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Human Settlements and Development

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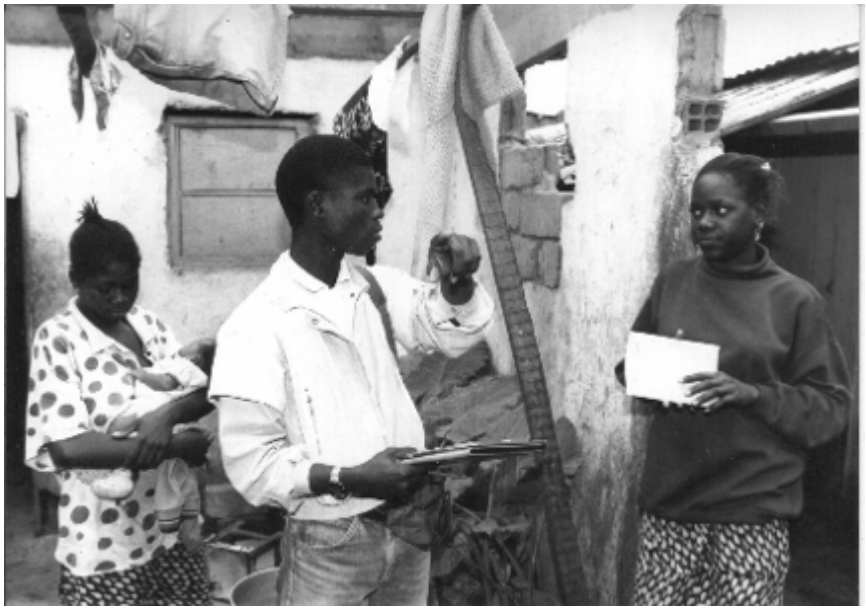
COMMUNITY CONSULTATION & WILLINGNESS TO PAY FOR BASIC WATER SERVICES



IRE

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PROVINCIAL GOVERNMENT OF LUANDA

LUANDA – 1998

DEVELOPMENT WORKSHOP ANGOLA

Was Sub-Contracted through
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1. Scope of Works

The areas considered for the construction of public standpipes for the present project is limited to the following:

- the "Mulemba" area of the Municipality of Cacuaco which encompasses the bairros of Mulemba, Kikolo and part of Ngangula.
- most of the Municipality of Cazenga, including: the bairro of Cazenga in the Comuna of Cazenga; the bairros of Cuca, Mabor, Petroangol and part of Hoji Ya Henda in the Comuna of Cuca; and the bairro of Cariango in the comuna of Tala Hadi.
- the N'gola Kiluanje area of the Municipality of Sambizanga; and,
- part of the Prenda and Rocha Pinto areas of the Municipality of Maianga.

The Development Workshop team was asked to identify appropriate sites for standpipes "*on secondary extensions* to the primary lines…". However, subsequent discussions with the client indicated that secondary extensions were not financially feasible at present and that the standpipes are to be connected directly to the primary lines. The siting of new standpipes was limited to those sites for which direct connection to the primary network was feasible.

The Development Workshop team also understands that the number of standpipes to be located under the present contact has been reduced from 670 standpipes to about 500 standpipes, but that the total budget available for the construction of public standpipes is limited to an estimated USD 1,380,000.

2. Description of Existing Situation

The areas within which the primary network is to be extended vary enormously in terms of land use, housing types, population density and current access to water. Furthermore, there are scanty reliable statistics for these areas, and those statistics that do exist are usually aggregated to the municipal level without being published separately for each bairro. For example, population density figures listed in the IRE Short Term Master Plan are listed by Comuna, or in the cases of Cacuaco and Viana, by Municipality. There are no figures given neither for the bairro of Mulemba within Cacuaco nor for any of the bairros within Cazenga. Therefore, it is very difficult to use these figures from the Short Term Master Plan to calculate with any accuracy how many standpipes each of the identified areas will require.

In order to overcome the above difficulties and allow for physical and socio-economic variations within the areas under consideration for standpipe construction, a total of 43 small, relatively homogeneous zones were delineated based on the consultant's knowledge of Luanda. Table 2.1.1 below provides a general description of each zone, as well as each zone's surface area and population density. The same areas are found on the maps in Appendix 1 and are described by their appropriate administrative location in Appendix 2.

The surface areas given in Table 2.1.1 are those within 300 meters of the primary network. However, as secondary extensions have not been planned, it was not considered viable to provide public standpipes for people living further than 300 meters from the primary network.

