

APPENDIX 5 KWANDU CONSERVANCY¹

Table of contents

1. DEMOGRAPHICS	88
1.1 Gender	88
1.2 Location	88
1.3 Age	88
1.4 Education	88
1.5 Employment	89
1.6 Household income and other contributions to the household	89
1.7 The household head	90
2. LIVELIHOODS	91
2.1 Livestock	94
2.2 Crop production/gardening	95
3. NATURAL RESOURCE USE	97
3.1 NR contribution to livelihoods and cash income	97
3.2 NR utilisation by households	97
4. THE CONSERVANCY	99

List of graphs and tables

Graph 1 Age distribution.....	88
Graph 2 Main occupation of workforce (15–65, not at school)	89
Graph 3 Weighted average household income	90
Graph 4 Most important livelihood activities to households.....	91
Graph 5 Second most important livelihood activities to households	91
Graph 6 Third most important livelihood activities to households	92
Graph 7 Most important sources of cash income to households	92
Graph 8 Second most important sources of cash income to households.....	93
Graph 9 Third most important sources of cash income to households.....	93
Table 1 Annual income of (income-earning) household members	89
Table 2 Stock ownership, trading and income	94
Table 3 Crop production and income	96
Table 4 Number of households ranking resource utilisation as important (any rank).....	97
Table 5 Number of registered members per household (n=143).....	99
Table 6 Impact of conservancy on availability of natural resources for household use.....	100

¹ Figures reported include the purposive sample unless stated. Figures in brackets are those for the conservancy with the purposive sample excluded, where reported. These figures are only reported where there is a significant difference between the two groups.

1. DEMOGRAPHICS

1.1 Gender

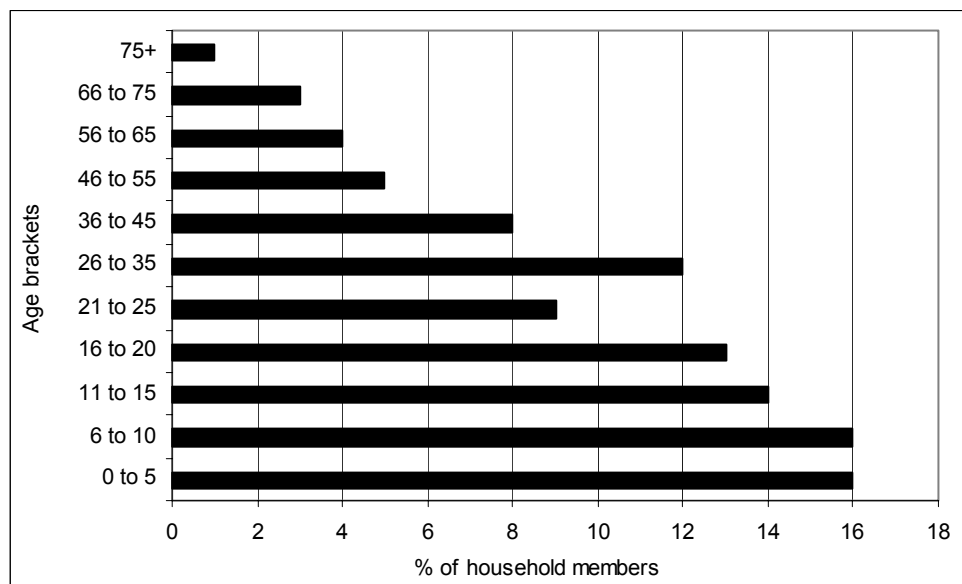
- 184 households responded representing 976 household members. (Excluding the purposive sample, analysis covers 165 households and 891 individuals.)
- 63% are male-headed households; 35% female de jure; and 2% female de facto.
- 47% of household members are male and 53% female.

1.2 Location

The average number of household members living in the household is five (median=5, ranging from one to 14); on average, no members live away (with a maximum of one member living away).

