

APPENDIX 6 MAYUNI CONSERVANCY¹

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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

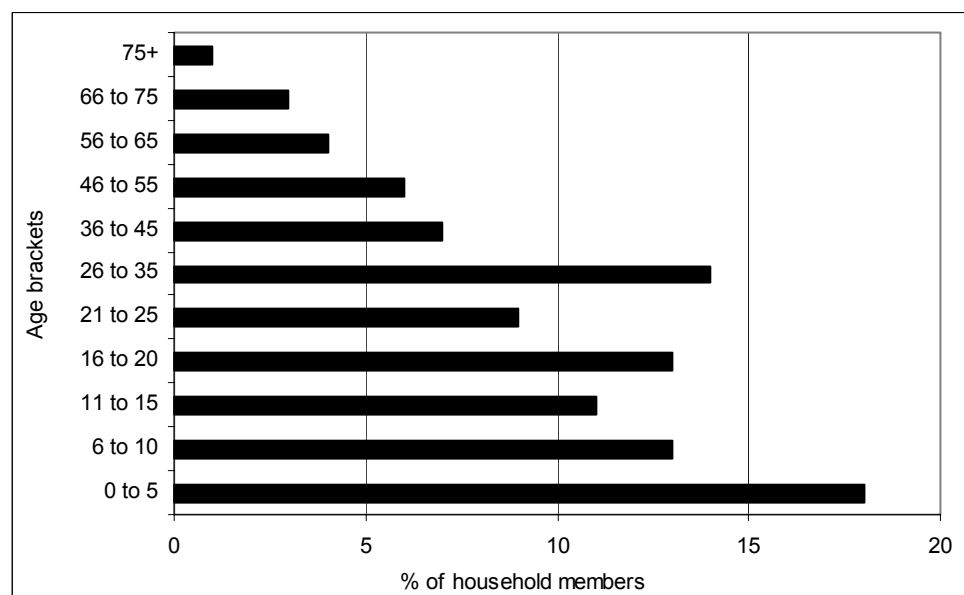
- 183 households responded (representing 872 household members). (Excluding the purposive sample, the analysis covers 165 households and 787 individuals.)
- 58% are male-headed households; 39% female de jure; and 3% female de facto. (Excluding the purposive sample, these figures are 56%; 41%; and 3%, respectively)
- 50% of household members are male and 50% female.

1.2 Location

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

1.3 Age

Graph 1 Age distribution

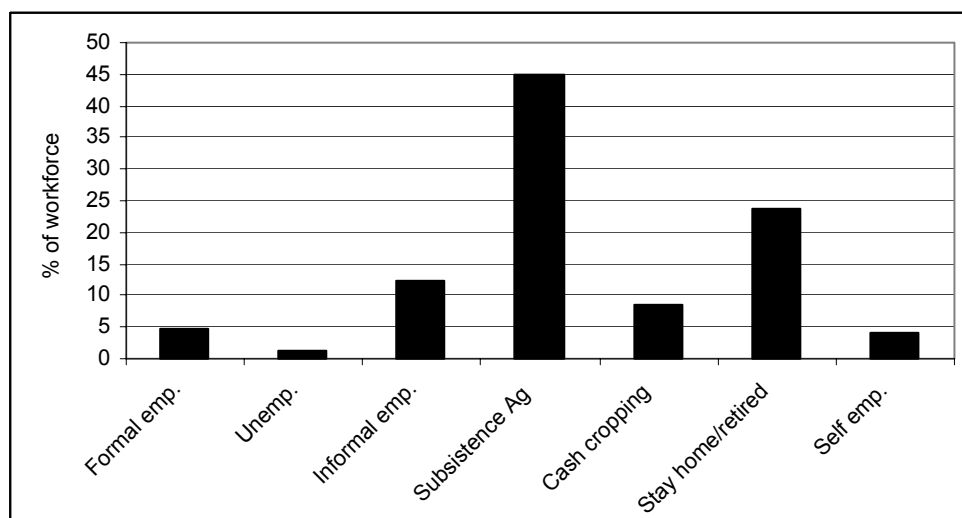


1.4 Education

- Of the householders over 20 years old, 33% have had no formal education. 24% have completed primary schooling, as their highest level of education; 19% have completed Grades 7–9; and 24% Grades 10–12. Only 0.5% have completed any form of higher education (0.3% don't know). (Excluding the purposive sample: these figures are 36%; 23%; 19%; 22%; 0.6%; and 0.3%.)
- 31% of householders are currently in school.
- 26% of households have children not attending school because of an inability to afford school fees or other school-related costs. Of these households, 71% have one child out of school; 19% have two; 8% have three; and 2% have five.

