



Cattle and cropping

While livestock production (cattle) has been identified by some (for example, Ashley and Lefranchi 1997) as an important activity, the contribution that cattle make to household income is less significant than pensions, crop sales or the sale of natural resources. Cattle are highly valued for a variety of reasons and provide a measure of security, but they clearly are less important for some as a regular source of income. Cattle are extremely important in terms of crop production, however, providing draught power and enabling larger areas of crops to be cultivated. Cattle sales may be less important as an overall source of income but they undoubtedly make an important contribution to livelihoods. Ashley and Lefranchi (1997), for example, state that livestock (cattle) and cropping are high priorities in terms of income security and food. That cattle and cropping remain the 'bedrock' of livelihoods is important for a number of reasons. Cattle in particular offer a degree of security, for cash, consumption and cultural reasons. Cattle are referred to as a 'bank account', in that they serve as an investment and as reserves in times of need. The importance of cattle can be illustrated by reference to the different wealth groups identified by Suich (2003). Cattle holding is a clear indicator of livelihood security for Caprivian households and people will invest in cattle when the opportunity arises. WILD research records three cases of people investing the money they earned through campsite employment and craft sales in cattle. The hiring out of cattle for cultivation purposes is commonplace.

Ninety-four per cent (or 465 households) of households surveyed (n=496) practised crop production or gardening; 79% of households either owned or had access to an ox-plough (Suich 2003). This compares with the 1999 MAWRD survey⁷, which indicated that in 89% of the area they surveyed, oxen was used for land preparation. It would appear that relatively few households cultivate grains using hand hoe techniques. The use of draught power accounts for the average areas cultivated being 2-3 ha (Suich 2003). In addition to ploughing, draught animals can be used for weeding purposes, and they can provide manure for gardens. The most labour-intensive activities involved in cropping are land preparation (ploughing), weeding, fertilising, and harvesting and threshing. Although the size and composition of households will affect labour arrangements and hence the amount of land cultivated, it is generally accepted that it is the ownership of cattle that has the greatest influence on crop production. Some people have their own oxen and ploughing equipment, while others hire or borrow this service. The MAWRD (1999) survey recorded that less than 50% of households owned ploughing equipment; and 19% of households prepared their fields only by using hand hoes. MAWRD no longer provide a ploughing service. At a

workshop held in Mayuni Conservancy, it was reported that most people use their own local seed and do not use fertilizer. It is normal practice for the seeds to be obtained from previous years' harvests. This was confirmed by MAWRD (1999); "very few households reported using the improved seed types" and only two households applied any fertilizer (n=146) (cited in Murphy and Mulonga 2002a). A number of factors play an important role in the successful production of crops. These include protecting crops from damage by wildlife, access to land, labour, draught power, and markets (see Jones *et al.* 2003).

Summary:

- Cattle in particular offer a degree of livelihood security, for cash, consumption and cultural reasons.
- Cattle holding is a clear indicator of livelihood security – three households purchased cattle from CBNRM-related incomes.
- Cattle ownership has the greatest influence on crop production (resulting in large areas under cultivation: 2-3 ha average).
- 94% of all households surveyed practised crop production or gardening.
- 89% of households use oxen for cultivation purposes.

Natural resource use

Natural resource harvesting (reeds and thatch grass) are seasonal activities, they provide material for the annual repair of housing and courtyards, but they are also materials that have a cash value. The most important natural resources are reeds and thatch grass: these are used for home consumption, but are also sold. Other natural resources include plant-based foods (wild fruits and water lilies), and palm (which is used for craft production: Murphy and Suich 2003, and Suich and Murphy 2003 provide details of the role of craft production for livelihoods). For some, wild animals (for example, duiker, warthog, impala and springhares) provide an additional source of food security and are occasionally sold. Mulonga 2003 provides a description of the role of these resources for livelihoods (see also Chapter 6 of this volume). In Caprivi, fish are also an important resource, providing for food and incomes (see Purvis 2002a and 2002b, and Tvedten *et al.* 1994). What is notable about the use of natural resources is that these provide a measure of security in terms of food and income, especially for poorer households. The barriers to entry (i.e. engaging in natural resource harvesting) are minimal. They require little more than the knowledge required to find the resources, and to harvest and the time invested in their collection and or processing. A broad range of wild plant resources are found in the Caprivi Region. Many of these have a potential commercial value in either the cosmetics or beverage industries. Among those that are currently either being exploited for commercial purposes or have known properties

