational status of each h/h member in month before survey	For the employed, main sector of work	Where does this person work or study? (NOTE: estimate and insert distance categories from place name as mentioned by respondent)	How much did each household member contribute to the home from labour earning?		How much did each household member contribute to the home from pension/welfare remittances?	
				1.12.1 Amount	1.12.2 Currency	1.13.1 Amount	1.13.2 Currency
R.0.0.1				-----		-----	
R.____				-----		-----	
R.____				-----		-----	
R.____				-----		-----	
R.____				-----		-----	
R.____				-----		-----	
R.____				-----		-----	
R.____				-----		-----	

R. _ _ _ _ .				-----		-----	
R. _ _ _ _ .				-----		-----	
R. _ _ _ _ .				-----		-----	
R. _ _ _ _ .				-----		-----	
R. _ _ _ _ .				-----		-----	
R. _ _ _ _ .				-----		-----	

R. _ _ _ _						
	<p>1=Baby, pre-school - home or crèche → go to next Q</p> <p>2=Scholar / student – attending → Q.1.11</p> <p>3=Retired - not working → Q.1.13</p> <p>4=Labour disabled-not seeking work → go to next Q</p> <p>5=Housewife / help - unpaid work → go to next Q</p> <p>6=Unemployed - seeking work → go to next Q</p> <p>7=Unemployed - not seeking work → go to next Q</p> <p>8=Employed - mainly informal²⁸ → Q.1.10</p> <p>9=Employed - mainly formal²⁹ → Q.1.10</p> <p>10=Employed - both sectors 50:50 → Q.1.10</p> <p>11=Self-employed - formal sector^b → Q.1.10</p> <p>12=Self-employed - informal sector^b → Q.1.10</p>	<p>1= Agriculture</p> <p>2=Cattle farming</p> <p>3= Industry</p> <p>4= Tertiary sector/services of any kind</p> <p>5= Civil servant</p>	<p>1= This village</p> <p>2= Neighbouring village</p> <p>3= Less than 20 km</p> <p>4= More than 20 km away</p> <p>5= More than 100 km away</p> <p>6=Other (Specify) _____</p>	<p>NOTE: Indicate raw amount in Rands / rupees / pula earned/contributed by each person permanently living in household from wages or salaries or pensions or welfare or migrant or business activities remittance, in the last month up to survey day, or average month if last month exception. If respondent does not wish to state actual amount, ask e.g. 'Between 50 and 100, 100 and 150, etc. and write in mid figure, e.g. 75, 125, etc. If None=0.</p>		

SECTION 2: QUESTIONS TO HOUSEHOLD HEAD ABOUT USUALLY NON-RESIDENT MEMBERS

28 Employment is informal when unregistered, e.g. by small firms, or family artisan enterprises, or on family farms.

29 Formal employment or self-employment means that the employer is a large or registered company or farm, or the government, or that one's activity is officially registered.

(NOTE: Ask household head about usually non-resident members, if any. Use ID codes of non resident member as in section 1)

Use ID codes of non-resident (see ID section 1)	2.1	2.2	2.3
	At what age did (NAME) first migrate? (e.g. leave the household to live somewhere else for some relevant amount of time)	Why did this person migrate? (NOTE: main reason only. Same definition as in question 2.1)	Has this person been in contact with you during the last year? (NOTE: any kind of contact, visiting, sending money etc.)
N.0.1			
N. . .			
N. . .			
N. . .			
N. . .			
N. . .			
		1= Work 2= Education 3= Marry 4= Natural disaster (includes flood, crop pests, widespread fire) 5= Drought 6= Illness 7= Death of an earner 8= Quarrel 9= Unproductive land 10= Other (Specify)	Yes= →go to next question No= →Q 2.15

ASK ABOUT NON-RESIDENT MEMBERS WHO HAVE BEEN IN CONTACT

ID	2.4				
	What type of migration did this involve? (e.g. occasional/regular: see codes) (Repeat the question for each year below)				
	2.4a During this/last year (1999) ..	2.4b year before (1998)	2.4c – 2 years ago (1997)	2.4d - 3 years ago (1996)	2.4e - 4 years ago (1995)
N. . . .					
N. . . .					
N. . . .					
N. . . .					
N. . . .					
N. . . .					
N. . . .					
	From Q2.4a to Q2.5e use the following codes: 1=None; 2= Seasonal (harvest etc.); 3=Occasional/activities that do not occur each year (e.g. for building roads); 4=Long-term; 5=School attendance; 6= Other (specify)				

ID	2.5				
	Would it be possible for you to give us an idea of the amount of time, expressed in number of months he/she was absent?				
	2.5a During this/last year (1999)	2.5.b year before (1998)	2.5.c – 2 years ago (1997)	2.5.d - 3 years ago (1996)	2.5.e - 4 years ago (1995)
N. . . .					
N. . . .					
N. . . .					
N. . . .					
N. . . .					
N. . . .					

ID	2.6	2.7	2.8
	When this person left, did he/she lose the right to the use of assets (land, cattle, any other)?	When (NAME) left, were any of his/her tasks taken over by somebody else?	Within your household, was there sufficient labour (people) available to take over the tasks of the person who left
N._._.	<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		
N._._.	<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		
N._._.	<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		
N._._.	<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		
N._._.	<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		
N._._.	<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		
		(Codes from 3 to 12 are the same codes of Q.1.4) 50=Nobody 51=Various 52=No tasks 3= Head's wife / husband /partner 4= Head's son / daughter 5= Head's father / mother 6= Head's grandchild 7= Head's grandparent 8= Head's brother / sister 9= Head's brother/ sister in law 10= Head's son/daughter in law 11= Other relative 12= Household help 13= Other (e.g. lodger) (Specify)_____	1= Yes, all the time 2=Yes, usually or except in peak seasons 3= Usually not 4=No or hardly ever

ID	2.9	2.10.				2.11 (If migrant away for more than 1 year)
	Does she/he support the household by sending or bringing back goods or money ?	Can you give us some idea of how much (NAME) has brought or sent home during the last year?				Would you say that the amount brought / sent back (total) was more or less than the preceedings years?
		2.10.1 Cash	2.10.2 Currency	2.10.3 Value of goods	2.10.4 Currency	
N. . .		.....		.....
N. . .		.....		.....
N. . .		.....		.....
N. . .		.....		.....
N. . .		.....		.....
N. . .		.....		.....
	1=Frequently or to a large extent 2=Sometime or to a moderate extent 3= Rarely or to a small extent 4=Not at all → Q2.14					1=Less 2=More 3=Same

ID	2.12	2.13	2.14	2.15 (THIS QUESTION IS REQUIRED ONLY AT HOUSEHOLD LEVEL)	2.16	2.17
	What are these remittances/ cash mainly used for?	Who, would you say, is the main beneficiary of these remittances?	Do you, or other members of the household also support (NAME), e.g. by giving or sending food or money?	Would you say that the fact that (NAME) spends most of his/her time elsewhere has improved the situation of the household?	Is (NAME) present now? (NOTE: to be interviewed in section 7)	If YES, when is she/he available for interview? (Try to fix date for interview)
N.			<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> / / . . . / 19.
N.			<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> / / . . . / 19.
N.			<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> / / . . . / 19.
N.			<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> / / . . . / 19.
N.			<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> /		<input type="checkbox"/> 1=Yes / 2=No <input type="checkbox"/> / / . . . / 19.
	1=Food 2=Clothes 3=Education 4=Inputs/tools 5=Buy land 6=Health 7=Repaying t debt 8=Improving house 9=Paying labourers 10= Other (Specify)	1= Whole household or family 2= Head 3= Head's partner 4= Other (please, if possible, specify the ID code, see section 1)- specify _____		1=Yes, very much 2=Yes, a little bit 3=Much the same 4=A little worse 5=Much worse		

