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CARE INTERNATIONAL IN MOZAMBIQUE

BASELINE SURVEY

MACHAZE DISTRICT

November 1994

Machaze Water Project

Grant No. 656-0217-G-00-3046

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Project Manager

MACHAZE WATER PROJECT

BASELINE SURVEY

A baseline survey of socio-economic and knowledge indicators was performed by the CARE Machaze Water Project in November 1994. Together with data from previous CARE surveys in Machaze (Baseline Nutritional Survey: Machaze District, by Nancy Anderson MD, 1994, and A Water Resources Study of Northern Machaze District, by Richard Wesson, 1994), these survey data comprise the baseline data for the Machaze Water Project.

1. SURVEY OBJECTIVES

The survey aimed to compile data on family structure, basic demographics, agricultural production, income, water use, level of knowledge of health and hygiene, and basic health indicators. The survey will be repeated near the project's end in October 1995. The purpose of the survey is to provide a baseline which can be compared with the repeat survey in 1995 to reveal trends and, to an extent, measure impact of project activities.

2. IMPLEMENTATION

The survey was implemented, under the supervision of the animation supervisor and the project manager, by elements of CARE's team of local animators, who reside in the eight communities where respondents were sought. Using random sampling methodology, the animators conducted individual interviews with respondents, following and recording responses on a questionnaire form. In this way a total of 403 survey responses were obtained (approximately 50 in each of the eight communities).

Raw data was entered into DataBase III, and analyzed with the same program or by hand.

3. NOTES ON SURVEY METHODOLOGY

A. Questionnaire: The socio-economic questionnaire was developed in Portuguese, and field-tested in oral translation into Ndau. Modifications followed the field tests, including coding open-ended questions into multiple choice format.

B. Personnel and training: The CARE animation supervisor helped develop and field-test the questionnaire. Nine CARE animators underwent one day of survey training, including introduction to the survey instrument and some field-testing. They were instructed to explain survey objectives to interviewees, and to avoid suggesting responses to open-ended questions. Necessarily, the animators verbally translated the Portuguese survey instrument into Ndau while interviewing, and translated the Ndau responses into Portuguese entries on the questionnaire form. Each animator conducted interviews in her or his own community, with a few exceptions where it was necessary for animators to also cover a community not their own. Therefore, interviews were

conducted by nine different interviewers in eight communities.

C. Sample: The survey used random sampling technique, specifically, to interview persons who were waiting to get water from a water point (borehole pump). This method was the best feasible approximation of a random sample, for the following reasons:

1. Water points in the district at the time of the survey were completely limited to borehole pumps; therefore every family would necessarily collect water at one of these.

2. The water points are public, and with the exception of the old diesel pump in Chitobe (all others being handpumps), are homogenous; there is no apparent distinction among users of a given pump, except that in communities with more than one pump, users arriving from outside the community tend to use a certain pump (this is accounted for in the fact that survey responses are divided by respondents' community of residence).

3. The dispersed nature of Machaze's population (averaging about one household per square kilometer) made household visits logistically infeasible in the given time frame.

4. No other forum could be found which would give a more random sampling.

The vast majority of pump users are women; traditionally it is the women's job to fetch water. Therefore the respondents were nearly all women (interviewers were instructed that female respondents should be of at least child-bearing age). The socio-economic questions pertain to the family/household unit, rather than the individual; but it should be noted that survey responses would not reflect differences of perception betweem males and females. However, if the end-of-project survey is conducted in the same method, the results will be comparable. It was beyond the capability of the survey implementers to conduct a similar number of interviews with males, and then compare results on the objective questions with female responses, so as to determine differences of perception or estimation. Finally, the responses to "level of knowledge" questions regarding health and hygiene, while obviously susceptible to gender differences, are still valuable, because if women are the ones fetching and storing water, the project wishes to focus on their knowledge and practices.

4. RESULTS AND INTERPRETATIONS
(Please refer to data table, Appendix 1, and Questionnaire, Appendix 2.)

1. Current Population (% Female)

These figures were obtained from regulos (hereditary chiefs) in each community in early 1994; therefore they do not include people who arrived in the UNHCR-sponsored repatriations which began in earnest in July 1994 (after the project's start). These returning refugees are entered in item #7. The District Administration has its own population figures for these sites, but project staff considers the regulos' figures to be more accurate. The percentage of female population was not available from any source, though regulos agree that there has been a higher-than-normal proportion of women in the population, due to war casualties and to men working abroad.

