Cusseque/Cacuchi - The People

This factsheet is based on data collected between 2012 and 2013. The quantitative data source is the TFO Socio-Economic Baseline Survey (SEBS), which included 237 households in the village (*Aldeia*) of Cacuchi, including the neighbourhoods (*Kimbos*, in original Chokwe) of Tzuia, Camue, Kankuikui, Liazemba and Cacuchi, each with its own land and traditional authority (*Soba*) (Fig. 1). *Kimbo* Cacuchi is the most recently established Kimbo. The village of Cacuchi is located approximately 20 km north of the Cusseque core site, half way to the small town of Chitembo. Qualitative data were collected in TFO's Cusseque core site, which consists of the villages Calomba, Cahololo (or Sovi) 1, Cahololo (or Sovi) 2, and Cusseque, each with its own Soba but also with one Big Soba (*Soba grande*) responsible for all 4 villages. The data collection methods consist of interviews and focus groups on farming practices with key informants, especially knowledgeable farmers and men/ women of the community (N= 16).

Table 1: General information and key figures.

Total number of households	Total number of individuals/ population size
237	1,566
Average household size	**Ratio of children : adults : seniors**
7	0.59 : 0.39 : 0.01
Average age for total population	**Median education level adult (age>18) population**
21 years	No formal education
Dependency ratio*	**Sex ratio for total population***
159.31	93.33
Child-woman-ratio*	
946.02	