SECTION 3 INCOME

ONLY FOR HOUSEHOLD NOT FOR INDIVIDUALS

NOTE TO INTERVIEWERS s: *Time period for the answers of this section should be one year (that is last 12 months) for “large” items (e.g. livestock) and one month (that is the last 30 days) for “small” items (e.g. livestock products). (help respondent to recall dates more precisely by referring to village events of which you know the dates. Such events will have been previously reviewed with headperson/official/records). For incomes, please try to find out the money equivalent in case of barter.*

<p>3.1</p> <p>We'd like to know whether staple food/crops, grown on the land you have farmed in the last year, supply much of your resident household members' consumption of staple food</p> <p><input type="checkbox"/> 1=More than enough, with a surplus for sale or other uses</p> <p><input type="checkbox"/> 2=More than half the staples consumption</p> <p><input type="checkbox"/> 3=Less than half but more than a quarter</p> <p><input type="checkbox"/> 4=A quarter of staples consumption or a bit less</p> <p><input type="checkbox"/> 5=None, or almost none of your staples consumption</p> <p><input type="checkbox"/> 6=No staple food crops grown</p> <p><input type="checkbox"/> 7=Other (Specify) _____</p>	<p>3.2</p> <p>We'd like to ask about animal products –meat, poultry meat, milk, soured milk, other dairy products, eggs, etc., - from your owned or managed animals, eaten in your household in the last year. What was such consumption like?</p> <p><input type="checkbox"/> 1=Regular and a large part of resident household members' diet</p> <p><input type="checkbox"/> 2=Regular and a small part of the diet</p> <p><input type="checkbox"/> 3=Infrequent and/or unimportant</p> <p><input type="checkbox"/> 4=None or negligible</p> <p><input type="checkbox"/> 5=No food-providing animals managed or owned</p> <p><input type="checkbox"/> 6=Other (Specify) _____</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

3.3		3.4		3.5		3.6	
Income from crop sales (per year, last year)		Income from renting out ox(en), plough, other equipment (per year, last year)		Income from sales of manure or compost (per year, last year)		Income from sales of live cattle/goats/sheep/pigs/donkeys/chickens/other poultry/domestic animals (per year, last year)	
3.3.1 Amount	3.3.2 Currency	3.4.1 Amount	3.4.2 Currency	3.5.1 Amount	3.5.2 Currency	3.6.1 Amount	3.6.2 Currency
<p>Indicate raw amount in Rands/rupees/pula earned by household from wages or salaries or pensions or welfare or migrant or business activities remittance. If respondent does not wish to state actual amount, ask e.g. 'Between 50 and 100, 100 and 150, etc. and write in mid figure, e.g. 75, 125, etc. If None=0</p>							

<p>3.7</p> <p>Income from sales of milk, meat, hides, eggs or other, livestock products (per month, average or last month)</p>	<p>3.8</p> <p>Income from renting out accommodation (per year, last year)</p>	<p>3.9</p> <p>Is there anyone in your area who can help you with meals, food, or finding/giving you a job or a loan, if you run short of food or money?</p>	<p>3.10</p> <p>How does this year's income compare with last year's income (included everything: crops, livestock etc.)?</p>
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3.7.1 Amount	3.7.2 Currency	3.8.1 Amount	3.8.2 Currency	<input type="checkbox"/> 1=NO <input type="checkbox"/> 2=Yes relatives <input type="checkbox"/> 3=Yes neighbours <input type="checkbox"/> 4=Yes VDC <input type="checkbox"/> 5=Yes NGO <input type="checkbox"/> 6=Yes other (Specify) _____	<input type="checkbox"/> 1=Better then last year <input type="checkbox"/> 2=Much the same as last year <input type="checkbox"/> 3=Worse the last year <input type="checkbox"/> 4=No crops harvested/livestock sold last/this year
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SECTION 4: HOUSEHOLD INFRASTRUCTURE

4.1		4.2	4.3	4.4	4.5	4.6
How much do you think your dwelling/home is worth, including the value (if any) of the land on which the dwelling stands?		Do you feel there is, or is not, much of a risk of losing your house?	Is the household's water supply adequate?	Is the household's water supply clean?	Is the household's water supply nearby?	Does the household have access to electricity?
4.1.1 Amount	4.1.2 Currency	<input type="checkbox"/> 1=High risk <input type="checkbox"/> 2=Small risk <input type="checkbox"/> 3=No risk	<input type="checkbox"/> 1=Always or almost always <input type="checkbox"/> 2=Usually or most of the time <input type="checkbox"/> 3=Seldom or occasionally <input type="checkbox"/> 4=Almost never	<input type="checkbox"/> 1=Always or almost always <input type="checkbox"/> 2=Usually or most of the time <input type="checkbox"/> 3=Seldom or occasionally <input type="checkbox"/> 4=Almost never	<input type="checkbox"/> 1=Own tap connection <input type="checkbox"/> 2=Outside, less than 100m <input type="checkbox"/> 3=Outside, 100m-less than 500m <input type="checkbox"/> 4=Outside, 500m-less than 1km <input type="checkbox"/> 5=Outside, 1km-less than 5km <input type="checkbox"/> 6=Other (Specify) _____	<input type="checkbox"/> 1=Good connection to electricity <input type="checkbox"/> 2=House is connected but only unreliable supply <input type="checkbox"/> 3=No connection <input type="checkbox"/> 4=Other (Specify) _____

HOUSEHOLD ASSETS NOT USED FOR FARMING

Does your house have any of these?		When did your household first acquire an item of this sort? (for all assets ever owned)	Market price or current estimated value (if the house has any such assets now)
			Amount Currency
Telephone	4.7 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/..... If yes go to 4.7.1	4.7.1. 19.....	4.7.2 4.7.3
Private toilet on the plot	4.8 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/..... If yes go to 4.8.1	4.8.1. 19.....	4.8.2 4.8.3
Hi-fi set	4.9 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/..... If yes go to 4.9.1	4.9.1. 19.....	4.9.2 4.9.3
Radio (excluding hi-fi set)	4.10 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/..... If yes go to 4.10.1	4.10.1. 19.....	4.10.2 4.10.3

TV	4.11 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/ If yes go to 4.11.1	4.11.1 19.	4.11.2	4.11.3
Dining room suite	4.12 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/ If yes go to 4.12.1	4.12.1 19.	4.12.2	4.12.3
Living room suite (excluding dining room suite)	4.13 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/ If yes go to 4.13.1	4.13.1 19.	4.13.2	4.13.3
Electrical stove	4.14 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/ If yes go to 4.14.1	4.14.1 19.	4.14.2	4.14.3
Gas stove	4.15 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/ If yes go to 4.15.1	4.15.1 19.	4.15.2	4.15.3
Bicycles	4.16 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/ If yes go to 4.16.1	4.16.1 19.	4.16.2	4.16.3
Car used mainly for personal transport (excluding trucks or pickups, which are used mainly for farming)	4.17 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/ If yes go to 4.17.1	4.17.1 19.	4.17.2	4.17.3
Other assets (Specify) _____	4.18 <input type="checkbox"/> 1=Yes/ <input type="checkbox"/> 2=No/ If yes go to 4.18.1	4.18.1 19.	4.18.2	4.18.3
			Make a rough estimate of the current market value of all items of each kind	

SECTION 5: RESOURCE BASE AND ENVIRONMENTAL ISSUES

NOTE TO INTERVIEWERS: In these questions we are trying to understand the household's experience of its environment. It does not matter whether the person owns the bore hole or well to which s/he has access; nor whether firewood for the household is collected by a household member or an employee; nor whether the cattle being grazed by household members belong to them. Be sure, when asking the questions, not to make implicit assumptions about these matters, or to suggest any particular answer.