1.3 Age

Graph 1 Age distribution

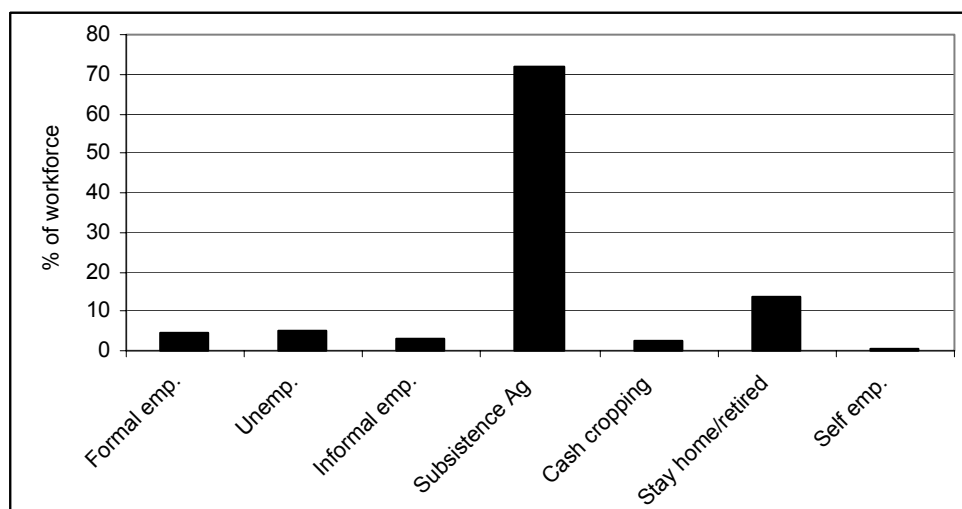


1.4 Education

- Of householders over 20 years of age, 31% have had no formal education; 21% have completed primary school as their highest level of education; 24% have completed Grades 7–9; and 24% completed Grades 10–12. Only 1% have completed any form of higher education.
- 36.9% of householders are currently in school.
- 21% of households have children not attending school because of an inability to afford school fees or other school-related costs. Of these households, 55% have only one child out of school; 29% have two; 13% have three; and 2% have five.

1.5 Employment

Graph 2 Main occupation of workforce (15–65, not at school)



1.5.1 CBNRM and tourism-related occupations

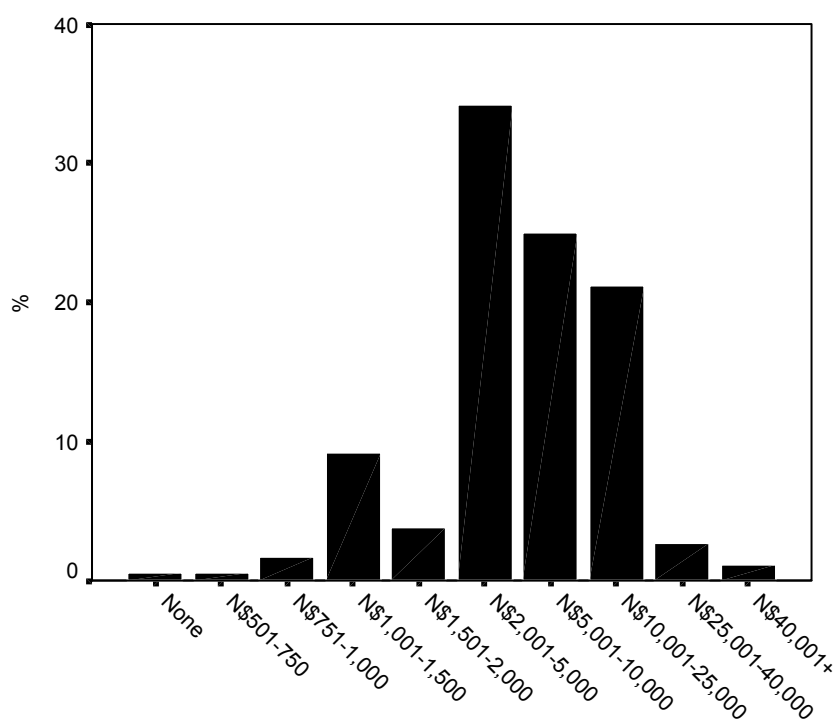
- Only four individuals are involved in CBNRM or tourism-related enterprises as their main occupation. One is a committee member and three are CGGs/CRMs/shepherds.
- Ten individuals work in this field as their secondary occupation – five committee members and five CGGs/CRMs/shepherds.

1.6 Household income and other contributions to the household

36% of household members over 16 years old stated that they had no income. Table 1 shows the annual income of the remaining 307 income-earning household members.