The population densities listed in Table 2.1.1 were estimated from 1:2000 maps and through site visits to all of the areas. The densities that are cited in Table 2.1.1 are substantially higher than those listed in the Short Term Master Plan. The main reason is that the densities listed in the Short Term Master Plan are municipal averages, which include industrial and commercial areas, schools, roads and other public spaces. The densities listed in Table 2.1.1 are much closer to the actual population densities found in the areas listed and compare with figures from informal urban settlements in other countries.

Table 2.1.1: Areas Considered for Standpipe Construction

Name of Zone	Ha	Estimated density (/Ha)	Estimated population	no. of existing standpipes
Cacuaco				
Chendovava	33	400	13,200	0
Boa Esperanca	25	250	6,250	0
Sovinagres	9	400	3,600	0
Control	36	250	9,000	0
Compao	22	500	11,000	1
Mbala	12	400	4,800	0
Fabimor	16	300	4,800	0
Induve	4	500	2,000	0
Ngangula	93	250	23,250	0
Farol Lagostas	17	200	3,400	0
	267		81,300	
Cazenga				
Vila Da Mata	77	250	19,250	0
Cavop	57	500	28,500	11
Nzamba 1	63	500	31,500	2
Madeira	18	400	7,200	0
Cariango	18	500	9,000	0
Matopa	97	500	48,500	0
Mabor	46	400	18,400	1
Agua Bruta	70	250	17,500	0
Tonang	40	500	20,000	0
Palmerinha	33	500	16,500	0
Tala Hadi	63	500	31,500	0
4 De Fevereiro	12	500	6,000	0
Patricio	28	500	14,000	0
Espirito Santo	21	300	6,300	0
Cazenga 2	60	500	30,000	0
Coral	50	500	25,000	0
Tira Pistola	20	500	10,000	0
Mario	37	500	18,500	0
Cazenga 1	114	500	57,000	0
Combustiveis	110	300	33,000	0
C.Americana	45	500	22,500	2
Mabululu	35	400	14,000	0
Cambalacho	54	250	13,500	0
Sonefe	55	400	22,000	0
	1223		519,650	
Maianga				
Jumbo	32	500	16,000	0
Tourada	48	500	24,000	1
Prenda	60	500	30,000	2
Engenharia	25	500	12,500	1
Sag.Esperanca	21	400	8,400	0
Rocha Pinto	196	400	78,400	0
	382		169,300	
Sambizanga				
Madame	31	200	6,200	6
Marconi	65	500	32,500	4
Val Saroca	40	500	20,000	3
	136		58,700	
TOTAL	2008		828,950	

3. Field Work Programme

The field work carried out by the consultant was designed with two distinct objectives. The first objective was to collect sufficiently detailed information on water demand, consumption patterns and consumer preferences related to public standpipes in all areas affected by the extension of the primary network. The second objective was to involve as many interested people as possible in the decision-making and design processes so that the final decisions and designs reflect local priorities.

The quantitative component or survey, was designed to indicate the areas of greatest need for standposts by assessing water demand and consumption patterns. The purpose of the qualitative component of the research was to triangulate and expand on the data collected in the quantitative survey. It specifically aimed to

- Confirm the priority zones identified in the survey
- To assess user willingness to pay for the service
- To investigate potential models of cost recovery for the proposed public water program
- To investigate potential models for management of the proposed standposts
- To assess the implications for institutional change inherent in the management options proposed by the consumer.

Two main research tools were used: a quantitative house-to-house survey, and a series of focus-group discussions. Both methods were mutually complementary and allowed the consultant to verify information collected at each stage of the project. The two methods are described in more detail in Section 4 and Section 5.

4. Quantitative Questionnaire Survey

The survey questionnaire was conducted in all of the 43 different zones delineated in Table 2.1.1. The number of questionnaires conducted in each zone was determined by the size of the zone, with about one questionnaire conducted for each hectare within the zone. Two thousand three hundred (2300) questionnaires were conducted by thirteen different interviewers.

All houses within each zone were considered as candidates for interviews. Houses were selected by choosing every tenth house along a road chosen at random by the interview team. The questionnaire asked the following: whether or not the house had a domestic water connection; whether or not the house had a water tank and, if so, how it was filled up; the cost to fill it up; where the house normally collected water; how much water they collected; how much they paid for the water; how far they walked to collect water; and, how much time they spent collecting water. The actual questionnaire used, which was pre-tested in over 200 interviews, is included in Appendix 2.

A summary of the basic results of the survey questionnaire are listed in Table 2.1.2. A more detailed table of results is included in Appendix 3.