1.5 Employment

Graph 2 Main occupation (16–65, not at school)



1.5.1 CBNRM and tourism-related occupations

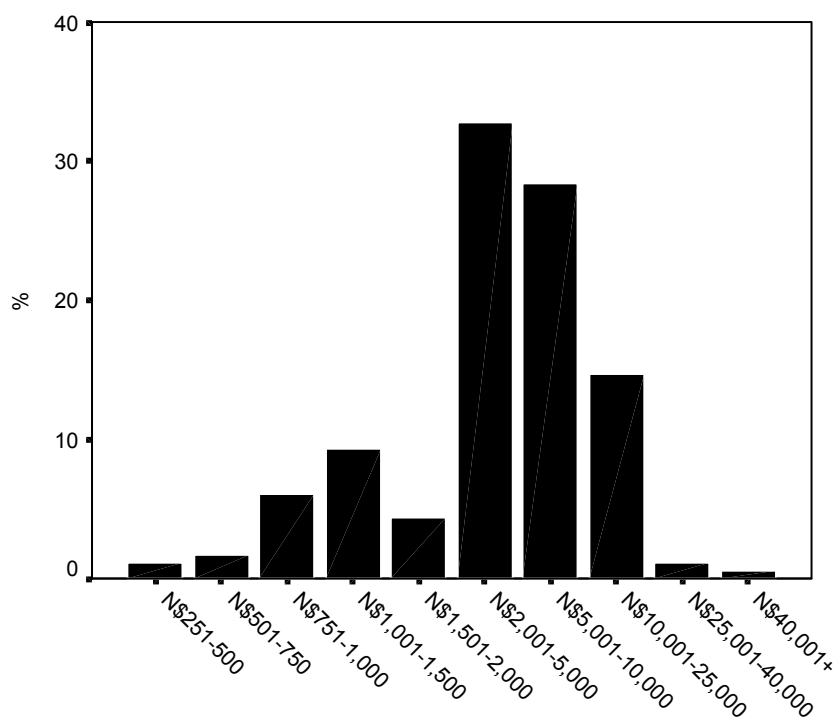
- 25 individuals work in CBNRM and tourism-related enterprises as their main occupation. Six are conservancy committee members; nine are CCGs/CRMs/shepherds; five are employed at a private lodge/campsite; two work at the community campsite; and three have an own enterprise (selling crafts to tourists).
- Only four individuals have secondary occupations: one being a CCG/CRM/shepherd; two working at a private tourism enterprise; and one having an own enterprise (selling crafts to tourists).

1.6 Household income and other contributions to the household

40% of household members 16 years and older stated that they had no income. Table 1 illustrates the income distribution of those earning income.

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

Income bracket	% of respondents
<N\$100-250	0
N\$251-500	5
N\$501-750	5
N\$751-1,000	11
N\$1,001-1,500	17
N\$1,501-2,000	11
N\$2,001-5,000	28
N\$5,001-10,000	19
N\$10,001-25,000	4
N\$25,001-40,000	0
N\$40,001+	0

Graph 3 Weighted average household income²

- 100% of households have at least one member contributing to cash income. 44% have one contributing member; 50% have two; 6% have three; and 1% four.
- 99% of households receive contributions in kind. Of these, 36% receive from one member only; 58% from two members; 6% from three members; and 1% from four members.
- Only 15% of households receive remittances (from someone living away). Of these households, 89% receive from only one member; and two, three and four members each send remittances to 4% each. (Excluding the purposive sample, 13% of households receive remittances, of which 96% receive from one member and 5% from three members.)
- 23% of households in Mayuni have member(s) receiving a pension. Of these 42 households, 81% have one pensioner; 17% have two pensioners; and 2% (one household) has eight pensioners.