Table 1 Annual income of (income-earning) household members

Income bracket	% of respondents
<N\$100-250	0
N\$251-500	3
N\$501-750	6
N\$751-1,000	12
N\$1,001-1,500	16
N\$1,501-2,000	9
N\$2,001-5,000	21
N\$5,001-10,000	28
N\$10,001-25,000	3
N\$25,001-40,000	2
N\$40,001+	0

Graph 3 Weighted average household income²

- All but one households have a member contributing to cash income. Of these households, 25% have one cash contributor; 65% have two; 9% have three; and 1% have four (with one household (0.5%) having five cash contributors).
- All households receive contributions in kind. 21% of households receive contributions from one member; 68% from two members; 9% from three; 2% from four; and 1% from five members.
- 17% of households receive remittances (from someone living away). Of these households, 69% receive remittances from only one source; 22% from two; 3% from three; and 6% from four.
- 26% of households have a member(s) receiving a pension. Of these households, 75% have only one pensioner and 25% have two pensioners.

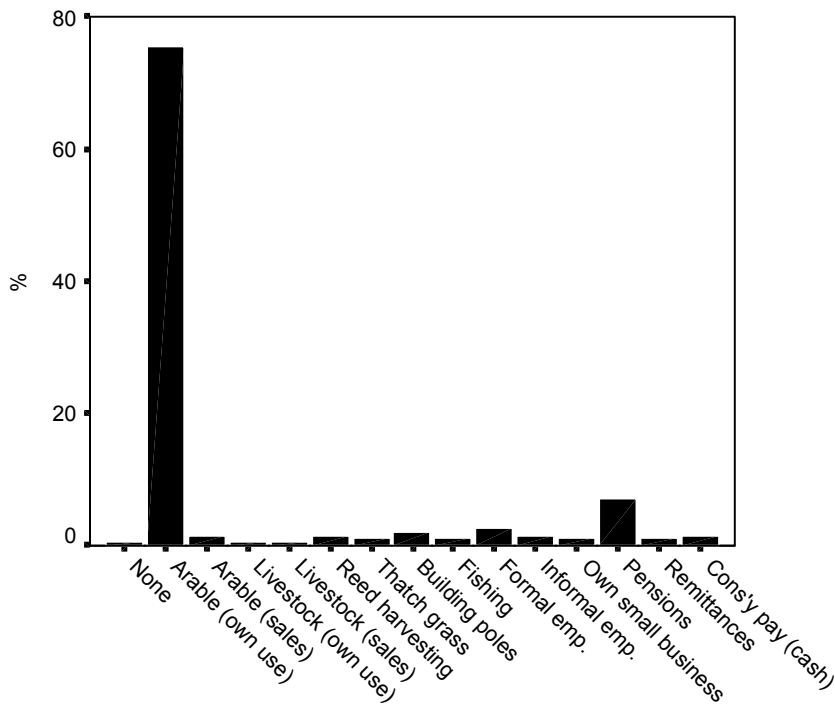
1.7 The household head

- 98% of household heads live in the household, with only 2% living away. 33% of household heads have had no formal education. 23% have completed primary school; 18% have completed Grades 7–9; and 26% Grades 10–12. One household head has completed any form of higher education.
- Only 5% of household heads are in formal employment; 3% are informally employed; 84% undertake subsistence agriculture; 3% are cash croppers; and 4% stay at home/are retired. One household head is unemployed and another is self-employed (both 0.5%).

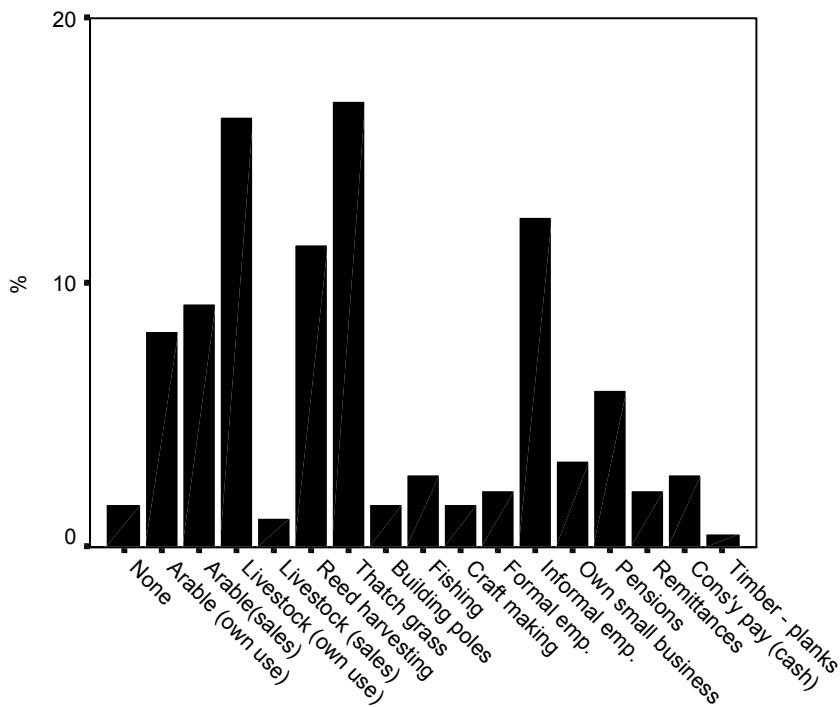
² Weighted average household income is the average income of households, excluding household members who do not earn income.