*** Definition of the indicators in Electronic Appendix**

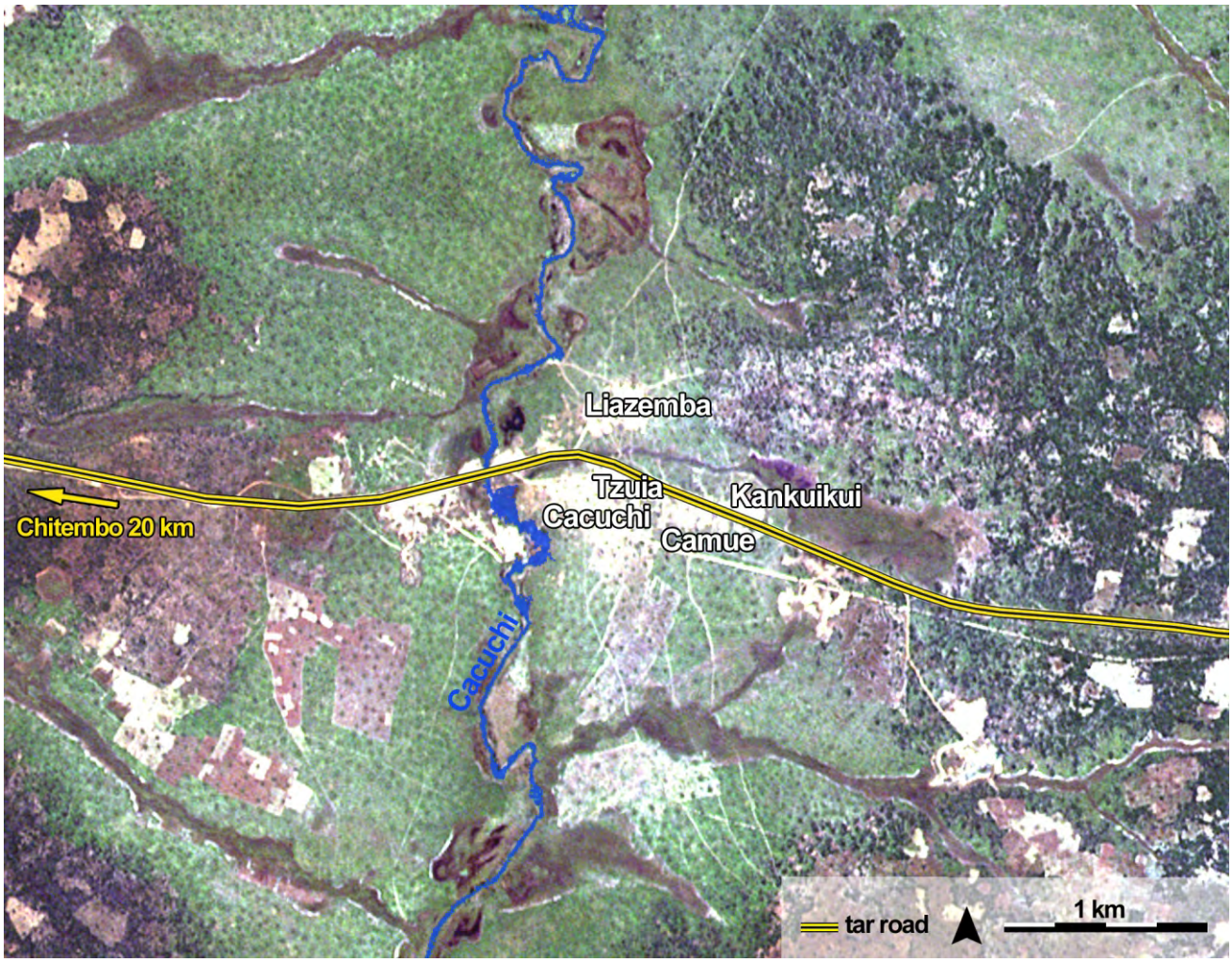

Fig. 1: Location of the village of Cacuchi, with its five *Kimbos*, 20 km north of the core site of Cusseque. Map designed by Jan Wehberg.

In: Oldeland, J., Erb, C., Finckh, M. & Jürgens, N. (2013) [Eds.]: Environmental Assessments in the Okavango Region. – Biodiversity & Ecology **5**: 73–80. DOI: 10.7809/b-e.00250.

Analysis of livelihood strategies

This section presents livelihood strategies of the inhabitants of Cacuchi. The livelihoods options are not very diverse. Most of the residents in this rural area practice arable farming based on a system of shifting cultivation. Other options include regular employment (notably in the nearby small town of Chitembo), business, livestock keeping (large and small stock), use and/or retail of natural resources (especially charcoal, game and honey), and wage labour. Households combine these different options to secure their livelihoods. This strategy may vary from one household to another. In order to identify existing livelihood strategies, we conducted a cluster analysis based on the following six variables representing livelihood options in Cacuchi:

- Does the household practice agriculture or horticulture? (Y/N)
- Does the household own any livestock? (Y/N)
- Does the household own cattle? (Y/N)
- Does the household sell or exchange natural resources? (Y/N)
- (Amount of) Annual household cash income from employment
- (Amount of) Annual household cash income from private businesses.

Main livelihood strategies in the Cacuchi core site society

Common to all households in the sample is the full reliance on arable farming and generally very limited access to cash. As is typical for many societies based on a system of shifting cultivation, lifestyles, wealth and education levels are relatively homogeneous in the village of Cacuchi. However, our analysis reveals the existence of small diversification paths which suggest that the society of Cacuci may be changing (Tab. 2). Based on these diversification paths, we identified six strategies which can be organized into three wealth categories.

A first category includes better-off households, who show similar signs of wealth, traditionally possess low numbers of small livestock (including pigs and poultry) and make intensive use of natural resources. This well-off category, representing only 10% of the households, are long-established in the area and located in older Kimbos than the more recently established Kimbo of Cacuchi. Within this category, a first very small cluster (*1 - Employed urbanites*) consists of households regularly receiving a relatively high salary for the area. The second better-off cluster (*2 - Income earning farmers with cattle*) is slightly larger and consists of the only households owning cattle, which mostly belong to the Nganguela ethnic group. Some households generate cash income through employment, business or retail of natural resources (e.g. honey), which is then probably invested in the large and small livestock.

A second category shows households with an intermediate level of wealth but still a strong use of natural resources. This category includes the largest cluster (*3 - Typical middle-class smallholder*) in the site. Its households combine arable farming with retail of agricultural products and natural resources. These typical activities are complemented to a limited extent by private business and formal employment to generate cash, which is sometimes reinvested in small numbers of small farm animals. In comparison, the next groups are slightly less well-off. Cluster four (*4 - Emerging rural self-made men*) consists of younger, better educated and small households. They are similar to those of cluster 3, but have less wealth assets (no small livestock) and only a few have a higher income from business activities. The last cluster of this category (*5 - Poor small-holders*) is also similar to cluster 3. Households have very few small farm animals, but do not sell natural resources for a living and have a more limited access to cash. This can be explained in part by the fact that 40% of the households in this group are headed by women, while typical income activities from natural resources such as charcoal making, hunting and honey making are activities dominated by men.

