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Heifer Project International

Zambezia Province

Mozambique

Composite Baseline

Prepared for HPI

by

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1 Introduction and Objectives

In 1995, Heifer Project International (HPI) and Winrock International Institute for International Development were awarded approximately \$800,000 00 by USAID for the implementation of the Goat Restocking and Ownership Through Households (GROWTH I) pilot project. The success of the two year Growth I project has led to a proposal for funding a second phase (GROWTH II) through February 2001.

The GROWTH model functions as a livestock based micro-credit program. Project participants are "loaned" one male and four female goats to be repaid in kind (plus one) after a period of time. Households repay the loan with goats which have been produced by the original stock. These repaid goats are then passed on to other participant households. In Zambezia province, HPI functions as an intermediary between goat markets in Tete province and Malawi and NGO and government partners in districts in Zambezia. Counterparts include World Vision (WVI), ADRA, IBIS, Save the Children UK and in some districts, the Department of Agriculture and Fisheries. These partners are responsible for forming or identifying farmer groups interested in goat production, distributing goats to households and helping to manage the transfer of repaid animals to additional participants. Specifically, HPI's role is to purchase and transfer goats to Zambezia, quarantine the animals and consign the animals to the partners working in the various districts. HPI's other, equally important, function is to provide extension training in livestock management to NGO and government extension agents working with the project.

For most project partners, goat restocking is a component of a more comprehensive agricultural development program. ADRA, for example, is also working in cashew rehabilitation in the Maganja da Costa district. Since many partners have already collected detailed baseline demographic and agricultural production data for their districts, it was felt that another general baseline survey by HPI would be unnecessary. Instead, baseline information on goat production and basic household demographics from partners and other sources¹ have been compiled in this report.

By monitoring the percentage of households owning goats and average herd size, HPI should be able to assess its effectiveness in its restocking efforts. In order to evaluate HPI's impact in extension activities, it is recommended that HPI carry out a small scale survey on goat management, mortality and sales among goat owners in project and non-project areas. See Appendix A for a draft questionnaire.

¹In the interest of presenting a more complete picture of goat production in Zambezia province, TIA (national agricultural survey) data from 1996-97 and Medecins sans Frontieres (MSF) food security survey data from 1996 were also compiled and are presented here.

2 Household Demographics

Basic household demographics by district are presented below in Table 1. Household size is slightly smaller than average for Mozambique (5.3 persons per household in Zambezia compared to 5.6 per household country average). The percentage of female headed households is also below the national average for Mozambique (12.8 for Zambezia compared to 18.8 for Mozambique). Adult literacy and school attendance tend to correlate (i.e. districts where literacy is higher tend to have higher rates of school attendance).

Table 1 Household Demographics-Zambezia Province (TIA 1997)

DISTRICT (Observations)	Average HH size	Percent Female Headed Households	Percent School attendance (children ages 6-18)	Literacy (% adults over 18 yrs)
HPI PROJECT AREAS				
Mopeia	5.1	11.3	67	57
Morrumbala	5.5	15.9	41	31
Nicoadela	4.8	12.8	42	33
Namacurre	5.1	9.8	73	50
Manganja da Costa	5.4	12.1	39	32
Mocuba	5.3	14.1	73	47
Gurue				
Alto Molocue	5.8	12.7	86	78
Gile				
Namarroi	4.8	17.5	33	37
NON-PROJECT AREAS				
Ile	5.0	18.2	41	54
Lugela	6.1	12.5	42	40
Chinde				
Pebane	5.2	7.8	71	56
Milange	5.1	3.3	52	41
Inhassunge	5.0	21.7	70	51
Quelimane				
TOTAL	5.3	12.8	53	45

3 Goat Ownership

Two data sources (TIA-The National Agriculture Survey and MSF-Food Security Survey) were used to determine baseline proportions for households with goats by province. There is some discrepancy in the numbers reported by the different sources which may result from several factors

* MSF based their sampling on agro-ecological zone population rather than on district population as TIA did

* The TIA survey was carried out at a different time than was the MSF survey, some differences might occur because of a temporal difference (up to 5 months) in data collection

Despite these differences by data source, the overall trend in goat ownership is well established. Goats are much more commonly raised in the south than in the north and Zambezia by far has the lowest level of goat ownership in Mozambique.