SECTION 5a: Mainly about farm water resource base

5.0	5.1	5.2 (If you have any access to ground water)	5.3 (If you have any access to ground water)
Do you have or use any grazing land or cropland or small amount of land (e.g. kitchen garden)	Have you any access to ground-water from a dug well, tubewell or bore hole, for crops or livestock?	In a year of normal rains, does your dug well, tubewell or bore hole provide enough ground-water for all, most, some, few or none of your needs for crops and/or livestock?	Is your access to this sort of ground-water less and/or deeper (further from the surface), than five years ago; more and/or shallower (closer to the surface); or much the same?
<input type="checkbox"/> Yes →go to next question <input type="checkbox"/> No →go to section 7	<input type="checkbox"/> 1=No groundwater for crops or stock→Q5.4 <input type="checkbox"/> 2=Bore hole; →Q5.2 <input type="checkbox"/> 3=Tubewell; →Q5.2 <input type="checkbox"/> 4=Dug well; →Q5.2 <input type="checkbox"/> 5= More than one of these sources→Q5.2	<input type="checkbox"/> 1=None <input type="checkbox"/> 2=Few <input type="checkbox"/> 3=Some <input type="checkbox"/> 4=Most <input type="checkbox"/> 5=All	<input type="checkbox"/> 1=No access to groundwater now and/or five years ago <input type="checkbox"/> 2=Less and/or deeper <input type="checkbox"/> 3=Same <input type="checkbox"/> 4=More and/or shallower
5.4	5.5	5.6	5.7

Do you sometimes, always, or never use surface irrigation water, such as a dam, canal, tanks, or pumps from a river (OTHER THAN direct rainfall or groundwater) on your crops?	Did you use surface irrigation water to irrigate a little, most, all or none of your crops last year?	Are your sources of surface water for farming, not counting rainfall, less or more adequate than five years ago, or much the same?	Do you always, usually, or never harvest most or some of your cropland more than once a year on the same piece of land?
<input type="checkbox"/> 1=Seldom or never sow crops <input type="checkbox"/> 2=Never <input type="checkbox"/> 3=Sometimes <input type="checkbox"/> 4= Always	<input type="checkbox"/> 1=No crops last year <input type="checkbox"/> 2=None <input type="checkbox"/> 3=Little or some <input type="checkbox"/> 4= Most <input type="checkbox"/> 5=All	<input type="checkbox"/> 1=Less adequate now <input type="checkbox"/> 2=Much the same <input type="checkbox"/> 3=More adequate now	<input type="checkbox"/> 1=Seldom or never has cropland <input type="checkbox"/> 2=Has cropland but none is ever double-cropped <input type="checkbox"/> 3=All cropland planted to trees or other continuous crops <input type="checkbox"/> 4=Double harvest on some land in some years <input type="checkbox"/> 5=Double harvest on most land, or some land in most years <input type="checkbox"/> 6=Double harvest on all

SECTION 5b: Mainly about farm vegetation resource base

NOTE TO INTERVIEWERS: If the respondent is a male, and there is an adult or adolescent woman available for interview, questions 5.10-5.12 should be asked of her, not of the male interviewee.

5.8	5.9	5.10	5.11
Is firewood collected for your household from trees or shrubs often, occasionally, or never?	Are the trees or shrubs (within walking distance and used for firewood by your household) plentiful, just about adequate, or scarce?	Compared to five years ago, do people who collect firewood for your household have to go considerably further, considerably less far, or much the same distance?	When a person takes cattle (*) to grazing land from your household, are thorn acacias or similar sharp shrubs a serious or frequent problem; a slight or rare problem; or no problem?
<input type="checkbox"/> 1=Never <input type="checkbox"/> 2= Occasionally <input type="checkbox"/> 3=Often	<input type="checkbox"/> 1=Absent <input type="checkbox"/> 2=Scarce <input type="checkbox"/> 3=Just about adequate <input type="checkbox"/> 4=Plentiful	<input type="checkbox"/> 1=Further <input type="checkbox"/> 2=Much the same distance <input type="checkbox"/> 3=Less far	<input type="checkbox"/> 1=Nobody here ever looks for grazing land <input type="checkbox"/> 2=Serious or frequent problem <input type="checkbox"/> 3=Slight or rare problem <input type="checkbox"/> 4=no problem

() NOTE TO INTERVIEWERS: make clear that you are talking about cattle, not goats or sheep [these can more readily cope with thorn acacia etc.]*

5.12	5.13	5.14
Are thorn acacia and similar sharp shrubs, within (say) five miles/eight kilometres of your home, commoner and/or denser than five years ago; less common and/or less dense;	When your household tries to use grazing land, or to clear cropland, is the amount or density of invasion by sharp, hard grasses such as <u>Imperata</u> a serious or frequent problem; a slight or rare problem; or no problem?	Within five miles eight kilometres of your household, is the amount or density of invasion by sharp hard grasses like <u>Imperata</u> more than 5 years ago, less or much the same?

or much the same?		
<input type="checkbox"/> 1=Commoner/denser <input type="checkbox"/> 2=Same <input type="checkbox"/> 3=Less common/dense	<input type="checkbox"/> 1=No use of either grazing or cropland <input type="checkbox"/> 2=Serious or frequent <input type="checkbox"/> 3=Slight or rare <input type="checkbox"/> 4=No problem	<input type="checkbox"/> 1=More <input type="checkbox"/> 2=Much the same <input type="checkbox"/> 3=Less

SECTION 5c: Mainly about soil and terrain resource base

5.15	5.16	5.17	5.18
When you walk around the cropland or grazing land that you or your household members use, do you see the outcrops of bare rock often, seldom or never?	When you walk around the cropland or grazing land that you or your household members use, do you see the patches of pebbles often, seldom or never?	When you walk around the cropland or grazing land that you or your household members use, do you see the gravely patches often, seldom or never?	When you walk around the cropland or grazing land that you or your household members use, do you see the very sandy soil with little or no clay content often, seldom or never?
<input type="checkbox"/> 1=Often <input type="checkbox"/> 2=Seldom <input type="checkbox"/> 3=Never	<input type="checkbox"/> 1= Often <input type="checkbox"/> 2=Seldom <input type="checkbox"/> 3=Never	<input type="checkbox"/> 1= Often <input type="checkbox"/> 2=Seldom <input type="checkbox"/> 3=Never	<input type="checkbox"/> 1=Often <input type="checkbox"/> 2=Seldom <input type="checkbox"/> 3=Never