The last category is characterized by poverty in terms of assets, access and use of natural resources, as well as cash income. This category is made up of one cluster (*6 - Disadvantaged newcomers*) and represents 10% of the households, which are mostly headed by women. This cluster potentially represents the most vulnerable population and is mostly recently established in the Kimbo of Cacuchi. In a few extreme cases, households conduct no farming at all.

Characteristics of households in each of the six livelihood strategy clusters

	(1) Employed urbanites	(2) Income earning farmers with cattle	(3) Typical middle-class smallholders	(4) Emerging rural self-made men	(5) Poor small-holders	(6) Disadvan-taged new-comers	*Total sample*
Cluster information							
Number of households in cluster	7	17	103	40	46	23	*236*
Share of households in sample	3%	7%	44%	17%	19%	10%	*100%*
General household attributes							
Share of households residing in Cacuchi area since less than 5 years	29%	18%	39%	46%	57%	74%	*45%*
Households residing in participating villages [share / (n°)]							
Camue	14% (1)	17% (2)	18% (17)	10% (4)	14% (6)	0% (0)	*14% (30)*
Cacuchi	0% (0)	8% (1)	28% (26)	35% (14)	49% (21)	71% (15)	*36% (77)*
Kankuikui	14% (1)	33% (4)	13% (12)	5% (2)	7% (3)	5% (1)	*11% (23)*
Liazemba	43% (3)	17% (2)	26% (24)	38% (15)	16% (7)	14% (3)	*25% (54)*
Tzuia	29% (2)	25% (3)	15% (14)	13% (5)	14% (6)	10% (2)	*15% (32)*
Mean household size	7.71	8.35	7.12	5.75	6.28	4.83	*6.61*
Dependency ratio*	313.56	170.71	177.82	133.48	143.37	170.37	*166.42*
Share of households with female headship	0%	6%	21%	18%	38%	52%	*25%*
Household's mother tongue [share / (n°)]							
Chokwe	86% (6)	29% (5)	44% (45)	64% (25)	50% (23)	70% (16)	*51% (120)*
Nganguela	14% (1)	71% (12)	52% (53)	31% (12)	46% (21)	22% (5)	*44% (104)*
Ubundu	0% (0)	0% (0)	4% (4)	5% (2)	4% (2)	4% (1)	*4% (9)*
Mbunda	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	4% (1)	*0% (1)*
Household welfare							
Share of households where highest level of education among adults does not go beyond "Finished primary school“	86%	82%	85%	73%	98%	91%	*86%*
Share of households where education level of household head does not go beyond "Finished primary school“	86%	100%	92%	80%	98%	96%	*91%*
Share of households using modern sources of energy (gas, electricity, solar panel, diesel gene-rator) for cooking, heating, lighting	0% (0)	6% (1)	5% (5)	0% (0)	2% (1)	0% (0)	*3% (7)*
Share of households using the river as main source of water	100%	100%	100%	100%	98%	100%	*100%*
Share of households with at least one modern house (walls made from bricks, roofs made of iron sheets)	71%	82%	64%	60%	67%	65%	*66%*
Mean (median) asset endowment (max. 20)*	4.1 (5)	3.2 (3)	1.8 (1)	1.3 (1)	1.7 (1)	1.2 (1)	*1.8 (1)*
Mean (median) days with consumption of meat (max. 30)	5.7 (3)	3.9 (3)	2.8 (3)	2.5 (3)	2.3 (2)	1.9 (2)	*2.7 (3)*
Mean (median) days with consumption of fish (max. 30)	11.0 (6)	6.4 (4)	5.4 (4)	4.6 (3)	3.6 (3)	3.6 (3)	*5.0 (3)*