Table 2 Average Number of Households with Goats and Average Herd Size by Province

PROVINCE	MSF 1996 Percentage of HH's with Goats (# of HH's Interviewed)	TIA 1996-97 Percentage of HH's with Goats (# HH's Interviewed)	TIA 1996-97 Average Herd Size
Niassa	13.0 (160)	10.6 (256)	9.5
Cabo Delgado	8.0 (100)	14.7 (320)	4.7
Nampula	3.4 (480)	9.8 (702)	3.5
Zambezia	1.9 (480)	4.9 (830)	2.8
Tete	27.0 (500)	30.9 (320)	7.3
Manica	4.0 (220)	33.7 (253)	7.8
Sofala	22.5 (298)	35.6 (319)	9.6
Inhambane	35.8 (310)	40.5 (378)	6.6
Gaza	33.8 (370)	41.7 (319)	8.8
Maputo	25.0 (79)	24.0 (192)	8.9
Total National Average (Unweighted)	21.6	20.3 (3889)	7.6

Weighted means

There are indications that HPI and its partners may be doing more actual stocking than re-stocking of goats. Several farmers have indicated to project personnel that the GROWTH program is in fact their first experience with this type of livestock husbandry. The Atlas Geografico (1986) gives a rough estimate of only 30 thousand head (goats and sheep) in Zambezia, fewer than found in any other province except Niassa which has a much smaller human population. Why Zambezia has historically had such small numbers of goats is not certain. Certainly, massive de-stocking occurred during the civil war, but the roots may go much deeper. One informant has suggested that during colonial times, small farmers in Zambezia may not have been allowed to raise goats due to their potential for damaging crops on the large commercial farms which encompassed much of the area in the province. The project may wish to pursue this issue, not only for historical interest but also as an input to the extension component of the project. Extension programs in small ruminant husbandry may need to be designed differently for clientele with little or no experience versus one with some past experience.

Goat ownership by household type (male versus female headed) is also examined in this report. Again, there are some discrepancies between the data sources, but the general trend for all provinces is that female headed households are much less likely to own goats than are male headed households.

Table 3 Male vs Female Headed Households - Percent Households Owning Goats (TIA 1997)

PROVINCE	Percentage of Households Owning Goats	Percentage of Female Headed Households Owning Goats	Percentage of Male-Headed Households Owning Goats	Percentage of Female Headed Households
Zambezia	4.9	1.8	5.8	13.3
Nampula	9.8	14.9	9.9	10.0
Manica	33.7	22.7	40.8	30.0
Sofala	35.0	35.9	38.6	16.3

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Table 4 Male vs Female Headed Households - Percent Households Owning Goats (MSF 1996)

PROVINCE	Percentage of Households Owning Goats	Percentage of Female Headed Households Owning Goats	Percentage of Male-Headed Households Owning Goats	Percentage of Female Headed Households
Zambezia	19	1	23	14.3
Nampula	34	0	99	7.2
Manica	40.0	15.6	40.8	14.5
Sofala	22.5	20.8	38.6	17.8

Table 5 Province-Zambezia 1997

Indicator	MSF	TIA
Percent of Households owning goats	19	49
Percent of Female-Headed Households owning Goats	10	18
Average Herd Size (All Households)	3	2.8

Ownership of small livestock species has important implications for household income, food and financial security. In general, female headed households tend to live in more precarious and vulnerable circumstances. The results of 1997 income proxy data for four northern provinces (Zambezia, Manica, Nampula and Sofala) show that per capita income levels are 10-20% lower on average for female versus male headed households. One of the main objectives of both GROWTH I and II is to ensure that women, female-headed households in particular, are included in project activities. Again, by periodically measuring goat ownership by household type, both within and outside project areas, realization of gender focussed objectives can be measured.

At the district level, data was available from TIA (1996), World Vision (1997) and ADRA (1997) Results are presented below in Table 6

Table 6 Percent of all Households owning goats by District and Source (1997)
(Average Herd Size)

DISTRICT (Observations /District)	TIA-1996 (64/District)	WORLD VISION-1997 (1209 Total)	ADRA- 1997 (536)
HPI PROJECT AREAS			
Mopeia	1 6 (5)		
Morrumbala	14 1 (3 3)	3 8 (5 2)	
Nicoadala	1 6 (6)	1 3 (7)	
Namacurra	4 7 (1 3)	6 (3)	
Manganja da Costa	9 5 (2)		4 9 (1 5)
Mocuba	4 7 (1 3)		
Gurue		5 0 (4 4)	
Alto Molucue	1 7 (8)		
Gile		1 3 (2)	
Namarroi	0	0	
NON-PROJECT AREAS			
Ile	4 7 (2)		
Lugela	1 6 (2)		
Chinde			
Pebane	0		
Milange	1 6 (4)	1 3 (2)	
Inhassunge	6 3 (2)		
Quelimane			