⁷ The MAWRD survey (1999) was conducted in Muyako, Kalimbeza, Lusesse, Batubaja and Makango areas of Caprivi. These are similar in terms of the characteristics of people's livelihoods to the study areas of WILD.



in the southern African region are: marula (*Sclerocarya birrea*); wild date palm (*Phoenix reclinata*); monkey orange (*Strychnos pungens*); sausage tree (*Kigalia Africana*); African mangosteen (*Garcia Livingstonei*) and baobab (*Andersonia digitata*) – see Mulonga 2003 for further details.

Summary:

- Natural resource harvesting is mostly seasonal.
- Most important resources are reeds and thatch.
- Wild animals provide an additional source of food security and sometimes cash.
- Fish are also important for livelihoods – in terms of food and for small enterprise.
- The barriers to entry for natural resource harvesting are minimal.
- Natural resources are particularly important to poor households.
- A wide variety of plant-based products found – some with commercial values as yet unexploited.

Cash incomes

Formal employment does *not* provide a significant opportunity for many rural people in Caprivi. The WILD/EEU survey found that only 4.8% of individuals (n=1,060) of working age reported that their primary occupation was formal employment. Chapter 8 addresses the issue of employment in tourism in detail. Only 14 individuals or just over 1% of those of working age⁸ randomly sampled across the three conservancies were engaged in tourism-related employment. WILD survey data (Suich 2003) indicates that 36% of individuals (over the age of 16) had no income. This compares with an earlier national census, which identified for 1991 that in Caprivi just over half the population aged over 15 had no sources of income. For those that do earn some kind of income, the WILD/EEU data

showed that the *average individual* annual income was N\$3,795, although over half of the income earners were earning less than N\$2,000 and 28% were earning less than N\$1,000. Only 22% of earners were in the average income range (Table 7).

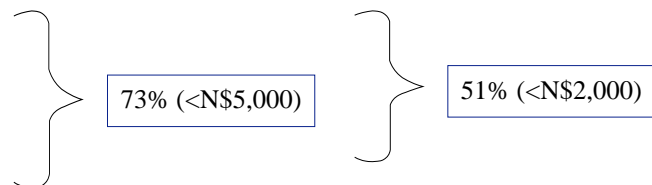
Analysis of the figures in Table 7 indicates that 73% of income earners earn less than US\$1.70 a day, with 51% earning less than US\$0.68 per day⁹. This finding is comparable with data collected by MAWRD from seven villages during 1996 and 1997. The average household income was N\$3,036. Taking inflation into account this amounts to N\$4,953 average household income at 2002 prices¹⁰ (or approximately US\$1.70 per day). These figures are lower than those indicated by the WILD/EEU survey which, based on there being 1,060 income-earning individuals spread across the 496 households surveyed, indicates an average household income of just over N\$6,500 and an average annual income per earner of a little over N\$4,500.¹¹

Table 8 illustrates the difference between various income sources based on the WILD/EEU survey.

When evaluating cash incomes it is important to recognise that in some cases it is the frequency of incomes and not the absolute amounts that are important as these provide a higher degree of income security. Seasonal activities for example, reed harvesting and sales or crop production and grain sales only offer seasonal cash injections. While at these times the incomes can be significant, and in the case of crop production can contribute to further investment in production, these activities do not provide for the regular financial needs of households, for example, for the purchase of food items.

Table 7: Annual income of (income-earning) household members in Caprivi

Income bracket	% of respondents
<N\$100-250	3
N\$251-500	8
N\$501-750	6
N\$751-1,000	11
N\$1,001-1,500	14
N\$1,501-2,000	9
N\$2,001-5,000	22
N\$5,001-10,000	20
N\$10,001-25,000	4
N\$25,001-40,000	1
N\$40,001+	0



⁸ Working age refers to all those between the ages of 16 and 65.