5.19	5.20	5.21	5.22	5.23
When you walk around the cropland or grazing land that you or your household members use, do you see the whitish, salty soil patches on which nothing useful grows; often, seldom or never?	For outcrops of bare rock, can you say whether- on the cropland or grazing land that you use locally- the problem is considerably less, much the same, or considerably worse than five years ago?	For patches of pebbles or medium-size stones, can you say whether- on the cropland or grazing land that you use locally- the problem is considerably less, much the same, or considerably worse than five years ago?	For gravely patches, can you say whether- on the cropland or grazing land that you use locally- the problem is considerably less, much the same, or considerably worse than five years ago?	For very sandy soil with little or no clay content, can you say whether- on the cropland or grazing land that you use locally- the problem is considerably less, much the same, or considerably worse than five years ago?
<input type="checkbox"/> 1=Often <input type="checkbox"/> 2=Seldom <input type="checkbox"/> 3=Never	<input type="checkbox"/> 1=Worse <input type="checkbox"/> 2=Same <input type="checkbox"/> 3=Less <input type="checkbox"/> 4=Absent	<input type="checkbox"/> 1=Worse <input type="checkbox"/> 2=Much the same <input type="checkbox"/> 3=Less <input type="checkbox"/> 4=Absent	<input type="checkbox"/> 1=Worse <input type="checkbox"/> 2=Same <input type="checkbox"/> 3=Less <input type="checkbox"/> 4=Absent	<input type="checkbox"/> 1=Worse <input type="checkbox"/> 2=Same <input type="checkbox"/> 3=Less <input type="checkbox"/> 4=Absent

5.24	5.25	5.26	5.27
For whitish, salty soil patches on, which nothing useful grows, can you say whether- on the cropland or grazing land that you use locally- the problem is considerably less, much the same, or considerably worse than five years ago?	Do you usually plough any land for crops?	Is your topsoil usually deep and ample, or sparse and thin?	Is your topsoil deeper or shallower than about five years ago, or is their little change?
<input type="checkbox"/> 2=Worse <input type="checkbox"/> 3=Same <input type="checkbox"/> 4=Less <input type="checkbox"/> 4=Absent	<input type="checkbox"/> 1=Yes→ go to next question <input type="checkbox"/> 2=No→go to Section 6, Q. 6.1 -.-.-	<input type="checkbox"/> 1=Sparse and thin <input type="checkbox"/> 2=Deep and ample <input type="checkbox"/> 3=In between <input type="checkbox"/> 4=Other (specify) _____	<input type="checkbox"/> 1=Shallower <input type="checkbox"/> 2=Little change <input type="checkbox"/> 3=Deeper
5.28	5.29	5.30	5.31
Is loss of topsoil due to erosion always, usually, seldom or never a problem on your cropland?	Has loss of topsoil got less serious, stayed much the same, or got worse in the past five years or so?	Is most of the topsoil where you plant crops rich in humus, poor in humus, or more or less typical?	In the last five years or so, has the amount and quality of humus in the topsoil on your cropland got worse, stayed the same, or got better?
<input type="checkbox"/> 1=Always <input type="checkbox"/> 2=Usually <input type="checkbox"/> 3=Seldom <input type="checkbox"/> 4=Never	<input type="checkbox"/> 1=Worse <input type="checkbox"/> 2=Much the same <input type="checkbox"/> 3=Less serious	<input type="checkbox"/> 1=Poor <input type="checkbox"/> 2=Typical <input type="checkbox"/> 3=Rich	<input type="checkbox"/> 1=Worse <input type="checkbox"/> 2=No change <input type="checkbox"/> 3=Better

SECTION 6: LAND ACCESS AND LAND TENURE

NOTE TO INTERVIEWERS: convert the answers into just one unit of measure. If units other than the those below are used, convert into one of those below

How big is your landholding altogether, including your residential site, cultivation lands and any other type of place that is part your holding? (FOR BOTSWANA excluding grazing land)

6.1 Quantity	6.2 Unit of measure
.....	<input type="checkbox"/> 1=Hectares <input type="checkbox"/> 2=Soccer pitches <input type="checkbox"/> 3=Morgen <input type="checkbox"/> 4=Acres (including “Botswana acres”) <input type="checkbox"/> 5=Bighas <input type="checkbox"/> 6=Other (specify) _____

WHAT KINDS OF LAND FOR CULTIVATION HAS YOUR HOUSEHOLD GOT NOW?

Household main garden or kitchen garden

6.3	6.4	6.5	6.6	6.7	(In INDIA ask everybody, in Botswana and South Africa only if it is applicable) 6.8 Price or approximate value when plot acquired	(In INDIA ask everybody, in Botswana and South Africa only if it is applicable) 6.9 If this plot could be sold now, what would you expect to fetch?		
Size (quantity)	Size (unit of measure)	When did your household first acquire the plot? (YEAR)	How would you rate the quality of this plots?	Tenure arrangements	6.8.1 Amount	6.8.2 Currency	6.9.1 Amount	6.9.2 Currency

.....		<input type="checkbox"/> 1=Good <input type="checkbox"/> 2=Average <input type="checkbox"/> 3=Bad or poor	<input type="checkbox"/> 1=Owned by inheritance <input type="checkbox"/> 2=Owned by purchase <input type="checkbox"/> 3=Commercial or usufruct rights <input type="checkbox"/> 4=Rented or share cropped in <input type="checkbox"/> 5=Rented or share cropped out <input type="checkbox"/> 6=Other (Specify) _____	
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Household's other arable plots (except community garden)

6.10 Size (quantity) (Begin with most important, then the second and so on)	6.11 Size (unit of measure)	6.12 When did your household first acquire the plot? (YEAR)		6.13 Rate quality of plots	6.14 Tenure arrangements
6.10.1	6.11.1	6.12.1.1 Since 19..	6.12.1.2 <input type="checkbox"/> Since always	6.13.1	6.14.1
6.10.2	6.11.2	6.12.2.1 Since 19..	6.12.2.2 <input type="checkbox"/> Since always	6.13.2	6.14.2
6.10.3	6.11.3	6.12.3.1 Since 19..	6.12.3.2 <input type="checkbox"/> Since always	6.13.3	6.14.3
6.10.4	6.11.4	6.12.4.1 Since 19..	6.12.4.2 <input type="checkbox"/> Since always	6.13.4	6.14.4

		For 6.12.1.2 to 6.12.4.2, Y=Yes, if still has the plot N=No, if no longer has the plot	1=Good 2=Average 3=Bad or poor	1=Owned by inheritance 2=Owned by purchase 3=Commercial or usufruct rights 4=Rented or share cropped in 5=Rented or share cropped out 6=Other (Specify)_____
--	--	----------------------------------------------------------------------------------------------	--------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------

(ONLY FOR INDIA) 6.15 Price or approximate value when plot acquired		(ONLY FOR INDIA) 6.16 If this plot could sold now, what would you expect to fetch?	
Amount	Currency	Amount	Currency
6.15.1.1	6.15.1.2	6.16.1.1	6.16.1.2
6.15.2.1	6.15.2.2	6.16.2.1	6.16.2.2
6.15.3.1	6.15.3.2	6.16.3.1	6.16.3.2
6.15.4.1	6.15.4.2	6.16.4.1	6.16.4.2