Table 4.1.1 Summary of Basic Results of Questionnaire Survey

Name of Zone	people per house	houses with domestic connect.	houses with connect. flowing	cost per m3	litres per person /day
Cacuaco					
Chendovava	7.0	6%	6%	$ 3.91	27
Boa Esperanca	7.8	18%	18%	$ 4.02	18
Sovinagres	7.4	0%	0%	$ 5.65	28
Control	8.7	2%	2%	$ 6.41	17
Compao	6.9	8%	8%	$ 6.96	20
Mbala	8.2	0%	0%	$ 7.93	32

Name of Zone	people per house	houses with domestic connect.	houses with connect. flowing	cost per m3	litres per person /day
Fabimor	6.6	0%	0%	$ 8.15	22
Induve	7.7	0%	0%	$10.00	12
Ngangula	7.3	0%	0%	$12.07	21
Farol Lagostas	7.1	0%	0%	$17.72	11
Cazenga					
Vila Da Mata	6.5	3%	3%	$ 4.02	33
Cavop	8.1	42%	32%	$ 4.78	29
Nzamba 1	8.0	23%	11%	$ 4.89	20
Madeira	7.5	24%	2%	$ 5.33	23
Cariango	8.0	25%	15%	$ 5.65	24
Matopa	7.3	40%	37%	$ 5.65	33
Mabor	7.4	20%	10%	$ 5.87	25
Agua Bruta	6.8	0%	0%	$ 7.93	19
Tonang	8.0	23%	8%	$ 8.48	21
Palmerinha	5.5	57%	43%	$ 8.80	16
Tala Hadi	8.7	92%	73%	$ 8.80	59
4 De Fevereiro	5.9	65%	40%	$ 9.02	23
Patricio	9.6	48%	29%	$ 9.46	52
Espirito Santo	7.2	4%	0%	$10.11	28
Cazenga 2	6.8	0%	0%	$10.65	21
Coral	8.3	14%	5%	$10.87	21
Tira Pistola	8.8	55%	35%	$11.74	29
Mario	8.0	28%	20%	$11.96	21
Cazenga 1	7.5	6%	1%	$12.72	18
Combustiveis	7.7	1%	0%	$13.80	18
C.Americana	7.6	2%	0%	$15.65	17
Mabululu	8.8	20%	6%	$15.65	13
Cambalacho	7.1	0%	0%	$16.52	15
Sonefe	7.2	0%	0%	$19.89	16
Maianga					
Jumbo	8.3	59%	55%	$ 6.09	20
Tourada	7.3	10%	7%	$ 6.85	21
Prenda	7.7	21%	8%	$ 8.48	22
Engenharia	9.5	53%	0%	$10.22	20
Sag.Esperanca	8.3	43%	7%	$13.70	24
Rocha Pinto	7.2	3%	1%	$15.00	17
Sambizanga					
Madame	7.8	56%	40%	$ 5.76	19
Marconi	7.7	13%	3%	$12.28	23
Val Saroca	7.5	0%	0%	$15.65	19
AVERAGES	7.6	17%	10%	$10.22	22

Number of inhabitants per house: The survey found an average of 7.6 people per household with 58% of the zones included in the study reporting an average occupancy of more than 7.5 inhabitants. Only 14% of the zones reported an average occupancy of more than 8.5 inhabitants per house.

Houses with domestic connections: Only 17% of all the households interviewed reported having a domestic water connection, but this varied from a high of 92% in Tala Hadi to 0% in 10 other zones. In nearly half of the zones fewer than 10% of households reported having a domestic connection. The survey did not distinguish between illegal and legal domestic connections. Along with the price of

water, the number of households having domestic connections is a primary indicator for selecting those zones most appropriate for public standpipe construction. The demand for public standpipes is likely to be very low in those zones with a relatively high incidence of domestic connections. This is discussed in more detail in community consultation section.

Houses with domestic connections that flow: In the Luanda context, having a domestic connection does not necessarily mean having running water. Overall, only 10% of households reported having a domestic connection that provided water and only 5% of households reported that their connections provided water at least two or three times a week. Only 3 of the 43 zones had more that 20% of households reporting domestic connections that provided water at least two or three times a week. However, it is likely that with the rehabilitation of the primary network, many of the existing domestic connections will receive significantly more water than at present.

Cost of water: The price that people have to pay for water within each zone is the most important indicator of relative demand for improved water services. While the overall price of water averaged USD 10.00, the price varied enormously between zones. The lowest price was USD 3.91, in the area immediately surrounding EPAL water tower in Kikolo. The highest price of USD 19.89 was in Cazenga, immediately surrounding the Sonefe installations.