⁹ Using an exchange rate of N\$8: US\$1, the poverty line (US\$1 per day) is calculated at N\$2,920 per annum (March 2003 exchange rates).

¹⁰ Average inflation between 1996 and 2002 was 8.5% (Bank of Namibia, Annual Report 2002).

¹¹ The analysis of incomes was conducted by Dilys Roe of IIED using the data sets provided by WILD.



Table 8: Caprivi: Average household incomes from different sources¹²

Source of income	Average amount (N\$)	% of average hh income (N\$6,500)
Cropping & gardens		
Maize sales	916	14
Tomato sales	413	6.3
Livestock		
Cattle (live sales)	1,071 ¹³	16.4
Poultry sales	96	1.4
Natural resources		
Reeds	263	4
Thatch grass	229	3.5
Tourism employment	6,000	92
Pensions	3,000	46

Ranking exercises carried out during the WILD/EEU survey broadly support the income distribution as represented in Table 8. The majority of respondents gave priority to pensions, followed by cropping and then the sales of natural resources. Pensions were also ranked as important during qualitative work with households time and again citing them as the most *important* sources of cash income. This is likely because they offer a steady or regular source of income, rather than single large injections of cash. Cattle sales provide access to larger amounts of cash but these are not significant for the poorer members of the conservancies.

Remittances from household members living in urban areas account for a contribution to incomes for 21.9% of households surveyed by WILD (Suich 2003). In 67.9% of cases this came from a single individual. In one conservancy in Caprivi which has actually paid out cash from its own revenues, each village received N\$2,000 and N\$2,500 over the two years, less than the average annual income per household. The total amount paid out in 2001 was N\$36,000. The estimated total population for Salambala Conservancy is 8,000 people, meaning that if an individual payout was made to each resident, they would only get N\$4 each (or N\$8 if the payout was made to the estimated 4,000 conservancy members). This is at present obviously an insignificant amount, but in this case most of the villages used the money for some small development project purpose (see Mulonga and Murphy 2003 for further details).

Summary:

- Formal employment is *not* a significant opportunity for majority – only 4.8% of individuals of working age reported primary occupation as formal employment.
- 1% of those of working age were engaged in tourism-related employment.
- 36% of individuals (over the age of 16) had no income.
- Average household income is just over N\$6,500 and an average annual income per earner of a little over N\$4,500.
- 73% of income earners are on less than N\$5,000 per year.
- It is the frequency of incomes, *not* the absolute amounts, that are important as these provide a higher degree of income security.
- Pensions, cropping and natural resources are the most important sources of cash.

Differentiation and wealth

In Caprivi there are many factors that differentiate households from one another. These may relate to status and educational attainment, or political position in the context of local lineage groups and the traditional authority structures, or position within other institutions, including the conservancy. Differences may also relate to employment status, income levels and crop acreage or livestock holding. In wealth-group ranking exercises carried out in Mayuni and Salambala Conservancies¹⁴ it was clear that participants themselves in both cases identified cattle ownership as the most important criterion that leads to wealth differences. Those who were most secure or ‘those who have’ (*“Baliwanina ahulu”*) were those who had a large number of livestock (>30), and/or had salaried full-time employment. This group constituted between 14% and 20% of individuals who participated in these workshops (n=40). Interestingly they did not need to rely on any other persons (family) to support themselves. The next most secure or wealthy group (*“Baliwanina”*) were those who had some cattle (<30), and had access to a pension. This group constituted between 36% and 38%. The poorest group identified (44%-48%) did not own any cattle, relied on the pensions of another family member, and clearly had no kin support, being identified as a widow(er)s or those without parents or children (Murphy 2002a).

¹² Average refers to all the total income derived from a particular source divided by the number of respondent households who cited receiving income from that source.

¹³ Sales for three-month period only.

¹⁴ For details of the methodology used see Annex 3, Table 1, Section A3.1.4, see also Murphy 2002a, and 2002b.