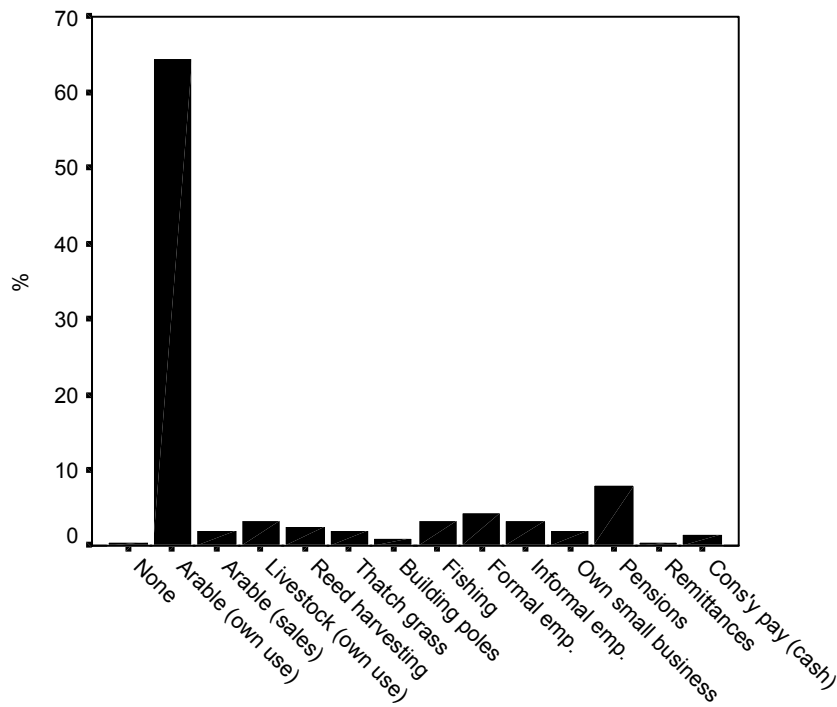
1.7 The household head

- 99% of household heads live in the household, with only 1% living away. 37% of household heads have had no formal education. 25% have completed only primary school; 18% have completed Grades 7–9; and 21% Grades 10–12. None have completed any form of higher education.
- Only 6% of household heads are in formal employment. 11% are informally employed; 63% undertake subsistence agriculture as their main occupation; 14% are cash croppers; 2% stay at home/are retired; and 4% are self-employed (one household head is still at school.)

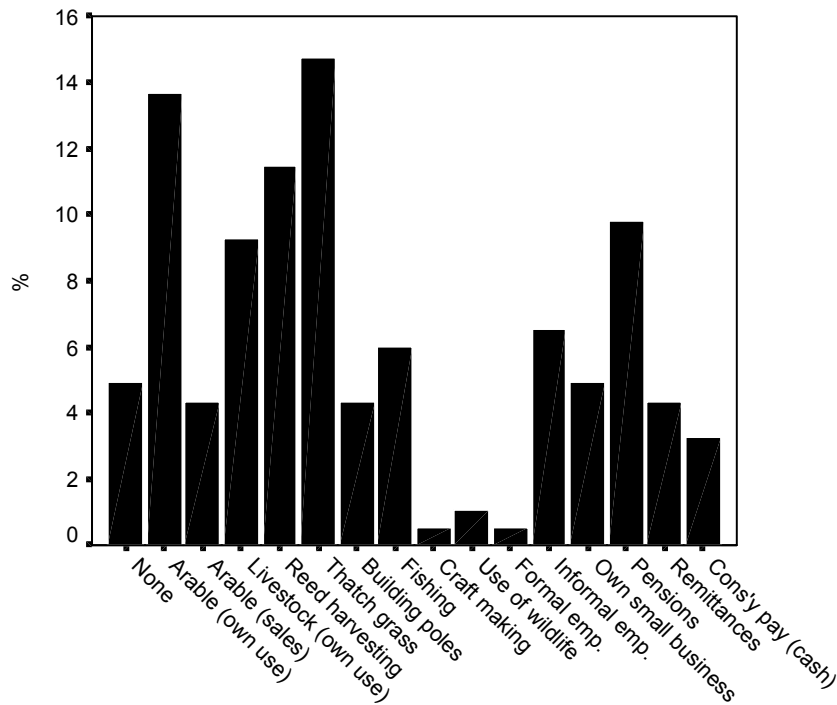
² Weighted average household income is the average income of households, excluding household members who do not earn income.