In general, the higher prices were found in those areas with the fewest domestic connections. In these areas, people are more reliant on water provided by water trucks. These zones are the highest priority for the construction of public standpipes.

Per capita consumption of water: The survey included questions on household water consumption. This combined with information on the number of people living in each household enabled the consultant to make estimations of per capita water consumption. The overall average was 22 litres per person per day, which is relatively low, but comparable to other African cities in which water is both expensive and scarce. Predictably, the highest consumption figures were found in those zones with the lowest water prices. Conversely, in the highest price zones water consumption was often below 20 litres per person per day.

5. Community Consultation

5.1 Methodology of Field Work

Forty-three areas were surveyed in the quantitative survey. Thirty-one of these areas were further selected as representative for the focus groups. Thirty-six focus groups were held in thirty-one areas. A further three discussion groups were held in three different markets with women only. This was to confirm the validity of emerging differences in opinion between men and women.
Eight groups were held in Maianga, sixteen in Cazenga, six in Ngola Kiluanji (Sambizanga) and six in Kikolo (Cacuaco). More groups were held in Cazenga because it had a larger beneficiary population living in areas which are very different with regard to types of housing, existing infrastructure and community organisation.
Twenty-three groups were held in areas where it is proposed to build standposts and thirteen in areas where standposts are not recommended.

Participants were recruited randomly for the focus groups in locations, which were within a distance of 300 meters from the proposed pipelines. Participants were interviewed to ensure they were resident and available. Twelve suitable participants were formally invited with a written invitation one-week before the focus group. They were instructed to send another participant of the same sex if they were unable to attend on the appointed day. If the participants did not turn up for the planned focus group discussion, the research teams were instructed to visit houses within 300 meters of the pipeline and recruit suitable participants on the day. Only one discussion was held with less than six participants and one other discussion was considered poor quality because some participants were drunk and the place where the discussion was held was inappropriate. The discussion groups were held in resident's yards, schools, churches and local cafes.

The primary limitation was that women in general were less available than men were because they sell in the market place every day. The researchers compensated for the lesser number of women

participants by holding modified discussions in the market place. The second limitation was, that in certain areas where there were a significant number of domestic connections, the participants tended to self select for those people most interested in a public standpost service.

There were two teams of researchers. Each team had one reporter, a facilitator and a third person. The role of the third person was to interview participants who were influencing the discussion separately from the main group. The supervisor/lead researcher accompanied each team, on alternate days, for the duration of the discussion. The lead researcher replaced the reporters on rest days and in the event of illness. The facilitators used a detailed discussion guide. The complete focus group discussions are included in Appendix 4.

5.2 Results

This section will present consolidated information for seven groups of areas. The information is presented in table form, indicating the main opinions by theme, any differences in opinions between men and women and any information, which is specific or peculiar to an area. Each of the tables consolidates information from similar areas. The areas are similar in

a) types of housing
b) current level of service provision
c) past level of service provision
d) existing infrastructure

An explanatory text is provided for each Municipal area with the exception of Cazenga where Hoji Ya Henda and Cazenga Communes are treated separately.

5.3 Review of Focus Groups from Maianga

Table 5.1.1: Rocha Pinto – Maianga, Summary of Focus Groups
(Standpipe = SP)

THEMES	MAIN COMMENTS	MEN/WOMEN	AREA SPECIFIC
General Issues	• Reluctant to believe in government capacity/willingness to deliver on the project. • Worried about the quality of water they drink now • Many people eat less to buy water • People buy the water they can afford, not the water they want/need	Women particularly emphasised the cost of water	Saca Penda • Sense of marginalisation • Antipathy towards people from outside the bairro exploiting them • Resentment at not being included in the urban plan
Locations	• Depends on the total number to be built in their bairro • Community should select the spots and Local Administration should authorise the use of the land. Initiative should not be left to Local Administration • Houses should not be knocked down • SP should be built adjacent to places like police barracks, churches for reasons of security • No consensus on whether SP could be placed in a resident's yard		• Saca Penda is not zoned, therefore planning SP by blocks is not possible • Zona A thought that the number of SP should be allocated by block
Distance/ Time	• Participants mentioned distances between 50 and 200meters • Prepared to wait in a queue of 4-5 people		
Water tanks	• Many tank owners can no longer afford to fill their tanks • Water tanks are a good service but expensive		Very high prices are related to areas where the erosion prevents lorries delivering water
Standpost Service	• SP should be open morning and afternoon • Users should be authorised to fill a limited number of recipients in one turn • Good service requires a sufficient number of standposts and pressure in the network	Women emphasised the importance of SP being open in the evening when they come home from the market	
Models	• Nationally produced taps • Protection grids on taps		Saca Penda: Community will build a cabin around the SP when they see water flowing
Illegal Connections	• The tendency is increased by low pressure and irregular supply		Saca Penda: a previous SP stopped working because of illegal connections