2. # of Female-headed Households

On question #1 of the questionnaire, respondents were asked whether the head of the household is male or female. Respondents self-defined whether their households are female-headed; however it is clear from the responses that polygynous wives, though each may have her own household, did not define themselves as heads of households. Raw responses from the survey sample were extrapolated with "Estimated # of Households" (overall) to produce these calculated totals for each community. The results imply that overall in the survey area, 16% of households are female-headed.

3. % of Polygynous Families

This was calculated by sum of responses to question #2 ("How many wives does your husband have") which were greater than one, divided by survey sample ("n"). The percentage ranges from a low of 29% in Chipambuleque to a high of 60% in Guezanhe, with an average of 48%.

4. Average # of Members of Family

"Family" and "household" are difficult to delineate in a context with prevalent polygyny. Local information suggested that most polygynous wives have a household of their own, usually within the husband's compound alongside the households of the other wives. (Also, each wife usually cultivates her own field, separately from the other wives.) Therefore, a proxy question (#3) was used, which the animators offered as the traditional way of asking how many people live and eat in your household. The plausible responses, and very low number of non-responses, indicate that these responses may confidently be considered accurate.

5. Estimated # of Households

This figure is included simply for the purposes of context. It was calculated as a dividend of item 4 by item 1 (av. family size by population).

6. Average # of Years at this Location

Responses were plausible and non-responses were few, making these figures confident. Of note is that most respondents from Chitobe arrived as returnees this year, most from Guezanhe arrived last

year (in fact it is well known that they arrived en masse in an informal repatriation), and most respondents in Chipudje arrived there in 1981 or 1982, just as the war came to Machaze and forced them into that central town. The other extreme is Butiro, where a few respondents reported living there since the 1930s and 1940s (possibly referring to their ancestors rather than themselves).

7. Expected # of Returning Refugees

These figures are directly taken from UNHCR's announced repatriation lists, which include community of destination. There are no lists for expected informal returnees. (Note that most of the population of Guezanhe had already returned en masse in 1993.)

8. Expected # of People Leaving

Question #5 asks whether the respondent's family intends to move soon. Non-responses were few, so accuracy can be confidently considered high. Positive responses were extrapolated and factored with the community's population for an overall figure. Results are plausible: for instance the wartime retreats of Chitobe and Chipudje show large numbers intending to move out and resettle, whereas Guezanhe respondents, who all arrived there cohesively in the last two years, uniformly intend to stay.

9. % of Subsistence Farmers

The significance of these figures depends on how "subsistence farmer" is defined. Subsequent questions show that there are few sources of subsistence in Machaze other than farming and distributed food. On the other hand, results would be skewed if they excluded the many returnees who arrived too late to plant last year and are receiving distributed food, but who may resume subsistence farming for the current planting season (seed and tool distributions are also in progress).

There is no satisfactory definition of "subsistence farming" in a culture such as Machaze's, where farmers who do not sell their produce for cash are nonetheless involved in systems of barter, trading of certain property rights, and obligations of extended family. Also, cash-crop farming is observably rare. A major assumption must therefore be made: it is assumed for this analysis that any farmer in the survey area is a "subsistence farmer." Any respondent in this survey who reported that her/his family either planted or harvested, is counted as a subsistence farmer.

These data reflect percentages of non-zero responses to either question #7 or #8. Both questions are included because some respondents reported planting failed crops (#7<>0 and #8=0), and a larger number could not estimate the amount of land cultivated (#7=0 necessarily in DBaseIII format) but reported some yield (#8<>0).

10. Amount of Land Cultivated per Family

One of the most problematic measurements in this survey was amount of cultivated land per family. No data on hectarage cultivated in Machaze was available from government agricultural bureaus. Few respondents could respond in terms of hectares, and many of those responses were implausible. Most responses were in the form of "We planted lots/little," or "We planted a big/small field," or "We planted one/two/three fields." Some major assumptions were made to quantify these responses.