Table 9: Differences between wealth-ranked groups in Caprivi

Total each category (n=573 households ¹⁶)	63% (n=363)	31% (n=178)	6% (n=32)
Aspects of wealth	% of least secure hhs	% of middle hhs	% of most secure hhs
Male-headed hhs	55	64	94
Hhs with children out of school due to financial constraints	22	17	6
Hhs with no formal education	32	20	9
Main occupation: formal employment	4	6	12
Hhs receiving pensions (one or more members)	23	35	22
Hhs who practise cropping/gardening	92	99	91
Hhs who own/have access to stock	76	100	100
Contribution to livelihoods: Reeds	52	51	38
Contribution to livelihoods: Thatch grass	72	65	31
Contribution to livelihoods: Building poles	41	48	20
Contribution to livelihoods: Crafts	6	10	6
Contribution to livelihoods: Wildlife	28	22	9

Source: Adapted from Suich 2003

Other sources (MAWRD 1999; Ashley and Lefranchi 1997; and Suich 2003) also lend support to the above findings. Cattle ownership is a key indicator in Caprivi for differentiating households as secure or insecure. On this basis survey data from the WILD/EEU survey was analysed according to the extent of cattle holding. The following table (Table 9) illustrates the relationship between cattle holding and other factors.¹⁵

Table 9 illustrates some key differences between groups. Firstly, the households with most cattle are more likely to be male-headed. They have had more formal education; they are twice as likely to have some kind of formal employment than the middle wealth groups and three times more likely than the poorest. Interestingly all groups are involved in cropping and gardening. The middle group, however, are more involved with cropping, generally combined with slightly larger field sizes than both the rich and poor groups (Suich 2003: 19), though all groups cultivate the same types of crops. Also of interest in the context of this work is the extent to which there are differences between rich and poor in terms of the contribution that natural resources make to their livelihoods. In the case of plant-based resources (reeds, thatch grass, building poles) they make a greater contribution to the livelihoods of those with the least number of cattle. With crafts it is the middle group who report them making a greater contribution (perhaps reflecting that to produce craft requires an investment in time not available to the very insecure).

The difference between the most secure and least secure groups in terms of the contribution of wildlife to livelihoods is also significant. Among the least secure group 101

households (or 28% of the insecure group) ranked wildlife use as important to livelihoods. This compares with 39 households (or 22%) among the middle group and only three households (9%) among the most secure group. These findings are supported by other purposive samples carried out in Caprivi (see Mulonga 2003). Survey data also indicates that the most secure group tends to use comparatively small amounts of natural resources (timber, reeds, palm leaves, medicinal plants and edible plants), but that when they do use these they are more likely to trade these resources (particularly reeds, thatch and fish). When this group sells these resources they tend to sell them for considerable higher average values than the poorer groups.¹⁷

In terms of household incomes, not all households are involved in the same mix of livelihood activities or to the same extent. Different households will rely more or less on one or another or a combination of income sources. It is therefore difficult to generalise about the extent to which one or another activity will contribute to a particular household's income. What the WILD survey data does illustrate, however, is the relative value of the different options available to households. Cattle sales, for example, are most significant in terms of the average amounts raised (see Table 8).¹⁸ However, not all households have cattle and certainly not enough for regular or frequent sales (for those owning cattle, average holding is only 13 animals (Suich 2003: 32)).

Among the richer group there tend to be better links with institutions. In terms of the WILD/EEU data this reveals that the rich are more likely to be aware of the conservancy and its management plans (where these have been

¹⁵ The divisions were based on the following numbers owned: 0-5 cattle = poor; 6-30 cattle = between rich and poor; and 31+ cattle = rich.

¹⁶ The data presented in the table includes data from the Caprivi purposive sample. This adds a further 77 households to the data set from those involved directly in the conservancy activities and tourism.

¹⁷ From the survey data it was unclear why this would be so, but the issue requires further research.

¹⁸ It should be noted here that the figures for cattle sales relate to a three-month period only. It is not known whether these three months represent all the cattle sales over the year, or whether this level of sales would be expected to occur in each three-month period (in which case the income figure would be multiplied by four to show the annual income).