	(1) Employed urbanites	(2) Income earning farmers with cattle	(3) Typical middle-class smallholders	(4) Emerging rural self-made men	(5) Poor small-holders	(6) Disadvan-taged new-comers	*Total sample*
Household use of natural resources and ESS							
Share of households practicing arable agriculture	100%	100%	100%	100%	100%	91%	*99%*
Share of households owning livestock	100%	100%	100%	0%	100%	0%	*73%*
Mean (median) number of cattle owned	0 (0)	3 (2)	0 (0)	0 (0)	0 (0)	0 (0)	*0.9 (0)*
Mean (median) number of goats owned	1.2 (1)	2.9 (3)	1.5 (1)	0.0 (0)	1.1 (1)	0.0 (0)	*1.6 (1)*
Mean (median) number of pigs owned	2.7 (2)	2.5 (2)	1.5 (1)	0.0 (0)	1.2 (1)	0.0 (0)	*1.7 (1)*
Mean (median) number of wild food resources used*	5.0 (7)	5.9 (7)	6.6 (7)	6.0 (7)	4.4 (7)	2.6 (1)	*5.6 (7)*
Mean (median) number of natural resources used for building*	3.9 (5)	4.9 (5)	4.8 (5)	4.2 (5)	3.7 (5)	2.2 (1)	*4.2 (5)*
Household economic situation							
Mean (median) annual household income from business (in US$)	$2,801 ($3,771)	$115 ($0)	$54 ($0)	$129 ($0)	$33 ($0)	$0 ($0)	*$143 ($0)*
Mean (median) annual household income from salary (in US$)	$9,068 ($0)	$407 ($0)	$12 ($0)	$47 ($0)	$27 ($0)	$0 ($0)	*$317 ($0)*
Mean (median) annual household income from pension (in US$)	$0 ($0)	$37 ($0)	$0 ($0)	$0 ($0)	$0($0)	$55($0)	*$8($0)*
Share of households selling natural resources	71%	88%	100%	100%	0%	0%	*69%*
Share (total) of households							
with regular access to cash (additional irregular access possible)*	100% (7)	41% (7)	9% (9)	10% (4)	11% (5)	4% (1)	*14% (33)*
with irregular access to cash*	0% (0)	59% (10)	91% (94)	90% (36)	80% (37)	48% (11)	*80% (188)*
without access to cash*	0% (0)	0% (0)	0% (0)	0% (0)	9% (4)	47.8% (11)	*6% (15)*

*** Definition of the indicators in Electronic Appendix**

The farming system in Cusseque

Arable agriculture is by far the most important livelihood source in the Cusseque core site. On the one hand, this is a result of the decade-long civil war, which depleted livestock herds and turned most farmers who remained in the area into quasi-nomads who survived by cultivating small plots deep in the forest (Abdelli & Jouen 2012).

However, since the end of the war in 2002 and in the wake of the rapid economic development of Angola, a gradual livelihood diversification is taking place.

Nevertheless, the ongoing importance of farming is also a result of favourable environmental conditions and land abundance, making crop production a worthwhile activity which yields relatively stable harvests and generally meets households' annual food needs.

As a quick characterization, farmers in the core site can be described as predominantly subsistence oriented smallholders who practice mixed rainfed cropping of maize (*Zea mays*), manioc (*Manihot esculenta*) and various beans in a system of shifting cultivation. In this system, cultivation periods of between five and ten years alternate with fallow periods of several decades.

Facts on the farming system

Farming system classification

Shifting cultivation (under long-term fallow)

Location of fields and settlements

Stationary and clustered settlements along the road & temporary huts in the forest at individual households' fields. Farmers migrate to fields in peak labour periods during rainy season (Oct - Apr).

Dominant cropping pattern

Mixed cropping of maize (*Zea mays*), manioc (*Manihot esculenta*) and a wide variety of tertiary crops (legumes, pumpkin, …).

Complementary cropping patterns

- Mixed- or monocropping of millet (*Pennisetum glaucum*) and a wide variety of secondary crops (legumes, pumpkin, …).
- Horticulture is only practiced to a very limited degree (this appears to be a specificity of this core site and does not apply to its surrounding communities).

General farm management characteristics

- Farmers adapt to nature and do not try to adapt nature to the needs of farming.
- Agricultural practices are very homogeneous across the core site and between households.

Main farming implements

Manual, hoe-based cultivation. A small minority uses ox-drawn ploughs for soil preparation.