Community garden plot (if any)

6.17 Size quantity	6.18 Size unit of measure	6.19 When did your household first acquire the plot? (YEAR)	6.20 Rate quality of plots?	6.21 Tenure arrangements	6.22 Have you lost control of any land during the last five years? (Exclude fallow land from this question)
.....		<input type="checkbox"/> 1=Good <input type="checkbox"/> 2=Average <input type="checkbox"/> 3=Bad or poor	<input type="checkbox"/> 1=Owned by inheritance <input type="checkbox"/> 2=Owned by purchase <input type="checkbox"/> 3=Commercial or usufruct rights <input type="checkbox"/> 4=Rented or share cropped in <input type="checkbox"/> 5=Rented or share cropped out <input type="checkbox"/> 6=Other (Specify)_____	<input type="checkbox"/> 1=Yes→go to next question <input type="checkbox"/> 2=No→go to Q 6.29 -----

6.23 Size (only if you have lost control of any land during the last five year)	6.24 Quality	6.25 Time of transaction YEAR	6.26 (Only if it is applicable) Price /Approx. value when plot lost	6.27 How was it lost?
------------------------------------------------------------------------------------	-----------------	-------------------------------------	---------------------------------------------------------------------------	-----------------------

Quantity	Unit measure of			Amount	Currency		
6.23.1.1	6.23.2.1	6.24.1	6.25.1.	6.26.1.1	6.26.2.1	6.27.1	
6.23.2.1	6.23.2.2	6.24.2	6.25.2	6.26.2.1	6.26.2.2	6.27.2	
		1=Best 2=Above average 3=Average 4=Below average 5=Worst				1=Sold 2=Rented out 3=Exchanged; 4=Lost for mortgage/debt 5=Flooded/destroyed	6=Given to child/children 7=Given to other near relatives 8=Given to persons not near relatives 9=Other sources of loss (Specify)

<p>6.28 Overall, would you say that your household, over the last 5 years has rather decreased its land ownership/control; increased or remained much the same? (NOTE: in case of doubt refer to value of land)</p> <p><input type="checkbox"/> 1=Decreased <input type="checkbox"/> 2=Increased <input type="checkbox"/> 3=Remained much the same</p>	<p>6.29 Is your main plot fenced? (ask everybody)</p> <p><input type="checkbox"/> 1=Yes <input type="checkbox"/> 2=No</p>
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FARM AND OTHER ASSETS: How many of the following assets does your household own?

Enumerators to emphasise that here we only want to know about assets that are primarily used for farming

	Number of each item	Since when do you own it? (most recent year if two or more items)	Amount	Currency
Motor cars and bakkies	6.30.1	6.30.2 .19 . .	. . . . .
Motorbike	6.31.1	6.31.2 .19 . .	. . . . .
Tractor	6.32.1	6.32.2 .19 . .	. . . . .
Trailer/cart	6.33.1	6.33.2 .19 . .	. . . . .
Shop/Workshop	6.34.1	6.34.2 .19 . .	. . . . .
Sewing machine	6.35.1	6.35.2 .19 . .	. . . . .
Hammer mill	6.36.1	6.36.2 .19 . .	. . . . .
Plough	6.37.1	6.37.2 .19 . .	. . . . .
Ridger	6.38.1	6.38.2 .19 . .	. . . . .
Harrower	6.39.1	6.39.2 .19 . .	. . . . .
Weeder	6.40.1	6.40.2 .19 . .	. . . . .

Generator	6.41.1	6.41.2 .19 . . . . .	. . . . .
Other farm productive assets (Specify) _____	6.42.1	6.42.2 .19 . . . . .	. . . . .

6.43	6.44
Livestock and draft - What livestock does the household own now ?	Do you use your livestock for transport at all?
1) = No of Calves (under one year) 2) = No of heifers, bullocks or tollies (1 or 2 years old) 3) = No of cows (3 years old or more) 4) = No of oxen (3 years old or more) 5) = No of bulls (3 years old or more) 6) = No of horses 7) = No of donkeys 8) = No of goats 9) = No of sheep 10) = No of pigs 11) = No of chickens 12) = No of Other (Specify)_____	<input type="checkbox"/> 1=Yes <input type="checkbox"/> 2=No

SECTION 7 QUESTIONS TO BE ASKED OF HOUSEHOLD MEMBERS NOT USUALLY RESIDENT, BUT PRESENT FOR INTERVIEW(SEE LIST IN Q.2.17)

ID	7.1	7.2	7.3	7.4	7.5 (IF NOT)	7.6
	Who decided that you should migrate, on the first occasion that you did?	Why was it decided (by whoever made the decision) that you migrate) Note: main type of migration only, during last year)	How often do you visit your family here? (NOTE: times per year)	Are you intending to/ do you settle permanently elsewhere?	When do you want to resettle here?	Which is your current sector of economic activity? (Note: main activity only)
N. _._.						
N. _._.						
N. _._.						
N. _._.						
	1= Self 2= Father/mother 3=Brother/sister 4=Husband/wife/partner 5=Other relative 6= Other (Specify)_____	1= Work 2= Education 3=Marry 4=Natural disaster (includes floods, crop pests, widespread fire) 5= Drought 6= Illness 7=Death of an earner 8=Quarrel 9= Unproductive land 10 = Other (Specify)_____		1=Yes→ go to Q7.6 2=No → go to next question	1= As soon as possible 2= After a few years 3= After retirement 4= Never 5= Other (Specify) _____	1= Agriculture 2= Cattle farming 3= Industry 4= Tertiary sectors 5= Civil servant 6= None / don't work 7= Other (specify)

ID	7.7	7.8	7.9				7.10 (If migrant away for more than 1 year)	7.11
	What kind of main activity, if any, were you carrying out before leaving, on the first occasion that you did? (Max 2 answers)	Do you ever bring anything back home, such as cash or goods?	Can you give us some idea of how much you brought or sent home during the last year?				Would you say that the amount brought / sent back (total) was more or less than the proceedings years?	Do you also get support from the household, e.g. food ?
	Most important 2 nd most important		7.9.1. Cash	7.9.2 Currency	7.9.3 Value of goods	7.9.4 Currency		

N. . . .				.....		.....
N. . . .				.....		.....
N. . . .				.....		.....
N. . . .				.....		.....
	1= None 2= School 3= Help on household enterprise with crops 4= Ditto livestock 5= Ditto artisan or other 6= Hired employment for cash or for o food, beer, etc. 7= Other (Specify) _____		1=Yes → go to next question 2=No → Q 7.11 -.-.-				1= Less 2= More 3= Same -.-.-	1=Yes 2=No -.-.-

ID	7.12				
	Would it be possible for you to give us an idea of the amount of time/number of months you were absent				
	7.12.a During this/last year (1999)	7.12.b year before (1998)	7.12.c - 2 years ago (1997)	7.12d - 3 years ago (1996)	7.12e - 4 years ago (1995)
N. . . .					
N. . . .					
N. . . .					
N. . . .					

Thank you for your co-operation!