2. LIVELIHOODS

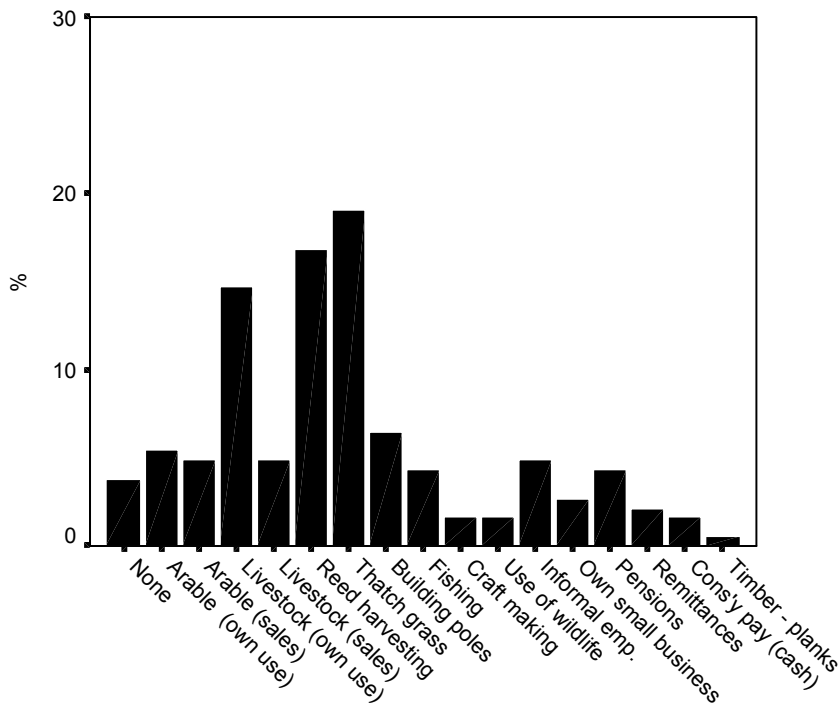
Graph 4 Most important livelihood activities to households



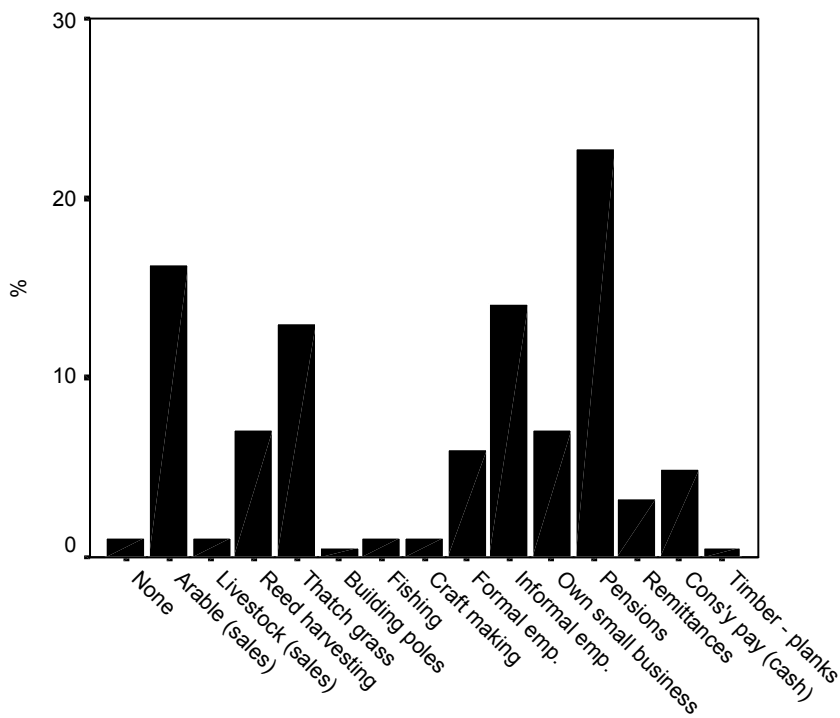
Graph 5 Second most important livelihood activities to households