After pacing off some typical fields, staff concluded that 2 hectares could be considered a typical field. (Note that many respondents had not planted, therefore the total area cultivated in the survey area was far less than 2 HA per family.) Responses were therefore essentially coded on this basis. "One field" or "average" responses were entered as 2 HA; "Two fields," "Big field," and "planted lots" were entered as between 3 and 5 HA, depending on context. "Small field" and "planted little" were entered as 1 HA. Totals were divided by estimated number of households in each community, i.e., the average includes those who did not plant.

Results are overall plausible. Chitobe and Bassane have large returnee populations who did not plant. The more demographically stable communities like Butiro and Guezanhe (the latter being notably industrious in several ways since their return) cultivated on average more land. The average hectarage planted per family for the whole survey area, including households that did not plant, is 1.12 HA. To obtain the average among households that did plant (i.e. for those who actually farmed last year, how much on average did they farm), the zero responses can be excluded and non-zero responses averaged. That figure is 2.23 HA per household which planted.

Machaze has a low population density of about 8 people per square kilometer, so cultivation is rarely limited by competition for land. Limitations include the fact that seed availability has been low, and that most of Machaze is forested, making cultivation without animal traction very labor-intensive.

11. Average Yield/HA/Year

Cereal, mostly millet, is by far the major crop in Machaze, therefore yield per hectare was measured for this staple. Field testing of the survey showed that respondents could answer most confidently in terms of *celeiros* (silos) filled or partially filled. Responses were entered in the database as 0, 0.25, 0.5, 1 silo etc. Staff measured some typical silos and found that the average capacity is about one cubic meter. Approximating the weight of one cubic meter of grain as 250 kg, entries were converted to weight. These weights were averaged over each community, then divided by that community's average hectarage planted (excluding zero responses), to give an average yield per

hectare for that community. It was not possible to directly divide yield by area planted for each response, because there was a significant number of "don't know" responses; i.e. many respondents estimated the yield but didn't know the area planted, or vice-versa.

It should be noted that this measuring technique is probably not accurate enough to realistically assess food production in the district, nor to track small changes in land productivity. However the results do point to some distinctions among the surveyed communities.

Lowest average yields were from the northern sector including Butiro, Chipudje, Tuco-Tuco and Guezanhe. The interviewer in Chipudje noted on the forms that many respondents cited low rainfall and excessive sun last year (the crops were "burned" by the sun) as the reason for low yield. The highest average yield was in Bassane, which is well known as an area of better soil and more rainfall.

12. # Sellers/Traders in Principal Market
Directly counted by staff.

13. #/Type of Existing Community Organizations
Each community has a traditional leadership including a *regulo* who has traditional authority over the extent of the community, and a varying number of "chiefs" who have authority in defined geographical zones within the community. A larger town such as Machaze Sede is divided into *bairros*, some of which have a regulo and others which have a chief. Several of the communities have a *secretario*, which is a position invented by the government; in the majority of cases in Machaze, the regulo and the secretario are the same person. In this report, these local government structures are counted as one organization in each community.

Chitobe and Chipudje each have Catholic Church organizations and OMM (*Organização das Mulheres de Moçambique*), while Bassane and Chipopopo have OMM only.

14. # Wage Earners
Defined as respondents earning cash income from formally or semi-formally contracted services. This definition was used restrictively, to try to show the extent of steady employment. Thus responses for sources of family income such as ex-military benefits, which are temporary, and traditional healing, which is often barter, were excluded (and noted in other categories--see below).

The result of this analysis was that, among the 403 interviews, only five respondents had wage earners in the family by this definition. Therefore that figure is supplanted in this report by staff estimates, which are confident, of known wage earners by this

definition in each community. There is a certain bias in that CARE is by far the largest employer in the district, followed by government services and political parties.

15. Average Income/Month

These figures are a straight average per family of estimated cash income, as responses to question #11. As shown in the next item (% of respondents who earn cash), in most areas few respondents earn cash; therefore their earnings were averaged over the whole community. Even among those respondents whose households have cash-earning activities, there were a significant number of "don't know" responses for monthly income/expenditure. Therefore these figures are not confidently accurate. However they do reveal a certain level, albeit low, of monetarization in the survey area. They also indicate significant (and plausible) variations among communities, with the relatively remote or isolated communities showing lowest average income, and the central towns showing higher. The results from Chipopopo (a central town) are a surprise, showing a wide range of income-generating activities and the highest average income. Subjectively, this result seems confident because of that interviewer's meticulousness in filling out the questionnaire responses.