Appendix 2: Asset distribution

AE Gini coefficients of non- farm household assets by sub-region

Subreg/reg	N	Y	Sum(RiYi)	TA	LA=10000/2NY(Y+2NY -2SumRiYi)	GA=5000-LA	GC=GA/TA
bochum	93	150912.82	12285001	5000	1300.58	3699.42	0.74
seshego	62	212341.9	12418433	5000	647.87	4352.13	0.87
schonord	84	76087.19	5664578.8	5000	1196.60	3803.40	0.76
praktisser	137	215579.67	24358481	5000	1789.01	3210.99	0.64
zebediela	54	71977.64	3148163.8	5000	1992.95	3007.05	0.60
western	143	201647.12	23659075	5000	1830.13	3169.87	0.63

Appendix 3: Income distribution

3.1: Sources of household income, households owning them and percentiles of households

	Salary and wage earnings /year	Pension income/year	Agriculture and subsist	Value of remittance in kind	Cash remittances	Total remittance / year	Remittance per capita	Household income incl. subsistence	Per capita total hh income
N	277	217	227	213	226	228	228	513	573
Mean	17227.23	7721.59	2621.04	3006.00	11635.91	14342.07	2125.56	20096.17	2774.74
Median	9600.00	6240.00	1250.00	2000.00	8800.00	11200.00	1576.25	14400.00	1733.33
Std. Deviation	31607.54	3355.51	4277.62	3001.16	11184.90	12766.37	2337.01	26600.06	4134.14
Minimum	840.00	1320.00	107.10	74.00	200.00	400.00	38.46	435.62	0.00
Maximum	345600.00	21264.00	30475.52	26000.00	73600.00	99 600.00	19733.33	345 600.00	48857.14
Share of source in Hh income (%)	46.3%	16.2%	5.8%			31.7%		100%	
Percentiles									
10	2400.00	4800.00	257.04	700.00	2400.00	3299.70	367.61	4800.00	0.00
20	4200.00	6000.00	351.07	1100.00	4080.00	5680.00	620.28	6295.38	683.84
30	6000.00	6240.00	476.27	1500.00	5400.00	7300.00	967.75	9079.90	1001.82
40	7200.00	6240.00	825.30	1760.00	7200.00	9220.00	1221.67	12000.00	1349.43
50	9600.00	6240.00	1250.00	2000.00	8800.00	11200.00	1576.25	14400.00	1733.33
60	12888.00	6360.00	1553.10	2500.00	10080.00	12840.00	1845.71	17429.40	2260.95
70	16800.00	7200.00	1929.14	3000.00	12550.00	15900.00	2276.50	21600.00	2907.20
80	21290.40	12000.00	3205.49	4560.00	16400.00	20080.00	3052.00	26400.00	3795.55
90	34800.00	12624.00	6447.23	6520.00	24000.00	28210.00	4084.57	36302.66	5864.00

Source: Survey results - 2000

3.2: Gini coefficients of remittances by sub-regions

Subreg/reg	N	Y	Sum(RiYi)	TA	$LA=10000/2NY(Y+2NY-2SumRiYi)$	GA=5000-LA	GC=GA/TA
Bochum	93	196350	16861300	5000	820.03	4179.97	0.84
Seshego	62	146600	8334650	5000	910.81	4089.19	0.82
Schonord	84	687300	51554720	5000	1129.70	3870.30	0.77
Praktisser	137	939720	117162740	5000	935.89	4064.11	0.81
Zebediela	54	257489	12221288	5000	1303.09	3696.91	0.74
Wwestern	143	1042534	118601332	5000	2079.54	2920.46	0.58
Total HH	573						

3.3: AE Gini coefficients for all income by sub-regions (including remittances)

Sub-reg	N	Y	Sum(RiYi)	TA	$LA=10000/2NY(Y+2NY-2SumRiYi)$	GA=5000-LA	GC=GA/TA
bochum	93	238513.31	16771808	5000	2492.68	2507.32	0.50
seshego	62	206986.28	10296764.7	5000	2057.08	2942.92	0.59
schonord	84	352355.35	23946662.8	5000	1968.85	3031.15	0.61
praktisser	137	637168.15	65257311.5	5000	2560.75	2439.25	0.49
zebediela	54	133162.62	5740852.06	5000	2108.97	2891.03	0.58
western	143	695112.08	65132368.3	5000	3482.48	1517.52	0.30

3.4: AE Gini coefficients income by regions and sub-regions, excluding remittances

Subreg/reg	N	Y	Sum(RiYi)	TA	LA=10000/2NY(Y+2NY -2SumRiYi)	GA=5000-LA	GC=GA/TA
bochum	93	39228.48	3416725	5000	688.38	4311.62	0.86
seshego	62	37968.26	2125635.8	5000	1050.88	3949.12	0.79
schonord	84	53478.04	3918257.5	5000	1337.08	3662.92	0.73
praktisser	137	92011.37	11890837	5000	603.48	4396.52	0.88
zebediela	54	31645.24	1601821.8	5000	718.87	4281.13	0.86
western	143	325402.94	41637274	5000	1086.99	3913.01	0.78
Central	155	77196.74	5542360.8	5000	5400.31	-400.31	-0.08
south	275	177134.65	17410916	5000	6443.93	-1443.93	-0.29
west	143	325402.94	41637274	5000	1086.99	3913.01	0.78

Source: Survey results - 2000



Appendix 3.5: Mathematical derivation (adapted from Adams Jr 1999)

Richard H. Adams Jr has successfully used this model often for decomposing income inequality. Some of his studies in which he used it include: The Agricultural Income, Cash Crop and Inequality in Pakistan (1993, 1994 & 1995); Non-farm Income, Inequality and Land in Rural Egypt (1999).

Gini = G for distribution of total income within a group can be defined as:

$$G = \frac{(2 \text{cov} [Y_{rt}, F(Y_{rt})])}{\mu} \quad (4.4)$$

where μ denotes the mean household income of the sample and $F(Y_{rt})$ the cumulative distribution of total income in the sample

i.e. $F(Y_{rt}) = (f(y_1), \dots, f(y_n))$

where $f(y_i)$ is equal to the rank of y_i divided by the number of observations (n) (Stark et al., 1986:25).

Equation (4.4) can be rewritten and expanded into an expression for the Gini coefficient that captures the contribution to inequality of each of the K components of income. Assuming that within the chosen group there are n households deriving income from K sources of income, y_i denotes the total income of household i , where $i = 1, \dots, n$ and y_{ik} the income of the household i from source k , where $k = 1, \dots, K$. Also let the distribution of total household income be represented by $Y_r = (y_1, \dots, y_n)$ and the distribution of income component k be represented by $Y_k = (y_{1k}, \dots, y_{nk})$.

$$G = \frac{2}{\mu n} \sum_{i=1}^n \sum_{k=1}^k (y_{ik} - E(y_{ik}))(f(y_i) - E(f(y_i))) \quad (4.5)$$

$$G = \frac{2}{\mu n} \sum_{i=1}^n (y_i - E(y_i))f(y_i) - E(f(y_i)) \quad (4.6)$$

$$G = \frac{2}{\mu} \sum_{k=1}^k \text{cov}[Y_k, F(Y_{rt})] \quad (4.7)$$

$$G = \sum_{k=1}^k \left(\frac{\text{cov}[Y_k, F(Y_{rt})]}{\text{cov}[Y_k, F(Y_k)]} \right) \left(\frac{2}{\mu_k} \text{cov}[Y_k, F(Y_k)] \left(\frac{\mu_k}{\mu} \right) \right) \quad (4.8)$$

where μ_k is the sample mean of income from source k and $F(Y_k)$ is the cumulative rank distribution of income from source k (i.e. $F(Y_k) = (f(y_{ik}), \dots, f(y_{nk}))$), where $f(y_{ik})$ is equal to the rank of y_{ik} divided by the number of observation (n).