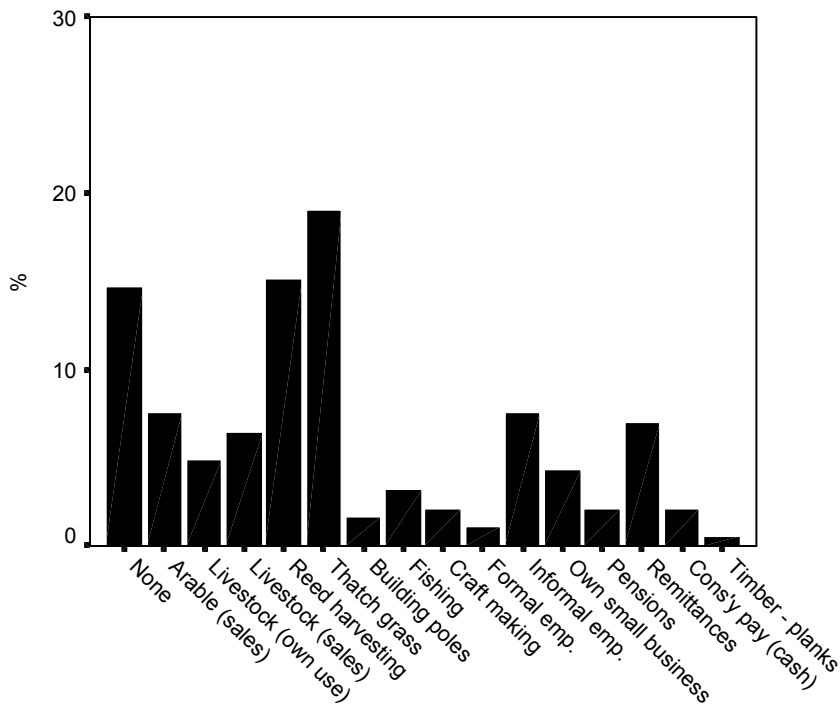
Graph 6 Third most important livelihood activities to households



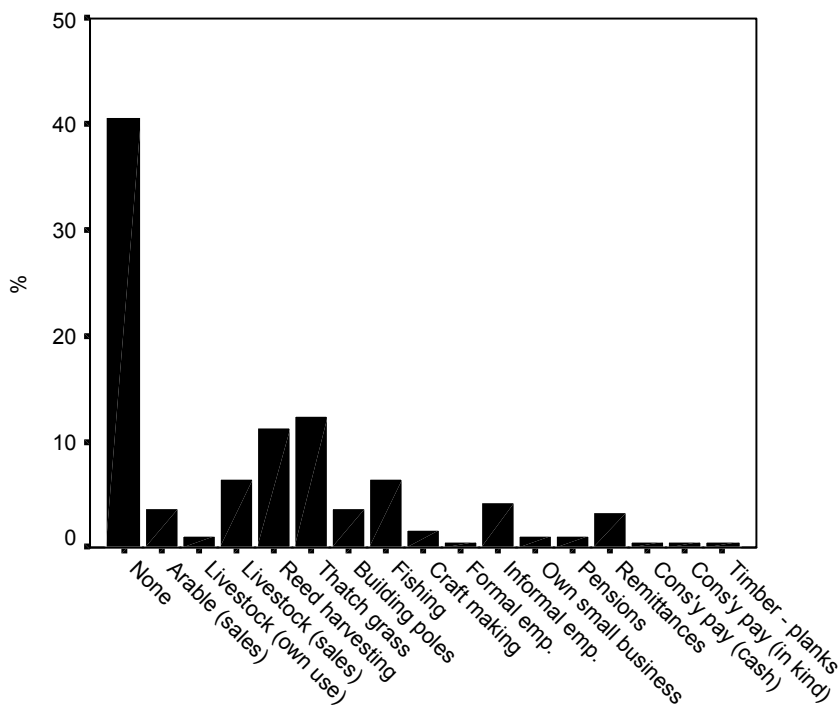
Graph 7 Most important sources of cash income to households



Graph 8 Second most important sources of cash income to households



Graph 9 Third most important sources of cash income to households



2.1 Livestock

83% of households own or have regular access to livestock (153 households).