Cultivation/Fallow cycle

Cultivation periods of 3-5 years (low soil fertility) or 5-10 years (good soil fertility) followed by many decades of forest fallow.

Typical sequence of field cultivation

Year 1	Clear & burn forest / incorporate ash into soil by creating earthen ridges/cultivation of manioc, maize and beans on ridges.
Year 2 +	• Cut annual weeds/incorporate organic material into planting mounds/cultivation of manioc, maize and beans on ridges.
	• Upon manioc maturity: harvest pure manioc field/pile residues/burn in following year/incorporate ash into ridges/cultivate manioc, maize, beans for another 2-3 years.
Year 8-10	Field abandoned; some manioc remains in fallow vegetation as backup food-source

Soil fertility management - typical practices

1) Ash from burning of forest vegetation (first year & after manioc maturity).
2) Organic material from weeding, crop residues and de-bushing of annuals (subsequent years).
3) Cutting of additional organic material from trees (rarely) .
4) Chemical fertilizer (rarely).

Land tenure

- Property of the state, but administered communally.
- "General use right" of community members on entire community land (e.g. for collection of natural resources, honey production).
- Exclusive "household-specific use rights" on specific plots of land, for specific tasks only (esp. for clearing, cultivation and charcoal making). Plots permanently allocated to these households.
- Non-native inhabitants of recently established village Cusseque without land rights; depend upon land borrowed-for-free from native communities.

Livestock economy & management

- Compared to downriver core sites with more permanent cultivation systems, relatively low importance of cattle keeping at the moment. Only a handful of households does own any cattle, possibly due to herd depletion during the civil war.
- Cattle management combines free range system and herding with kraaling at night.
- Small numbers of pigs, goats and chicken kept within villages, feeding on household wastes and natural vegetation.

Cultivated crops

Table 2: Crops cultivated in Cacuchi and frequency of cultivation among households (N=235). (Latin names derived according to best knowledge from FAO (2010) World Census of Agriculture).

	Crops	Latin name	Frequency (N=235)	% of cultivating households
Cereals	Maize	*Zea mays*	234	98.7
	Pearl Millet	*Pennisetum glaucum*	54	22.8
	Sorghum	*Sorghum bicolor*	11	4.6
	Rice	*Oryza* sp.	6	2.5
Pulses	Beans & Cowpea	no specification	196	82.7
Oil seeds	Groundnuts (African groundnuts or peanuts)*	*Arachis hypogaea*/ *Vigna subterranea*	33	13.9
Tubers	Cassava	*Manihot esculenta*	220	92.8
	Potatoes	*Solanum tuberosum*	138	58.2
	Sweet potatoes	*Ipomea batatas*	171	72.2
Vegetables	Cucumber	*Cucumis sativus*	190	80.2
	Chili	*Capsicum* spp. *(annuum)*	180	75.9
	Pumpkin	*Cucurbita* spp.	176	74.3
	Tomatoes	*Lycopersicon esculentum*	143	60.3
	Onions	*Allium cepa*	116	48.9
	Cabbage	*Brassica* sp.	111	46.8
	Carrot	*Daucus carota* ssp. *sativa*	4	1.7
	Lettuce	*Lactuca sativa var. capitata*	1	0.4
	Sesame	*Sesamum* sp.	1	0.4
Fruits	Banana	*Musa paradisiaca*	41	17.3
	Sugar cane	*Saccharum* sp.	2	0.8
	Orange	*Citrus sinensis*	1	0.4
	Guava	*Psidium guajava*	1	0.4

Table 3: Crops cultivated in Cusseque and frequency of cultivation among households (N=80).