The questionnaire included a question (#10) on sources of income, open-ended with coded responses. Following are the frequencies for each code:

A.	Sell traditional drink	4
B.	Sell millet	4
C.	Sell livestock	27
D.	Wages	5
E.	Craft/Small manufacture	29
F.	Other	58

There is a major discrepancy here with the sources of income findings from Anderson's Machaze nutritional survey of February 1994, in which the percentage of those earning income, who did so by selling traditional brew, was 76.2%. Project staff's impressions support this finding, that selling brew is a widespread source of cash income, and that it is normally a woman's craft. The possibilities are that (a) the current survey's question for sources of income was poorly designed, (b) the interviewers expressed it inadequately, or (c) that there was widespread evasion on the part of respondents regarding this specific activity. In other categories of cash-earning activities, the results of the current survey are comparable to those of Anderson; so it appears that the evasion or poor question design only affected responses regarding traditional brew.

The 58 responses for sources of income coded to the "Other" category include, in descending order of frequency: small business, seasonal agricultural employment, income from family members working abroad, ex-military benefits, traditional healing, hunting

and trapping, one singer, and three individuals in Chipopopo who confessed to usury.

Question #12 was an open-ended multiple-choice question on expenditures. Respondents could name any number of items. Following are the frequencies:

A.	Soap	24
B.	Salt	59
C.	Oil	4
D.	Meat	15
E.	Medicine	1
F.	Clothes	65
G.	Kerosene	0
H.	Other	52

(The majority of the "Other" responses were *comida* or *alimentação*, meaning unspecified foodstuffs.)

These expenditure categories will be useful for comparison with the same query on the end-of-project survey, as a measure of economic expansion and diversification in the survey area.

16. Raw % of Respondents who earn cash

This figure is simply the percentage of respondents who indicated that one or more family members do cash-earning activities. There is a wide range which does not seem to correlate with population or remoteness. It should be noted that the variable quality of the interviewers would be an important factor in eliciting responses to this line of questioning, and therefore quantitative comparisons of the responses across communities may be less than wholly confident.

17. # Wells Without Pumps
18. # Wells With Functioning Pumps
19. # Boreholes with Functioning Pumps
20. # Cisterns

These data are well known to project staff from Wesson's report (March 1994). Item 19 reflects the situation after the pump installations of the previous project, which ended May 15, 1994.

21. Average Distance of Water Point from Beneficiary, Dry Season
22. Average Distance of Water Point from Beneficiary, Wet Season
23. Average Time to Obtain Water, Dry Season
24. Average Time to Obtain Water, Wet Season
25. Average Water Use (liters/person/day), Dry Season
26. Average Water Use (l/p/d), Wet Season

These data, for Chipudje, Guezanhe, Bassane, and Chipopopo, are taken directly from Wesson's report (methodology is also described therein). Data for the other four communities were obtained as follows:

A. Average distances: known by project staff from field investigations.

B. Average times: directly deduced by staff from field investigations.

C. Average water use: it was not possible to replicate Wesson's methodology in the other communities in the time frame available (see Wesson's report for notes on the laborious nature of this methodology). An approximation was therefore calculated, using distance from water point as the factor. Chipudje had two water points, therefore the distance to them for Chipudje residents is defined as zero. Butiro is ten kilometers from Chipudje, and the assumption was employed that average water use drops 2% for each kilometer from the water point. Using this assumption, Butiro residents' water use would be 20% less than that of Chipudje residents (whose water use was surveyed by Wesson). These are the figures that appear for Chipambuleque, Chitobe, Butiro, and Tuco-Tuco.

27. <u>% Villagers with basic understanding of hygiene/safe water use</u>

The survey addressed this very complicated issue by means of proxy indicators. Survey questions #13 and 14 sought respondents' knowledge and attitudes with regard to causes of diarrhea and to sources of safe water. The questions were open-ended, with responses coded. This approach, while possibly the best available, is susceptible to bias from the fact that nine different animators did the interviewing, because a degree of follow-up questioning is usually needed to elicit a response which accurately represents the respondent's attitude. It is not confidently known whether all interviewers followed up to the same extent and in the same way, which would be necessary for a methodologically significant finding.