Using the notion of Stark et al. (1986), the Gini coefficient can be written as:

$$G = \sum_{k=1}^K T_k G_k H_k \quad (4.9)$$

where H_k is share of source k of income in total group income (i.e. $H_k = \mu_k/\mu$), G_k is the Gini coefficient measuring the inequality in the distribution of income component k within the group and T_k is the Gini correlation of income from source k with total income defined as:

$$(4.10) \quad T_k = \frac{\text{cov}[Y_k, F(Y_r)]}{\text{cov}[Y_k, F(Y_k)]}$$

Equation (4.8) shows that the effect of source k income on overall income inequality can be broken down into three components:

- a). The share of income component k in total income (captured by the term H_k)
- b). The inequality within the sample of income from source k (as measured by G_k)
- c). The correlation between source k income and total income (as measured by T_k)

It follows that the larger the product of these components, the greater the contribution of income from source k to overall income inequality. However, it should be noted that while H_k is always positive and less than one, G_k is always positive and may exceed one (if many of the source incomes are negative) and T_k can fall anywhere in the interval (-1, 1). When T_k is less than zero, income from source k is negatively correlated with total income and thus lowers the overall Gini measure for the sample.

Using this decomposition, it is possible to identify how much overall income inequality is due to a particular income source (farm, wages, remittances, pension and other). Assuming that additional increments of an income source are distributed in the same manner as the



original units, it is also possible to use this decomposition to ask whether an income source is inequality-increasing or not or whether an enlarged share of that income source leads to an increase or decrease in overall income inequality. On the basis of equation (4.9):

$$g_k = T_k \frac{G_k}{G} \quad (4.11)$$

where, g_k is the relative concentration coefficient of income source k in the overall income. From equation (11) it follows that income source k is inequality-increasing or inequality-decreasing according to whether g_k is greater than or less than unity.

Appendix 4.1: List of Villages Surveyed

Region / sub- region	Service center	Ward or Village & number of households surveyed	Village/Community CODE
Central			
Bochum	Bochum	Ext. ward 7:	
		<u>*Borkum (DilAEneng)=75</u>	C001
		<u>Gemarke=17</u>	C002
Seshego	Roodeput	Ext. ward 1:	
		<u>Opgaaf (Ghachokoe)=17</u>	C003
		Ext. ward 3:	
		<u>Louisiana (Gaphago)=17</u>	C004
	Moletjie	Ward 1:	
		<u>Vaalwater (Bloodriver)=18</u>	C005
		Ward 6:	
		<u>Moletjie-Moshate (Chief's Kraal)=17</u>	C006
Southern			
Schoonoord	Schoonord	Lordskraal:	
		<u>Lordskraal (Madibong)=17</u>	C007
		Paradys:	
		<u>Dingaanskop=17</u>	C008
	Strydkraal	Hoeraroep:	
		<u>Moskow (Gamashabela)=17</u>	C009
	B.B.Kloof	B.B. Kloof:	
		<u>Daljasofat=17</u>	C010
		Juglust:	
		<u>Zeekeoiegat (Serokolo)</u>	C011



	Steelpoortdrift	Degoedeverwachting:	
		<u>Eerstegeluk (Tukakglomo)</u>	C012
Praktiseer	Derdegelid	* <u>Derdegelid (Riba Cross)=75</u>	C013
		<u>Steelpoort (Drift Mashamothaie)=17</u>	C014
		<u>Bothashoek=17</u>	C015
		<u>Maandagshoek</u>	C016
Zebediela		Madisa-a-ditlovo=18	C017
		Tsantsabela	C018
		Moletlane=17	C019
Western			
Phalala-Mokelong	Beauty Planning Unit	<u>Shongwane=75</u>	C024
Palala-Mokelong	Bakenberg Planning Unit	<u>Mozambique=18</u>	C020
		<u>Haakdoorndraai=17</u>	C021
		<u>Vliegkraal=17</u>	C022
		<u>Vogelstruisfontein=17</u>	C023

**Note: Village No.12 moved to Praktiseer sub-region

Appendix 4.2: Household structure per village

VILLAGE	Average Household size	Child Adult Ratio	Average # of Migrants per household
Borchum (DilAEng)	7	0.68	1
Gemarke	9	0.24	1
Ga-Chokwe (Opgaaf)	7	0.34	0
Ga-Phoga (Louisiana)	6	0.69	1
Vaalwater (Bloodriver)	6	0.71	0
Chief's Kraal	6	0.26	0
Madibong (Lordskraal)	8	0.46	2
Dingaanskop (Mohlaetsi)	8	0.18	1
Ga-Mashabela (Moskow)	7	0.57	1
Daljasofat Ga-Nkwana)	8	0.95	1
Zeekoeigat (Serokolo)	7	0.50	0
Tukakgomo (Eerstegeluk)	6	1.17	1
Riba Cross (Derdeglid)	8	1.21	1
Steelpoort (Ga-Malekana)	6	1.25	1
Bothashoek	8	0.70	1
Maandagshoek (Boschoff Hospital)	7	1.40	1
Madisa-a-ditlovo (Magatle)	7	1.72	1
Tsantsabela (Elandskraal)	7	0.81	1
Moetlane (Zebediela)	9	1.24	2
Mozambique (Mapela)	9	0.84	1
Haakdoorndraai (Ga-Matlala)	9	1.85	2
Vliegkraal	8	0.24	1
Vogelstruisfontein	9	0.73	2
(Skrikfontein/Nyakelang)	8	0.92	1
Ga-Shongwane			
Total	7.4	0.78	1

Appendix 5 Basic infrastructure services and resource base profile of surveyed villages

1. Service / facility	% of resp	
Water supply (water)		
Always clean	29	
Usually clean	29	
seldom clean	21	
Never clean	21	
2. Education resources	% of Villages	Number of villages
Primary schools	100	24
Secondary Schools	79.2	19
Senior Secondary Schools	87.5	21
3. Health facilities		
Medical clinic within village	45.8	11
Medical clinic within reach village	91.7	22
4. Financial institutions		
Institutions within village	75	18
Institutions within easy reach of village	100	24
5. Post office	16.7	4
6. Police station	4.2	1