2. LIVELIHOODS

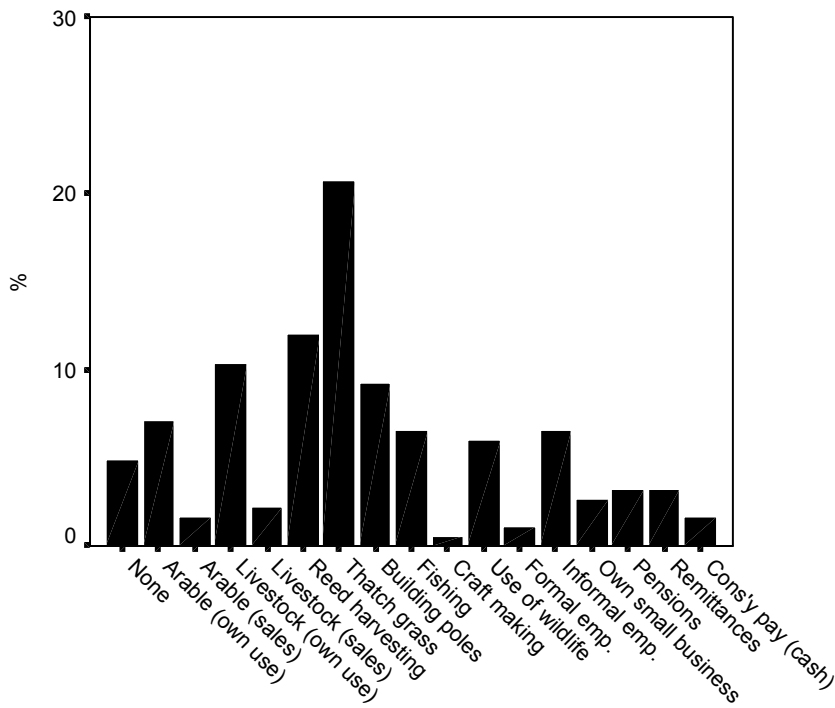
Graph 4 Most important livelihood activities to households



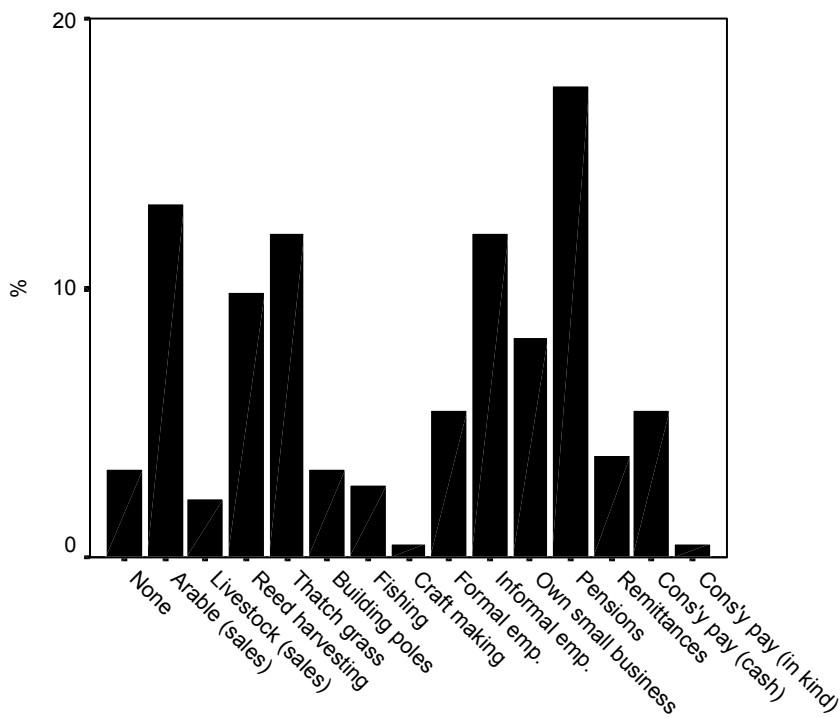
Graph 5 Second most important livelihood activities to households