Again, there is some variation in results by data source. This is probably due to differences in sampling methods and to the very small number of households with goats. Given the modest number of goat producers, figures for herd size are not necessarily accurate. District population figures are not available thus it is impossible to determine (weighted) differences in goat ownership in project versus non-project areas.

Income proxy data is presented here for households with and without goats (Table 7). Goats certainly contribute to household wealth, especially in Zambezia where goats are scarce and prices tend to be high (USD \$23-30 per head for a young female). Table 7 may demonstrate that goats are as much an indicator of wealth as they are a contributing factor to wealth. It is likely that in Zambezia where goats are scarce and costly, only wealthy households can afford them. Credit programs like GROWTH I and II can make a significant contribution towards equity, provided they are properly targeted.

Table 7 Per Capita Income (Proxy data-1997)-Zambezia Province

All Households	Households without Goats	Households with Goats
\$53.26	\$51.50	\$84.48

APPENDIX A

SAMPLE GOAT MANAGEMENT SURVEY INSTRUMENT

HPI MOZAMBIQUE

AVISO

O Sr(a) tem o direito a não participar nesta entrevista. A sua participação é inteiramente voluntária. No entanto vale a pena indicar que, caso o Sr(a) participar na entrevista, toda a informação recolhida será completamente confidencial, em nenhuma circunstancia o seu nome será associada a nenhuma resposta.

ID1 COMUNIDADE/BAIRRO _____ INQUIRIDOR _____

ID2 ENTREVISTA # _____ NOME DE CHEFE DE FAM _____

ID3 QUEM E O CHEFE DA FAMILIA? () 1=HOMEM () 2=MULHER

ID3 ESTADO CIVIL () 1=MONOGAMIA () 2=VIUVA(O) OU SOLTIERO(A)

() 3=POLIGAMIA

COMENTARIOS SOBRE TIPO DE MATRIMONIO _____

ID4 PESSOAS ENTREVISTADAS () 1=CHEFE (HOMEM)

() 2=ESPOSA(S) NO _____ DE _____

() 3=CHEFE (MULHER)

() 4=OUTRA PESSOA (MAIOR DE 16 ANOS)

GOAT SALES

Goat sales	Where was goat(s) sold?	Price received/goat				Date of sale
		male		female		
		J	A	J	A	
1						
2						
3						
4						
5						

J=Juvenile A=Adult

MANAGEMENT

1	Did you vaccinate your goats during 1997?	1()Sim 0()Nao
2	Did you worm your goats during 1997?	1()Sim 0()Nao
3	Did you vaccinate your chickens during 1997?	
4	How do you house your goats/sheep?	
5	Did you grow any pasture for your animals in 1997?	
6		
7		
8		

MANAGEMENT

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hpi-goats/sheep

ADDITIONS TO GOAT/SHEEP HERDS

Animal	How many goats/sheep did this HH have on 1 Jan 1997?		How many goats/sheep were purchased by this HH during 1997?		How many goats/sheep were born during 1997?		How many goats/sheep were received by this HH from a project during 1997?		How many goats/sheep were received as gifts or dowry by this HH during 1997		Other acquisitions of goats/sheep esp _____ _____ _____		Total number of sheep/goats acquired by this HH during 1997	
	male	female	male	female	male	female	male	female	male	female	male	female	male	female
goats														
sheep														

SUBTRACTIONS FROM GOAT/SHEEP HERDS

Animal	How many goats/sheep did this HH have on 1 Jan 1997?		How many goats/sheep were consumed by this HH during 1997?		How many goats/sheep were sold by this HH during 1997?		How many goats/sheep died during 1997?		How many goats/sheep were repayed by this HH to a project during 1997?		How many goats/sheep were lost through theft during 1997		How many sheep/goats were given as gifts/dowry during 1997		Other losses during 1997		Total number of sheep/goats lost or repaid by this HH during 1997	
	male	female	male	female	male	female	male	female	male	female	male	female	male	female	male	female	male	female
goats																		
sheep																		