6: Access to and distance from main facilities

Village name	Hh with	Hh with	Hh with	Distance Railway station	to nearest bus station	Distance from village to nearest main infrastructure (SA Explorer GIS data-base) River	School	Main road	Railway
	access to electricity	good connectio	bad connectio						
	%	%	%	Km	Km	km	km	km	km
Borchum (DilAEneng)	98.6	98.6	0	97	0	1.24	0.07	17.16	61.09
Gemarkte				112	0	3.92	0.8	28.89	70.55
Opgaaf (Ga-Chokwe)				55	0	3.8	1.37	4.82	22.15
Louisiana (Ga-Phago)				60	0				
Vaalwater (Bloodriver)	100	100	0	21	0	2.84	1.81	1.92	2.64
Moletjie-moshate (Chief's Kraal)	100	94.1	5.9	38	0				
Madibong (Lordskraal)	70.6	64.7	5.9	97	67	7.3	1.06	23.36	37.14
Dingaanskop (Mohlaletsi)	5.9	0	5.9	94	12	1.1	0.45	22.48	46.35
Ga-Mashabela (Moskow)				94	12	3.59	0.99	8.42	38.64
Ga-Nkwana (Daljasofat)				89	15	1.23	1.35	15.25	54.24
Zeekoiegat (Serokolo)				n/a	0	0.65	0.82	13.78	27.32
Tukagomo (Eerstegeluk)				7	7	2.23	1.01	3.82	8.16
Riba Cross (Derdegelid)	74.3	71.4	2.9	15	0	11.03	1.21	12.68	29.71
Steelpoort (Ga-Malekana)	58.8	58.8	0	6	6	1.75	0.63	2.32	28.35
Bothashoek	100	100	0	10	4	8.34	1.17	3.12	27.86
Maandagshoek (Boschoff Hospital)	75	75	0	27	0	1.3	0.45	8.48	20.22

Rural inequality, migration and remittances

Madisa-a-ditoro (Magatle)	100	100	0	13	11	0.78	0.85	14.66	16.36
Tsantsabela (Elandskraal)	100	100	0	78	0	1.31	0.28	27.74	34.74
Moletlane (Zebediela)	94.4	94.4	0	5	3	4.96	0.84	2.16	2.98
Mozambique (Mapela)	100	5.9	94.1	68	20	3.24	1	4.18	21.8
Haakdoorndraai (Ga-Matlala)				68	8	1.08	0.23	30.77	60.18
Vliegkraal	23.5	23.5	0	60	0	4.68	0.29	13.42	41.78
Vogelstruisfontein (Nyakelang)	5.9	5.9	0	68	20				
Ga-Shongwane	100	5.3	94.7	150	0	2.48	2.48	26.02	42.97
					Mean Distance	3.28	0.91	13.59	33.1



7:Village Resource base		
Type of land	% villages with access	Main use of resource
Forest land	95.8	Fuel wood & fencing
Communal grazing land	95.8	Grazing & thatch grass
Government land	33.3	Grazing & fuel wood
9. Major environmental problems in the villages surveyed		
Environmental Problem	# of villages with problem	Average % of village land affected
Soil erosion by wind	23	19
Soil erosion by water	24	30.2
Soil sickness	11	36
Water logging	16	9.9
Salinity	10	9.5
Toxicity	4	5.5
Mining and quarrying	5	20

Source: Survey results, 2000

Appendix 8: Summary of Adult Equivalent asset base

Appendix 8: Summary of Adult Equivalent asset base

	adult equivalent hh property & dwelling	adult equivalent salaries & wages contribution (x12)	adult equivalent hh pension	adult equivalent total & size of property in ha	Total & size of property in ha	adult equivalent all assets (farm+hh items+livst)	adult equivalent hh wealth	adult equivalent value hh land	adult equivalent hh income incl. subs & rem.	adult equivalent total income excl. rem.	adult equivalent all remittances (goods + cash)	adult equivalent only cash rem.	adult equivalent rem. goods only	adult equivalent value of livestock	adult equivalent farm assets (excl. livst)	adult equivalent hh assets (egTV)
N	573	277	217	320	320	573	573	320	573	288	288	283	275	250	127	573
Mean	8451.1	3923.2	1713.6	0.5	2.3	3643.9	12569.1	758.4	3949.9	2013.0	2370.2	1938.7	487.1	3685.7	1908.4	1620.4996
Median	6338.0	2030.8	1344.8	0.4	1.7	920.3	8445.3	584.5	2586.2	976.6	1641.9	1335.8	305.2	803.8	2.2	536.6379
Std. Deviation	9737.0	7264.2	1090.9	0.5	1.8	9169.9	15302.6	697.8	5877.34	5033.3	3024.0	2597.4	694.6	8079.9	5813.3313	4723.9448
Skewnes	5.024	6.3	2.0	3.1	1.7	5.9	4.7	3.1	6.7	9.3	3.2	3.4	3.7	4.4	5.647	9.909
Minimum	92.8	122.5	166.2	0.0	0.0	.00	147.8	.1	0.0	0.0	0.0	0.0	0.0	5.6	0.15	0.0
Maximum	106417.	74482.8	6315.8	4.2	10.0	101978.7	180961	6250.0	74482.8	68222.2	25964.9	22807.0	5204.5	70093.6	49425.29	77056.68
Percentile 25	3159.4	1074.4	978.5	.3	1.0	255.7	4777.4	357.8	1316.2	51.2	417.1	263.2	55.4	166.3	.5277	141.6021
50	6338.0	2030.8	1344.8	.4	1.7	920.3	8445.3	584.5	2586.2	976.6	1642.0	1335.8	305.2	803.8	2.2305	536.6379
75	10854.4	4084.5	2119.6	.7	3.3	2582.6	15083.8	978.8	4713.6	2211.4	3143.0	2325.6	668.8	2724.0	155.0388	1431.7982

Source: Survey results, 2000

Appendix 9: Summary of sources of household income (Rand per annum)

		income: hh salary and wage earnings /year	income: hh pension income/ year	aginc + subsistence	income: value remittance s in kind	Remit cash	Cash remit+ goods	total remittance per capita	hh income incl. subsistence	Income: per capita total hh income
N		277	217	227	213	226	228	228	513	573
	Mean*	17289.23	7,701.59	3,322.04	3006.00	11635.91	14,156.07	2125.56	20096.17	2774.74
	Median	9600.00	6240.00	1250.00	2000.00	8800.00	11200.00	1576.25	14400.00	1733.33
	Std. Deviation	31607.54	3355.51	4277.62	3001.16	11184.90	12766.37	2337.01	26600.06	4134.14
	Minimum	840.00	1320.00	107.10	74.00	200.00	400.00	38.46	435.62	0.00
	Maximum	345600.00	21264.00	30475.52	26000.00	73600.00	99600.00	19733.33	345600.00	48857.14
Sum		4771944.00	1675584.00	594976.19	640277.00	2629716.00	3269993.00	484626.80	10309337.74	1589925.70
% of total		46.3%	16.3%	5.7%			31.7%		100%	
Percentiles	10	2400.00	4800.00	257.04	700.00	2400.00	3299.70	367.61	4800.00	0.00
	20	4200.00	6000.00	351.07	1100.00	4080.00	5680.00	620.28	6295.38	683.84
	30	6000.00	6240.00	476.27	1500.00	5400.00	7300.00	967.75	9079.90	1001.82
	40	7200.00	6240.00	825.30	1760.00	7200.00	9220.00	1221.67	12000.00	1349.43
	50	9600.00	6240.00	1250.00	2000.00	8800.00	11200.00	1576.25	14400.00	1733.33
	60	12888.00	6360.00	1553.10	2500.00	10080.00	12840.00	1845.71	17429.40	2260.95
	70	16800.00	7200.00	1929.14	3000.00	12550.00	15900.00	2276.50	21600.00	2907.20
	80	21290.40	12000.00	3205.49	4560.00	16400.00	20080.00	3052.00	26400.00	3795.55
	90	34800.00	12624.00	6447.23	6520.00	24000.00	28210.00	4084.57	36302.66	5864.00

Source: Survey results, 2000. * Mean for households receiving income from source. Mean total income will, thus not add-up