Also, there is the question of how to analyze responses and decide which responses prove a "basic understanding of hygiene/safe water use." The coded responses and frequencies for question #13 are as follows:

-contaminated water.....198
-contaminated food.....138
-dirty hands.....123
-flies.....150
-phases of child's growth....5
-sorcery.....6
-parents' bad behavior..16
-time of the year.....17
-other.....36
-don't know.....128

NOTE: respondents could offer any number of causes, so the total of frequencies exceeds 403.

Most of those who responded "contaminated water" also named contaminated food, dirty hands, and flies, all of which could be considered to demonstrate basic knowledge. Therefore, for the purpose of reducing these responses to percentages, responses of "contaminated water" are defined as exhibiting basic knowledge.

This is all the more useful for a water project which wishes to emphasize the connection between clean water and health. Therefore, the percentages appearing on the data table are the percentages of respondents who offered "contaminated water" as a cause of diarrhea.

The results imply a wide divergence in level of knowledge among communities, and suggest intensive education efforts in those with the lowest percentages.

Question #14, about which kind of source is better for drinking water, produced no significant results, because there is in the responses a strong suggestion of bias on the part of the various interviewers. For instance, some interviewers' reported responses to this question were suspiciously uniform, e.g., "Pumps, because pump water is clean." Others obtained responses which consistently imply that respondents construed the question as meaning, "Where is it possible to get water?" which is a reasonable preoccupation of Machaze residents. Therefore the responses to this question are not analyzed further, and methodological improvements will be necessary for the next survey.

28. <u># Diarrhea Cases per Month</u>
29. <u>Average # Diarrhea cases reported per respondent</u>

Question #15 asks how many diarrhea cases occurred in the household in the last two weeks. Raw responses were totalled and factored by population to give estimated overall figures for the communities, which appear in item 28.

However, it was also considered important to show the rate of diarrhea cases (item 29). This was obtained by dividing reported cases in each community (the sum of question #15) by the number of interviews from that community. Here some significant results emerge: unlike the knowledge questions, the diarrhea rate appears to correlate to village size and remoteness, with the smaller and remoter communities showing a notably higher rate. This suggests intensive education efforts in those locations.

30. <u>Child Mortality Rate</u>

These data were unavailable from any source, including district health authorities, and infeasible to collect by means of the current survey. Compiling confident data on this subject requires a considerably greater health infrastructure than now exists in Machaze.

31. <u>% Chronic Malnutrition</u>
32. <u>% Acute Malnutrition</u>

These data are taken directly from Anderson's report (see Anderson's report for methodology). Anderson's nutritional survey examined only children under 5 years of age. The data are not broken down by community, and are available only as an average of

the survey area, which for Anderson's survey included Chitobe, Chipudje, Bassane, Chipopopo, Tuco-Tuco, Guezanhe, and Save (Chidoco). It was beyond the means of the current survey to collect new malnutrition data broken down by community.

CONCLUSIONS

Average income figures show a degree of monetarization which appear to support the exploration of cost recovery systems for community water points, even though the figures should not be taken to reflect actual income levels.

The rate of diarrhea cases and level of hygiene knowledge support the project's emphasis on water use education.

The subsequent survey will take the time to measure average water use and distance/time to water points in all eight communities, at least as carefully as in Wesson's survey. Approximations were used with confidence in this report for those communities not surveyed by Wesson. However, increased water use and access are the key outputs of this project, and will be measured with precision at project's end.

CARE will make inquiries about the nature, management, and beneficiary participation in water systems in the Zimbabwe refugee camps where most Machaze returnees stayed. This will be a means of assessing knowledge and attitudes towarsd community water systems among the large returnee population.

Animation staff will seek further information about traditional community organizations.

The end-of-project survey will engage a skilled interviewer to more closely supervise the team of interviewers, to improve the consistency of interviewing technique.

CARE will attempt to interview the three usurers of Chipopopo, to evaluate the informal credit market there.