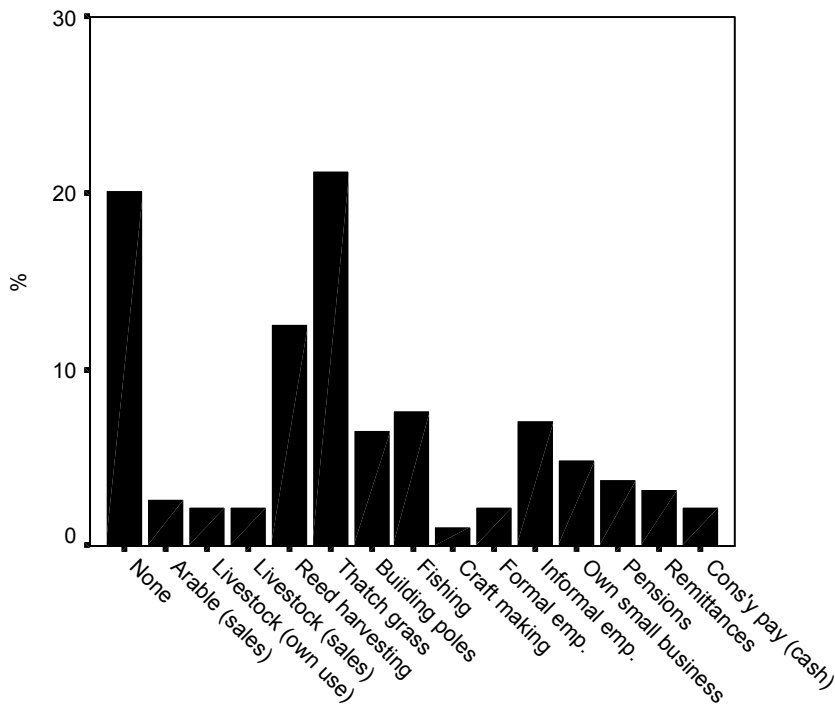
Graph 6 Third most important livelihood activities to households



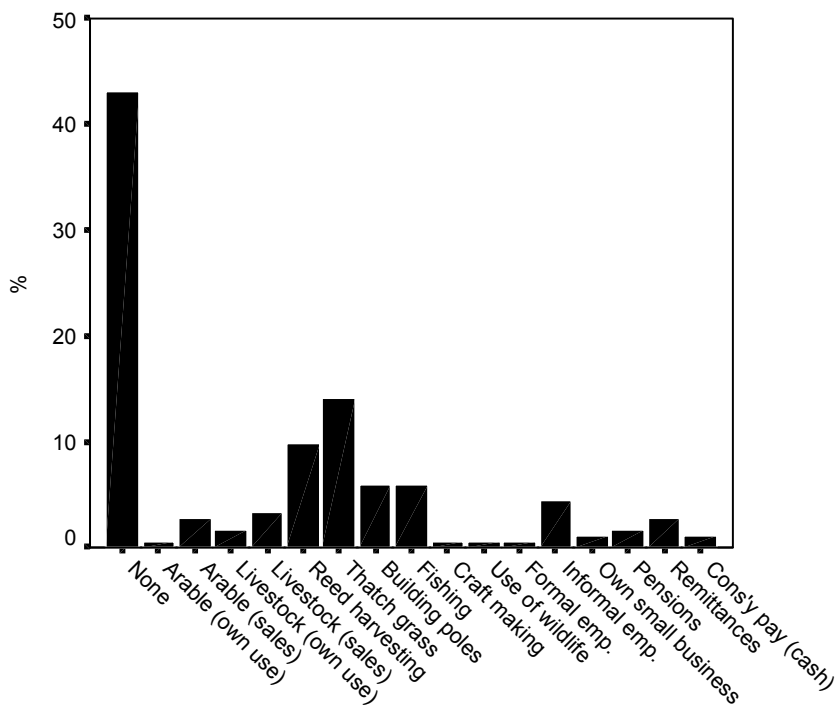
Graph 7 Most important sources of cash income to households



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

78% of households own or have regular access to livestock (142 households).