Table 2 Stock ownership, trading and income¹

	Cattle	Goats	Poultry
Ownership			
No. of hhs	91	22	142
Mean (median)	8 (6)	5 (3)	11 (10)
Range	1-25	1-18	1-40
Purchases			
No. of hhs	15	2	29
Mean (median)	2 (2)	2 (2)	2 (1)
Range	1-4	2	2-15
Milk consumption			
No. of hhs	60	5	-
Mean (median)	2 (2)	2 (1)	-
Range	1-6	1-3	-
Meat consumption			
No. of hhs	1	4	87
Mean (median)	2 (2)	2 (2)	4 (3)
Range	2	2-3	1-13
Milk sales (N\$)			
No. of hhs	9	-	-
Mean (median)	32 (20)	-	-
Range	10-110	-	-
Meat sales (N\$)			
No. of hhs	2	3	21
Mean (median)	165 (165)	97 (70)	22 (20)
Range	130-200	50-170	2-100
Transport sales (N\$)			
No. of hhs	-	-	-
Mean (median)	-	-	-
Range	-	-	-
Live sales (N\$)			
No. of hhs	11	5	32
Mean (median)	1,291 (900)	132 (100)	27 (20)
Range	500-3,000	70-300	2-150
Losses to predators			
No. of hhs	14	3	56
Mean (median)	2 (1)	5 (3)	4 (3)
Range	1-4	2-10	1-15
Bartered			
No. of hhs	4	-	14
Mean (median)	2 (2)	-	2 (1)
Range	1-3	-	1-3

¹ Over the three months prior to the survey

- Multiple stock ownership: 20 households (11%) own both cattle and goats; 19 households (10%) own cattle, goats and poultry; 21 households (11%) own goats and poultry; and 80 households (44%) own cattle and poultry.
- Reasons most commonly cited for livestock sales were: to meet subsistence needs (56%); educational needs (31%); medical needs (8%); ceremonial needs (4%); and because a disease was killing the poultry (1%).

2.2 Crop production/gardening

97% of all households surveyed practised crop production or gardening.

Table 3 Crop production and income (over the 12 months prior to the survey) (Na = information not available)

	Maize	Sorghum	Millet	Pumpkin/ Squash	Beans	Groundnuts	Melons	Tomatoes	Green Veg	Other
Dryland area planted (ha)										
No. of hhs	174	52	21	55	57	23	57	4	8	1
Mean (median)	4 (3)	2 (2)	1.9 (2)	1.7 (1)	1.2 (1)	0.9 (1)	1.4 (1)	1 (1)	2.4 (1)	1 (1)
Range	0.3-10	0.5-6	0.5-5	0-6	0-4	0.1-4	0-5	0-2	0-10	1
Irrigated area planted(ha)										
No. of hhs	-	-	-	-	-	-	-	2	2	1
Mean (median)	-	-	-	-	-	-	-	2.6 (2.6)	2.6 (2.6)	Na
Range	-	-	-	-	-	-	-	2-4	0.1-5	Na
% consumed by hh										
No. of hhs	165	46	17	49	49	15	50	6	9	2
Mean (median)	78 (100)	83 (100)	88 (100)	75 (80)	80 (100)	91 (100)	88 (100)	85 (100)	71 (100)	80 (80)
Range	5-100	20-100	45-100	10-100	5-100	5-100	30-100	40-100	20-100	60-100
Crop sold (N\$)										
No. of hhs	21	3	-	1	6	-	-	2	3	1
Mean (median)	786 (300)	273 (100)	-	75 (75)	63 (45)	-	-	350 (350)	933 (500)	500 (500)
Range	120-3,000	0.3-720	-	75	15-150	-	-	200-500	400-1,900	500
% damage (wild animals)										
No. of hhs	132	31	13	27	35	9	26	-	4	1
Mean (median)	38 (30)	32 (25)	48 (40)	44 (30)	47 (35)	86 (95)	44 (35)	-	58 (55)	10 (10)
Range	2-100	2-90	20-100	10-100	10-100	60-100	10-100	-	20-100	10
% destroyed (domestic animals)										
No. of hhs	94	21	10	22	13	1	21	-	1	-
Mean (median)	20 (10)	10 (5)	11 (10)	20 (10)	32 (20)	20 (20)	28 (20)	-	5 (5)	-
Range	1-80	1-40	1-30	5-70	5-80	20	5-100	-	5	-
% destroyed (pests)										
No. of hhs	3	9	9	-	-	4	-	1	1	-
Mean (median)	5 (5)	40 (20)	32 (10)	-	-	46 (40)	-	30 (30)	10 (10)	-
Range	1-10	1-100	1-100	-	-	5-100	-	30	10	-