APPENDIX I
CARE Manica Water Activity Reporting Table — Grant No. 69-0017-G-00-5046

BASELINE DATA AND FINAL EVALUATION DATA — December 15, 1994

ITEM #	Description	Chipambuleque n=48	Chitobe n=50	Chipudje n=50	Guezane n=50	Butiro n=50	Tuco-Tuco n=50	Bassane n=50	Chipopopo n=55	Total n=403
1	Current Population (% Female)	423	10378	8949	3011	1231	707	4153	1303	30155
2	# Female Headed Households	6	277	30	75	25	36	166	59	674
3	% of Polygynous Families	29	36	54	60	56	32	54	49	48
4	Average # Members of Family	8	9	6	8	9	7	6	6	7.38
5	Estimated # of Households	53	1153	1491	376	137	101	692	217	4220
6	Average # of Years at this Location	11.67	1.26	12	0.91	19.86	1.45	7.89	8.66	7.78
7	Expected # of Returning Refugees	0	11585	144	0	0	301	5044	0	17074
8	Expected # of People Leaving	18	1453	1611	0	0	42	1827	426	5377
9	% of Subsistence Farmers	42	12	96	52	80	74	88	91	67
10	Amount of Land Cultivated/Family (in HA)	0.99	0.09	0.46	1.34	2.34	2.22	0.55	1.04	1.12
11	Average Yield/HA/Year (in kilograms of cereal)	60	145	37.5	52.5	40	30	305	230	87.44
12	# Sellers/Traders in Principal Market	0	16	7	0	0	0	4	7	34
13	#/Type Existing Community Organizations	1	3	3	1	1	1	2	2	14
14	# Wage Earners	1	160	9	1	1	1	5	4	182
15	Average Income/Month (in meticais)	12,573	27,200	13,500	4,700	600	2,480	4,260	51,832	15,047
16	Raw % of Respondents who earn cash	40	8	12	18	6	28	30	76	27.8
17	# Wells without pumps	0	2	0	0	3	0	0	2	7
18	# Wells with functioning pumps	0	0	0	0	0	0	0	0	0
19	# Boreholes with functioning pumps	0	3	2	0	0	0	0	0	5
20	# Cisterns	9	0	128	83	171	110	363	355	1219
21	Average Distance of Water Point from Beneficiary, Dry Season	9 km	< 2 km	2 km	17 km	10 km	16 km	18 km	12 km	10.75km
22	Average Distance of Water Point from Beneficiary, Wet Season	< 2 km	<2 km	2 km	< 2 km	< 2 km	< 2 km	< 2 km	< 2 km	< 2 km
23	Average time required to Obtain Water, Dry Season	2 days	18 hrs	< 2 days	3 days	4 days	3 days	2 days	3 days	2.5 days
24	Average time required to Obtain Water, Wet Season	5 hrs	3 hrs	<3 hrs	<3 hrs	10 hrs	<2 hrs	<2 hrs	<3 hrs	3.875 hrs
25	Average water use (liters/person/day), Dry Season	3.49	4.36	4.36	2.42	3.49	2.88	5.82	3.81	4.31
26	Average water use (liters/person/day), Wet Season	10.4	11.36	11.36	7.63	9.09	7.5	8.82	11.5	10.45
27	% Villagers with basic understanding of hygiene/safe water use	54	26	16	94	82	2	28	85	49
28	# Diarrhea cases per month	138	899	835	677	238	125	1024	118	4054
29	Average # Diarrhea cases reported per respondent	2.6	0.76	0.56	1.8	1.74	1.24	1.48	0.55	1.33
30	Child Mortality Rate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
31	% Chronic Malnutrition in children under 5									42.8
32	% Acute Malnutrition in children under 5									5.7

APPENDIX 2

LEVANTAMENTO INICIAL

Projeto de Emergéncia de Água no Distrito de Machaze
CARE-Moçambique

QUESTIONÁRIO

Confidencial e Anómino

DATA: _____ LOCALIDADE: _____
PONTO DE ÁGUA: _____

NOME DO ANIMADOR/A: _____

HORA DE INICIO DE QUESTIONARIO _____ HORA DE ACABAR _____

---

1. O chefe da casa é homen ou mulher? _____

   (SE É HOMEN) O sea marido tem quantas esposas? _____

3. Quantas pessoas comem da mesma panela com comida preparada por si?

   _____

4. Desde quando está a viver nesta aldeia?

   _____

5. Vossa família tem plano de saír daqui em breve para um outro lugar?

   (sim/não) _____

6. Se o seu marido tem mais esposas, cada esposa tem uma machambe dela própria?

   (sim/não) _____

7. **Para o ano passado, você cultivou quantos hectares em total?**

   _____

8. E o resultado da sua colheita, você encheu quantos celeiros?

   _____

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9. Quantos pessoas na sua família estão a fazer actividades para ganhar dinheiro?