Table 2 Stock ownership, trading and income¹

	Cattle	Goats	Poultry
Ownership			
No. of hhs	55	14	129
Mean (median)	13 (8)	6 (6)	12 (10)
Range	1-62	1-16	1-120
Purchases			
No. of hhs	9	4	24
Mean (median)	3 (1)	2 (2)	2 (2)
Range	1-10	1-2	1-6
Milk consumption			
No. of hhs	37	3	-
Mean (median)	3 (3)	2 (1)	-
Range	1-12	1-3	-
Meat consumption			
No. of hhs	3	4	74
Mean (median)	5 (3)	2 (2)	3 (2)
Range	3-10	1-3	1-18
Milk sales (N\$)			
No. of hhs	9	-	-
Mean (median)	39 (20)	-	-
Range	10-100	-	-
Meat sales (N\$)			
No. of hhs	3	2	14
Mean (median)	897 (900)	170 (170)	10 (3)
Range	N500-1,200	90-250	1-40
Transport sales (N\$)			
No. of hhs	-	-	-
Mean (median)	-	-	-
Range	-	-	-
Live sales (N\$)			
No. of hhs	10	2	36
Mean (median)	828 (790)	120 (120)	35 (30)
Range	700-1,200	100-140	10-140
Losses to predators			
No. of hhs	7	2	38
Mean (median)	5 (2)	2 (2)	4 (3)
Range	1-18	1-3	1-20
Bartered			
No. of hhs	1	-	18
Mean (median)	2 (2)	-	2 (2)
Range	2	-	1-6

¹ Over the three months prior to the survey

- Multiple stock holdings: 40 households own both cattle and poultry (24%); 8 households own cattle and goats; 8 households own goats and poultry; and 5 households own cattle, goats and poultry.
- Reasons for livestock sales are: to meet subsistence needs (51%); educational needs (31%); medical needs (12%); and ceremonial needs (5%). One household sold stock because its oxen was sick. (Excluding the purposive sample: 51%; 30%; 13%; 5%; and one household.)

2.2 Crop production/gardening

93% (93) of all households surveyed practised crop production or gardening.

Table 3 Crop production and income (over the 12 months prior to the survey)

	Maize	Sorghum	Millet	Pumpkin/Squash	Beans	Groundnuts	Melons	Tomatoes	Green Veg	Sugar Reed
Dryland area planted (ha)										
No. of hhs	163	70	32	33	33	6	43	8	9	1
Mean (median)	3.1 (2)	2.4 (2)	2.1 (1.5)	1.9 (2)	1.1 (1)	0.9 (1)	1.4 (1)	3.3 (1)	2.7 (2)	0.9 (0.9)
Range	0.5-14	0.5-10	0.5-7	0.1-5	0-4	0.5-1	0-5	0-10	1-10	0.9
Irrigated area planted (ha)										
No. of hhs	-	-	-	-	-	-	-	2	4	-
Mean (median)	-	-	-	-	-	-	-	0.5 (0.5)	1 (1)	-
Range	-	-	-	-	-	-	-	0-1	0-2	-
% consumed by hh										
No. of hhs	140	52	20	23	25	4	36	10	12	1
Mean (median)	80 (100)	84 (100)	72 (63)	70 (75)	85 (100)	86 (98)	72 (78)	93 (100)	91 (100)	100 (100)
Range	5-100	15-100	10-100	5-100	10-100	50-100	0.3-100	50-100	20-100	100
Crop sold (N\$)										
No. of hhs	15	1	2	2	2	-	1	3	3	-
Mean (median)	715 (480)	480 (480)	165 (165)	125 (125)	48 (48)	-	60 (60)	1,109 (300)	1,678 (20)	-
Range	50-2,800	480	130-200	50-200	40-55	-	60	28 (3,000)	15-5,000	-
% damage (wild animals)										
No. of hhs	110	42	18	14	16	1	23	-	-	1
Mean (median)	50 (50)	55 (60)	61 (60)	64 (70)	48 (33)	15 (15)	46 (30)	-	-	30 (30)
Range	5-100	10-100	25-100	25-100	10-100	15	10-100	-	-	30
% destroyed (domestic animals)										
No. of hhs	59	18	11	8	2	-	11	2	-	-
Mean (median)	26 (20)	27 (15)	27 (30)	20 (13)	60 (60)	-	23 (10)	25 (25)	-	-
Range	1-100	5-89	5-50	5-50	20-100	-	5-100	10-40	-	-
% destroyed (pests)										
No. of hhs	14	10	8	-	1	-	1	-	-	-
Mean (median)	13 (3)	55 (65)	52 (45)	-	100 (100)	-	10 (10)	-	-	-
Range	10-100	2-100	5-100	-	100	-	10	-	-	-