- Damage caused by wildlife was attributed to: elephants (39%); warthog (29%); monkeys (9%); spring hare (7%); antelope (5%); porcupine (4%); hippo (4%); and birds (1%).
- Reasons for selling crops were cited as: meeting subsistence needs (53%); educational needs (31%); medical needs (10%); and ceremonial needs (5%). (Excluding the purposive sample, these figures are 53%; 31%; 12%; and 5%.)

3. NATURAL RESOURCE USE

3.1 NR contribution to livelihoods and cash income

The NR contributing most to livelihoods is thatch grass – ranked as important by 77% of households (of whom, almost 50% ranked it as their first or second most important activity). Reed harvesting is also important, ranked by 62% of households (of whom, 50% rank it as one of their top three activities). Building poles are also ranked by many households (40%), but generally not very highly. Fishing displays a similar pattern.

Reed harvesting also provides a useful source of cash income for 52% of households – approximately 44% of these ranked it as their first or second most important source of cash income. Thatch grass contributes to 67% of households' income (of whom 80% ranked it as in the top four contributing activities). Fishing is also an important income generator, providing 28% of households with income (of whom, almost 80% ranked it as one of their top four sources of cash).

Table 4 Number of households ranking resource utilisation as important (any rank)

Resource	Livelihood	Cash income
Reed harvesting	114	96
Thatch grass harvesting	141	123
Building poles	74	38
Fishing	76	52
Craft making	16	13
Wildlife utilisation	51	0
Timber for planks	2	2

3.2 NR utilisation by households³

- Firewood: All households utilise firewood, averaging 96% consumption by the household. 15% of households barter approximately 20% of their collection.
- Timber for poles: 53% of households utilise timber for poles, consuming on average 96% within the household. 8% of these households (or 4% of all households) sell timber (N\$200 worth), but none is bartered/given away.
- Reeds: 63% of households utilise reeds (approximately 76% within the household). Just over half sell reeds (average value N\$273). Only one household barter with reeds (approximately 5% of their collection).
- Papyrus: 46% of households utilise papyrus – consumption within the household averaging 88%. 29% of these households (or 13% of all households) sell some papyrus (average value N\$110) and 4% (or 2% of all households) barter with papyrus (average of 8% of collection).

³ In the 12 months prior to the survey

- Thatching grass: 70% of households collect thatch grass, consuming on average 70% of that harvested within the household. Of these households, 69% (or 47.8% of all households) sell an average of N\$222 worth of thatch grass. Only one household barter with thatch (15% of their harvest).
- Palm leaves: Only one household collects palm leaves; all is consumed within the household.
- Medicinal plants: 16% of households collect medicinal plants, consuming on average 95% of that collected within the household. 10% of these households (or 2% of all households) sell medicinal plants for an average of N\$313 and a further 7% of these households (or 1% of all households) barter using medicinal plants (25% of that collected).
- Edible plants: 52% of households utilise edible plants – consuming on average 91% of that harvested within the household. Of these households, 8% (or 4% of all households) sell edible plants (on average N\$33 worth). 24% of the households (or 13% of all households) barter/give away edible plants (on average 25% of that collected).
- Mushubu: Only 2% of households (3 households) utilise mushubu. None is sold or bartered/given away.
- Birds: 2% of households utilise birds (3 households). None is sold or bartered/given away.
- Reptiles: Only 1% of households (2 households) utilise reptiles; all is consumed within these two households.
- Fish: 80% of households utilise fish resources, consuming on average 89% of their catch within the household. 21% of these households (or 17% of all households) sell fish – for an average of N\$134. Almost 10% (or 8% of all households) barter/give away fish (approximately 16% of the household catch).
- Large mammals: No large mammals are utilised.
- Small mammals: No small mammals are utilised.
- Insects: Only 1% of households (two households) utilise insect resources, consuming all harvested within the household.
- Honey: Only one household collects honey, consuming 80% of that gathered within the household. The remaining 20% is bartered/given away.