	Crops	Latin name	Frequency (N=80)	% of cultivating households
Cereals	Maize	*Zea mays*	79	98.8
	Pearl Millet	*Pennisetum glaucum*	53	66.3
	Sorghum	*Sorghum bicolor*	2	2.5
	Rice	*Oryza* sp.	2	2.5
Pulses	Beans & Cowpea	no specification	77	96.3
Oil seeds	Groundnuts (african groundnuts or peanuts)*	*Arachis hypogaea*/ *Vigna subterranea*	15/31*	48.4
	Sesame	*Sesamum* sp.	13/31*	41.9
Tubers	Cassava	*Manihot esculenta*	73	91.3
	Potatoes	*Solanum tuberosum*	25	31.3
	Sweet potatoes	*Ipomea batatas*	55	68.8
Vegetables	Cucumber	*Cucumis sativus*	79	80.2
	Chili	*Capsicum* spp. *(annuum)*	66	75.9
	Pumpkin	*Cucurbita* spp.	54	74.3
	Tomatoes	*Lycopersicon esculentum*	66	60.3
	Onions	*Allium cepa*	39	48.9
	Cabbage	*Brassica* sp.	31	46.8
	Ginger	*Zingiber officinale*	15/31*	48.4
Fruits	Banana	*Musa paradisiaca*	7	8.8
	Melon (water melon & others)	*Citrullus vulgaris* & *Cucumis melo*	4	5.0
	Papaya (pawpaw)	*Carica papaya*	2	2.5

*** Data from an additional free-listing exercise among 31 farmers in Cusseque core site, 2012, Filipa Piedade.**

The Cacuchi and Cusseque core sites differ in two aspects. While the Cacuchi core site is located closer to the urban centre of Chitembo (i.e. 20 km) and is surrounded by lightly fragmented woodlands, the Cusseque core site lies further away from town (i.e. 40 km) and is surrounded by relatively dense and abundant woodlands.

Both TFO's Angolan core sites in the Bié province are characterized by a wide variety of cultivated crops. In total, 22 different crops are cultivated in the Cacuchi core site while 20 different crops are cultivated in the Cusseque core site (Tab. 2, Tab. 3). In terms of subsistence, maize, millet and cassava play the most important role, while cassava and beans are of highest importance for cash income. A third reason for the importance of cassava production is its role as a backup food source, as it can be stored unharvested in the ground for several years. Maize, cassava and beans are cultivated by more than 80% of the households and thus play a central role in the local diet, with sweet potatoes, cucumbers, pumpkin, tomatoes and chili following close behind (Fig. 2 and 3).

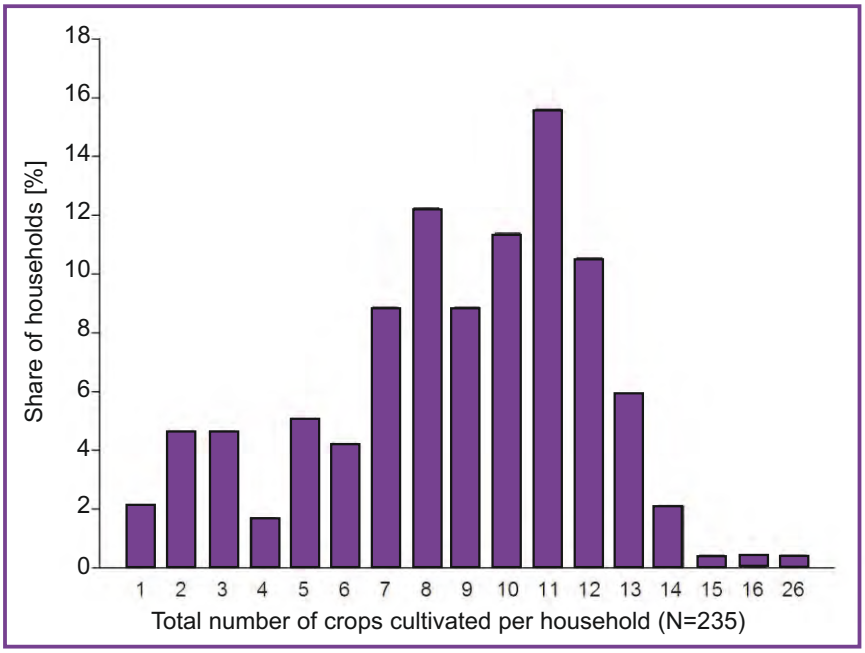

Fig. 2: Distribution among households of the diversity of crops cultivated in Cacuchi.