_____

10. Quais são estes actividades?

_____ _____

_____ _____

11. Quanto dinheiro a sua família ganhou durante o mês pasado? (por exemplo, 10.000 MT, 25.000 MT, 50.000 MT, etc.)

_____

12. O que está a comprar com este dinheiro?

_____ _____

_____ _____

13. Quais são as causas de diarrea?

[ ] agua contaminada
[ ] comida contaminada
[ ] maos sujas
[ ] moscas
[ ] fases do crescimento da criança
[ ] **feitiças**
[ ] mal comportamento dos pais
[ ] epoca do ano
[ ] outro _____
[ ] não sabe

14. Quando você quer água para <u>beber</u>, é melhor ir buscar este água donde?

[ ] cisterna [ ] pouço [ ] água de chuve em buracos
[ ] bomba [ ] lagoa [ ] água de chuve em recipientes
[ ] outra (Explicar) _____

Porque?

_____

15. Durante as últimas duas semanas, quantos membros da sua família tinha diarrea?

_____

BASELINE DATA AND FINAL EVALUATION DATA December 15, 1994

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6	Average # of Years at this Location	11.67	1.26	12	0.91	19.86	1.45	7.89	8.66	7.78
7	Expected # of Returning Refugees	0	11585	144	0	0	301	5044	0	17074
8	Expected # of People Leaving	18	1453	1611	0	0	42	1827	426	5377
9	% of Subsistence Farmers	42	12	96	52	80	74	88	91	67
10	Amount of Land Cultivated/Family (in HA)	0.99	0.09	0.46	1.34	2.34	2.22	0.55	1.04	1.12
11	Average Yield/HA/Year (in kilograms of cereal)	60	145	37.5	52.5	40	30	305	230	87.44
12	# Sellers/Traders in Principal Market	0	16	7	0	0	0	4	7	34
13	#/Type Existing Community Organizations	1	3	3	1	1	1	2	2	14
14	# Wage Earners	1	160	9	1	1	1	5	4	182
15	Average Income/Month (in meticais)	12,573	27,200	13,500	4,700	600	2,480	4,260	51,832	15,047
16	Raw % of Respondents who earn cash	40	8	12	18	6	28	30	76	27.8
17	# Wells without pumps	0	2	0	0	3	0	0	2	7
18	# Wells with functioning pumps	0	0	0	0	0	0	0	0	0
19	# Boreholes with functioning pumps	0	3	2	0	0	0	0	0	5
20	# Cisterns	9	0	128	83	171	110	363	355	1219
21	Average Distance of Water Point from Beneficiary, Dry Season	9 km	< 2 km	2 km	17 km	10 km	16 km	18 km	12 km	10.75km
22	Average Distance of Water Point from Beneficiary, Wet Season	< 2 km	<2 km	2 km	< 2 km	< 2 km	< 2 km	< 2 km	< 2 km	< 2 km
23	Average time required to Obtain Water, Dry Season	2 days	18 hrs	< 2 days	3 days	4 days	3 days	2 days	3 days	2.5 days
24	Average time required to Obtain Water, Wet Season	5 hrs	3 hrs	<3 hrs	<3 hrs	10 hrs	<2 hrs	<2 hrs	<3 hrs	3.875 hrs
25	Average water use (liters/person/day), Dry Season	3.49	4.36	4.36	2.42	3.49	2.88	5.82	3.81	4.31
26	Average water use (liters/person/day), Wet Season	10.4	11.36	11.36	7.63	9.09	7.5	8.82	11.5	10.45
27	% Villagers with basic understanding of hygiene/safe water use	[illegible]	28	16	94	82	2	28	85	49
28	# Diarrhea cases per month	[illegible]	899	835	677	238	125	1024	118	4054
29	Average # Diarrhea cases reported per respondent	[illegible]	0.78	0.56	1.8	1.74	1.24	1.48	0.55	1.33
30	Child Mortality Rate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
31	% Chronic Malnutrition in children under 5									42.8
32	% Acute Malnutrition in children under 5									5.7