Of these resources, more than 50% of respondents believed the firewood, mushubu and fish were in sufficient abundance to withstand more people harvesting. (48% of respondents thought that there were enough reeds for more people to harvest). Of the remaining resources, the majority were unsure of the status of the resource (i.e. answered ‘Don’t know’ or ‘Not applicable’), but among those who did venture an opinion, the majority believed that there was enough of each of the other resources to withstand more people harvesting. The notable exception to this was palm leaves. Of the 22% who offered an opinion on the state of this resource, 15% believed there was not enough to withstand more people harvesting, in comparison to 6% who believed there was enough. For more information on HWC, see tables re: livestock keeping and cropping/gardening.

Only 10% of households own hunting equipment and only 3% have free access or are able to rent hunting equipment. 19% of households own a mokoro/canoe; 20% can access one for free; and 5% are able to rent one. 35% of households own fishing equipment; 4% can access it for free; and 3% can rent equipment.

4. THE CONSERVANCY

78% of households are aware that there is a conservancy in their area. Table 5 shows the number of registered members in these households.

Table 5 Number of registered members per household (n=143)

Number of members/hh	% of households
0	73
1	8
2	12
3	1
4	3
5	1
6	1
7	1

- The three most commonly cited roles and responsibilities for members were: to attend meetings (40%); to provide information to the community (18%); and to look after wild animals (9%) (n=45). (Excluding the purposive sample, these figures are: to attend meetings (56%); to provide information to the community (24%); and no responsibilities other than to be registered (8%); n=25.)
- 36% of respondents (n=143) believed they knew what the roles and responsibilities of various committee members were. (Excluding purposive sample, this figure is 26%; n=124.)
- 17 households have member(s) who undertook paid work for the conservancy over the three months prior to the survey. They worked on average 48 days (range 1–90) for an average salary of N\$784 (range: N\$20–1,650). (Excluding the purposive sample, one household undertook paid work for five days and was paid N\$60 for this work.)
- 11 households provided unpaid labour to the conservancy over the three months prior to the survey, averaging 12 days work (2–32 days). (Excluding the purposive sample, one household provided three days unpaid labour to the conservancy.)
- 3% of households (4 households) made contributions in kind or in cash to the conservancy during this time. (Excluding the purposive sample, three households contributed in cash or in kind to the conservancy.)
- 37% of households are aware of the conservancy management plans and the same proportion were consulted (n=143). (Excluding the purposive sample, 27% and 29% respectively; n=124.)
- 32% of households are aware of the conservancy constitution and 35% of households were consulted. (Excluding the purposive sample, 21% and 27% respectively.)
- The most commonly cited advantages of the conservancy to the community were: the protection/sustaining of wildlife (55%); provision of jobs to the community (12%); and no advantages (9%) (n=143). (Excluding the purposive sample: protection/sustaining of wildlife 58%; provision of jobs to the community 11%; and no advantages 11%; n=124.)
- The three most commonly cited advantages of the conservancy at household level were: no advantages (49%); to teach household members new things (18%); and the provision of jobs to household members (11%) (n=143). (Excluding the purposive sample: no advantages 57%; to teach households new things 17%; protection of animals 9%; n=124.)

- The most commonly cited disadvantages of the conservancy to the community were: wild animals killing livestock (26%); no disadvantages (24%); and elephants brought into the area damaging water points/gardens (13%) (n=143). (Excluding purposive sample: no disadvantages 23%; wild animals killing livestock 23%; and elephants brought into the area damaging water points/gardens 14%; n=124.)
- The most commonly cited disadvantages of the conservancy at household level were: no disadvantages (48%); wild animals killing livestock (33%); and that it contributes to household poverty (11%) (n=143). (Excluding purposive sample: no disadvantages 48%; wild animals killing livestock 33%; and that it contributes to household poverty 11%; n=124.)

Table 6 Impact of conservancy on availability of natural resources for household use*

NR	None (%)	Negative (%)	Positive (%)	DK/NA (%)
Firewood	46	14	19	22
Timber	37	11	27	25
Reeds	53	9	13	26
Papyrus	44	10	17	29
Thatching grass	38	14	23	25
Medicinal plants	36	7	17	40
Edible plants	47	20	10	23
Birds	7	24	47	22
Reptiles	14	26	34	26
Fish	50	11	15	25
Large mammals	14	25	36	25
Small mammals	7	26	42	26
Honey	41	15	17	27

* Totals may not add to 100 due to rounding. Results are not reported where DK/NA is greater than 50%.