- Damage by wild animals was attributed to: elephants (47%); warthog (18%); monkeys (7%); porcupine (6%); spring hare (6%); baboon (4%); hippo (4%); and antelope (4%); buffalo (2%); and birds (1%).
- Reasons cited for selling crops were: to meet subsistence needs (48%); educational needs (23%); ceremonial needs (21%); and medical needs (8%).

3. NATURAL RESOURCE USE

3.1 NR contribution to livelihoods and cash income

Reed harvesting and thatch grass harvesting contribute to livelihoods of a large proportion of households in Mayuni. Of those who utilise reeds, almost 50% ranked it as their first, second or third most important livelihood activity. The results for the utilisation of thatch grass were almost the same. Half of the 57 households who fish (31% of households) consider fishing to be one of their three most important livelihood activities. Of the households who utilise wildlife (22% of households), none ranked it as their most important activity.

In terms of contribution to cash income, of those who utilise reeds, almost 50% ranked it as their first or second most important source of cash income. For those who sell thatch grass (61% of households in the conservancy), 90% ranked it as one of their top four cash-earning activities. Of those households who sell fish (23% of households), 70% ranked it as one of their three most important sources of cash. Only one household ranked wildlife utilisation as contributing to cash income – as their third most important source of cash income.

Table 5 Number of households ranking resource utilisation as important (any rank)

Resource	Livelihood	Cash income
Reed harvesting	100	84
Thatch grass harvesting	135	111
Building poles	86	50
Fishing	57	42
Craft making	6	6
Use of wildlife	41	1

3.2 NR utilisation by households³

- Firewood: All households utilise firewood, consuming on average 95% within the household. Only one household sells firewood (N\$220), though 16% barter it (averaging 30% of their collection).
- Timber for poles: Just over half of all households utilise timber for poles, consuming on average 96% within the household. 12 households (7% of total households) sell timber (averaging N\$198), with none bartering/giving any away.
- Reeds: 53% of households collect reeds. Of these households, 48% (or 24% of all households) sell reeds (average value N\$214), with only two households (2%) (or 1% of all households) bartering/giving it away.
- Papyrus: 65 households (36% of total households) utilise papyrus, consuming over 90% on average within the household. Small amounts are sold (25% of utilising households or 10% of all households; average value of sales N\$73) and bartered (6% of utilising households or 2% of all households; 14% of papyrus collected).
- Thatching grass: 57% of households harvest thatch grass. They consume on average 78% within the household. 54% of these households (or 31% of all households) sell

³ Over the 12 months prior to the survey

reeds – for an average of N\$232. Only 6% of these households (or 2.2% of all households) barter/give away thatch (only 20% of that collected).

- Palm leaves: Only five households (3% of total) collect palm leaves. All is consumed within the household; none is traded or bartered.
- Medicinal plants: 19% of households utilise medicinal plants, consuming almost all within the household. Only one household sells medicinal plants (for N\$60) and two households barter approximately 25% of their collection.
- Edible plants: 38% of households collect edible plants; 90% is consumed within the household. 10% of these households (or 4% of all households) sell small amounts (N\$21) and 29% (or 11% of all households) barter approximately 24% of their collection.
- Mushubu: Three households utilise mushubu, consuming all within the household.
- Birds: Only two households utilise birds, all within the household.
- Reptiles: No reptiles are utilised.
- Fish: 67% of households utilise fish resources (approximately 92% of which is consumed by the household). 15% of these households (or 10% of all households) sell fish (N\$124) and 12% (or 8% of all households) barter/give fish away (approximately 20% of their catch).
- Large mammals: No large mammals are utilised.
- Small mammals: No small mammals are utilised.
- Insects: 8 households (4% of total) utilise insects, consuming on average 97% within the household. One household sells N\$30 worth of insects and one household barter 5% of its stock.
- Honey: 7 households collect honey, consuming all of it within the household.