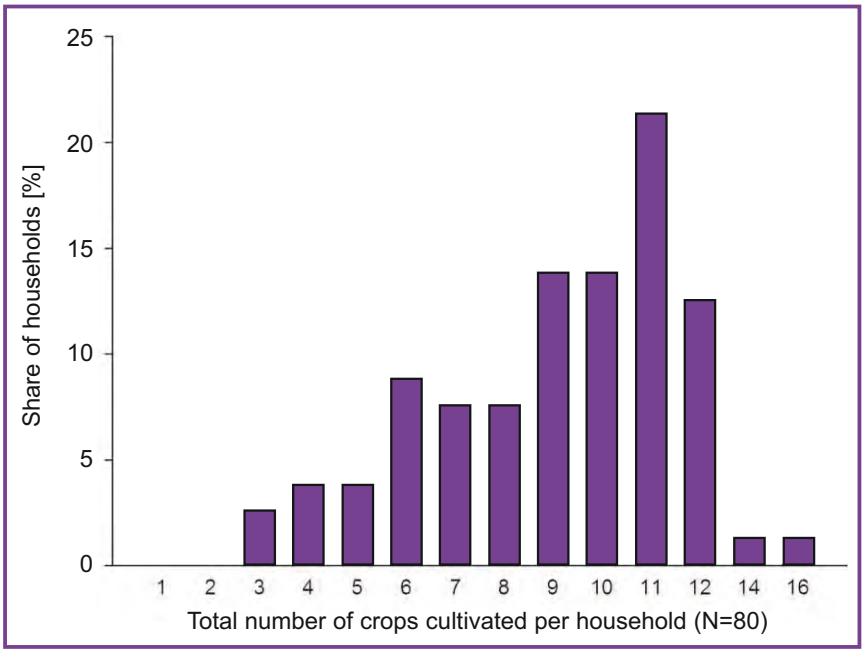

Fig. 3: Distribution among households of the diversity of crops cultivated in Cusseque.

Livestock ownership

Livestock is not abundant in Cacuchi. Although 60% of the households own livestock, the stock often only consists of chickens (48% of all households). Livestock mainly serves the traditional purpose of bank account and chickens, pigs, goats and cattle are sold in times of need (50% of livestock owners sold one or more animals in 2012). Small stock is much less abundant than chickens (25% of households own pigs and 20% goats) and cattle even less so (only 6.5% of households). For both stock types, herd size varies from 1 to 10, and most households own only 1 or 2 animals at most. This very skewed distribution shows that, although livestock is present in the core site, the majority of households neither possesses livestock nor benefits from it (cash, draught, manure). Comparison with simple ownership statistics collected in the Cusseque core site reveals that the number of households enjoying livestock is three- to fourfold higher in Cacuchi.

The differences in livestock ownership and choice of crops between the two communities may be linked to the nature of the farming system of Cacuchi, affected as it is by the proximity to town. This proximity may facilitate access to urban markets and employment opportunities and thus increase cash availability and possibilities for investing in livestock. The

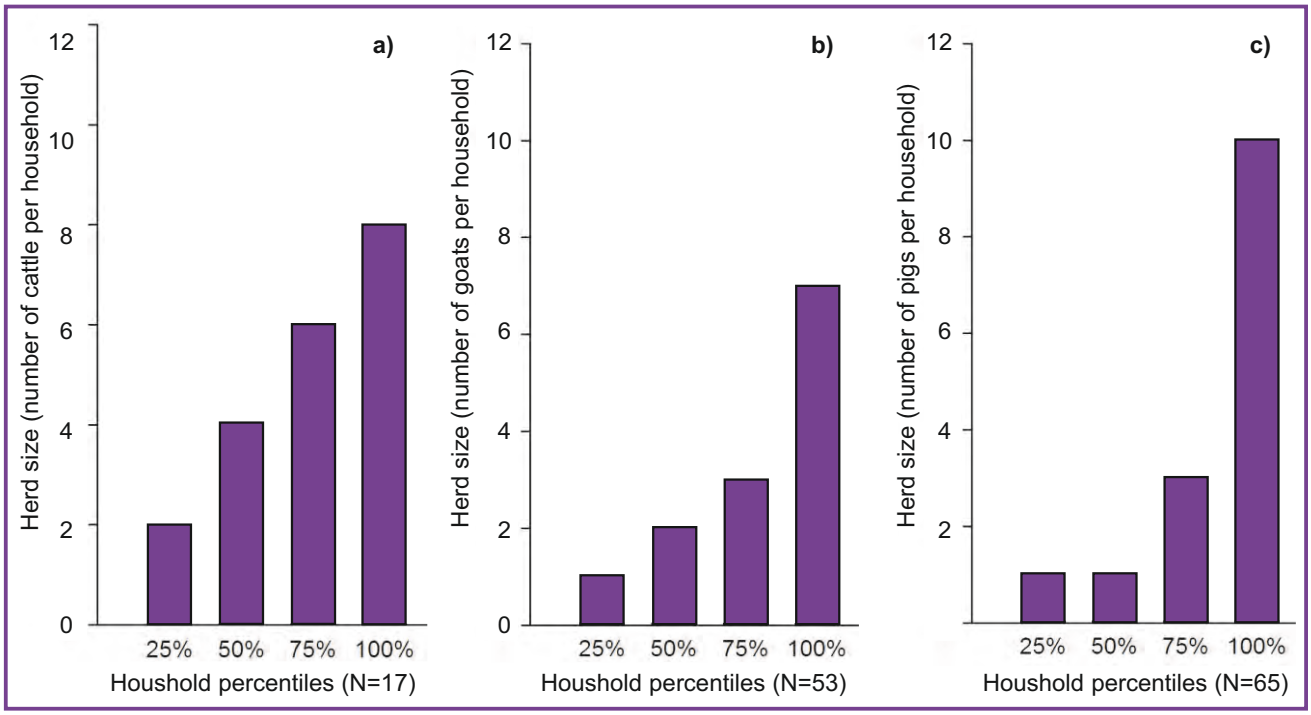

Fig. 4: Distribution of ownership of livestock among households in the Cacuchi core site: a) cattle; b) goats; c) pigs.

relatively higher importance of marketable potatoes in Cacuchi may be an indicator of this stronger focus on cash income generation, while the rarely marketed pearl millet is of elevated importance in the more remote Cusseque.

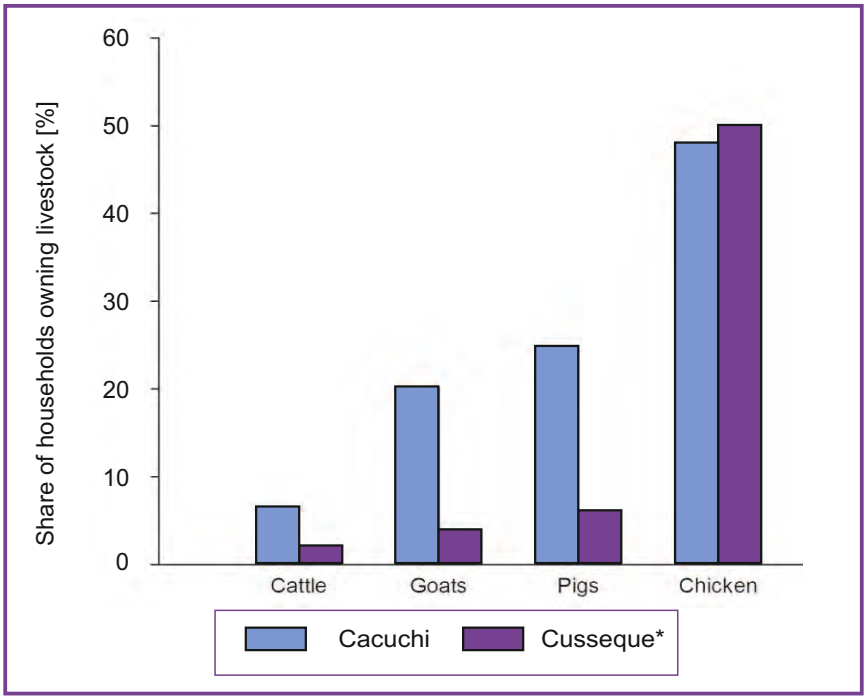

Fig. 5: Comparison of livestock ownership between the Cacuchi and Cusseque core sites (* numbers for Cusseque stem from a person-based survey conducted in Cusseque in 2012 by Jonathan Holden) .

Acknowledgements

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