More than 50% of households believe that the following NRs are in sufficient abundance to withstand increased harvesting: firewood, timber, reeds, papyrus, thatching grass, medicinal and edible plants, mushubu, birds, reptiles, fish and both large and small mammals. For more information on HWC, see tables re. livestock keeping and cropping/gardening.

20% of households own hunting equipment; 2% have free access to hunting equipment; and 1% rent hunting equipment. 14% of households own a mokoro/canoe; 13% have free access; and 7% rent. 31% of households own fishing equipment; 5% have free access; and 3% rent.

4. THE CONSERVANCY

72% of households are aware that there is a conservancy in their area (131 households). (Excluding the purposive sample, 69% of households, n=113.) Table 5 shows the number of registered members per household of those aware of the conservancy.

Table 5 Number of registered members per household of those aware of the conservancy

Number of members/hh	% of households
0	77
1	15
2	5
3	1
4	1
5	1
9	1

- The three most commonly cited roles and responsibilities for members were: to look after wild animals (30%); to attend meetings (18%); and to provide information to the community (15%) (n=33). (Excluding purposive sample: to attend meetings (33%); to look after wild animals (25%); to help combat illegal poaching (17%); and no responsibilities other than to be registered members (17%); n=12).
- Only 29% of respondents (n=131) knew what the roles and responsibilities of various committee members were. (Excluding purposive sample: 20%; n=113.)
- 20 households have member(s) who undertook paid work for the conservancy in the three months prior to the survey, averaging 60 days work (range 3–90). Average total estimated income for this work was N\$966 (range: N\$240–1,452). (Excluding purposive sample, only three households have member(s) working for the conservancy – for an average of 40 days (range 10–90) and for an average income of N\$1,067 (range N\$500–1,350).)
- Nine households (5% of total) did unpaid work for the conservancy in the three months prior to the survey, averaging nine days unpaid service (range 1–28). (Excluding purposive sample: six households have a member(s) doing unpaid work, on average 12 days (range 1–28).)
- Seven households (4% of total) contribute in kind or in cash to the conservancy. (Excluding purposive sample: five households (3%) contribute cash or in kind to the conservancy.)
- 23% of households are aware of the conservancy constitution and 23% were consulted (n=131). (Excluding purposive sample: 12% and 15%; n=113.)
- The three most commonly cited advantages of the conservancy to the community were: protection/sustaining of wildlife (35%); no advantages (18%); and bringing development to the community (13%) (n=131). (Excluding purposive sample: protection/sustaining of wildlife (32%); no advantages (23%); bringing development to the community (15%); n=113.)
- The three most commonly cited advantages of the conservancy at the household level were: no advantages to the household (55%); teaching household members new things (15%); and protection of animals/wildlife (9%) (n=131). (Excluding purposive sample: no advantages (66%); teaching household members new things (15%); and protection of animals/wildlife 9%); n=113.)
- The three most commonly cited disadvantages of the conservancy to the community were: no disadvantages (25%); wild animals killing livestock (24%); and elephants brought into the area damaging water points/gardens (16%) (n=130). (Excluding the purposive sample: wildlife killing livestock (28%); no disadvantages (24%); and elephants brought into the area damaging water points/gardens (12%); n=112.)
- The most commonly cited disadvantages of the conservancy at the household level were: no disadvantages (51%); wild animals killing livestock (29%); and elephants brought into the area damaging water points/gardens (4%) (n=130). (Excluding the purposive sample: no disadvantages (51%); wild animals killing livestock (30%); elephants brought into the area damaging water points/gardens (3%); and contribution to household poverty (3%); n=112.)

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

NR	None (%)	Negative (%)	Positive (%)	DK/NA (%)
Firewood	50	15	14	21
Timber	35	20	22	23
Reeds	44	15	15	26
Papyrus	48	14	9	28
Thatching grass	40	18	20	23
Medicinal plants	28	14	18	40
Edible plants	46	21	9	24
Birds	14	26	38	22
Reptiles	16	25	34	25
Fish	48	13	13	27
Large mammals	11	26	37	26
Small mammals	15	31	29	25
Honey	34	16	19	31

* Totals may not add to 100 due to rounding. Results not reported for those resources where DK/NA sum to greater than 50%.