	• No suggestions on control		
Organisation Committees	• Water Committee accounts to Residents Committee who reports to the Local Administration • Residents Committee also accounts to the community		• Zona A had previous experience of poor community leadership • Saca Penda has no previous experience of a Residents Committee
Monitor	• Full-time • Paid from user contributions • Recruited from unemployed men	Women confirmed that men were more available for the job but felt that women could do it if they so wanted	
Payment	• Willing to pay EPAL • Proposed two tier system, daily tickets or monthly cards	Women preferred a system of daily payments	
Institutional Context	• Local Administration give credentials for Water Committee • Local Administration person should participate in monthly meetings with community • Local Administration should arbitrate, resolve problems • Community deals directly with EPAL		Saca Penda has no previous experience of dealing with the Local Administration
Management of Money	• SP Bank Account in Cassenda • Treasurer should be somebody with means	Men felt that women managed money better than men in Saca Penda	
Private Operators	Negative response: • Any profit leaves the community • They doubted if government could regulate private operators effectively • Fear that the price would rise gradually • Fear that the maintenance would be poor • Considered the licensing of private operators as an abdication of government responsibility		Saca Penda: wished it stated clearly in the report that they did not want a private operator in their bairro.

Table 5.1.2: Kalemba and Madeira – Maianga, Summary of Focus Groups

THEMES	MAIN COMMENTS	MEN/WOMEN	AREA SPECIFIC
General Issues	• Replace the old pipelines which are riddled with illegal connections • Big increase in population in recent years • Children walk far and are involved in car accidents • Doubted government commitment to improve their living conditions	Women thought that money spent on water could be used for other things	Areas where people self selected for those interested in a SP service
Locations	• Places selected by Residents Commission in collaboration with technical team • Land use approved by Local Administration • Residents houses should not be knocked down	Women in Madeira thought standposts should be placed in a resident's yard	Madeira: • had limited public space for building standposts, unauthorized housing • 55% households have running water • People bought water from residents with piped connections
Distance Time	• prepared to walk 50 to 300 meters • accept to wait 10 minutes in a queue		Kalemba disliked the idea of their children walking long distance to get water.
Water Tanks	• No knowledge of number of connections which were legal or illegal in the community		Self selected in Madeira for participants who bought water
Service Standpost	• Standpost open from 05.30 to 18.00 • Water Supply every day • The quality of the service will be related to the number of SP and the water pressure		
Models	• Local taps • Grid protection • Liked the drainage pit. Avoided stagnant water around the SP		
Illegal Connections	• There must be realistic sanctions i.e. sanctions which hurt • Local Administration must apply the sanctions • Many illegal connections to tanks		• Kalemba had seven SP which no longer work because of illegal connections • In Madeira, a demobilized soldier built his yard around a standpost and refuses to allow the population use the SP. Local Administration have not applied sanctions.
Organization Committee	Not described		Kalemba group suggested that the Association of Kalemba supervise the project

Monitor	Monitors for each standpost	Women in Madeira suggested that community meetings be held on Mondays to facilitate women	• Kalemba suggested that the monitor be selected and paid by Dept. of Community Services • Madeira suggested that community select the monitor. Paid by community contributions
Payment	Just price @ 10.000Kw for 20 liters Discussed both daily and monthly payment systems	Women prefer daily payments	
Management Of Money	• Community held Bank Accounts • Managed by Association or Residents Committee		Association is specific to Kalemba.
Institutional Context	• Community Management • Association or Monitors account to the community via meetings • Report to the Local Administration • Contact with Local Administration via Coordinator • Coordinators seem active; Residents Committees not active		Madeira expressed doubts about Local Administration capacity or resources to solve problems
Private Operator	Reservations and Doubts: • Uncontrolled rise in prices • That operator would be arrogant i.e. not respect the users		

Table 5.1.3: Prenda – Maianga, Summary of Focus Groups

THEMES	MAIN COMMENTS	MEN/WOMEN	AREA SPECIFIC
General Issues	• Reluctance to believe in government commitment • Sense of marginalisation • Children frequently involved in road accidents, collecting water • Money spent on water could be used for other needs • Interested in a project with good coverage and service • Demand for house connections	• Women were more vocal/aggressive about feeling marginalised • Women also emphasized that money spent on water could be used for other needs	• Sector 19PR had experience of SP connection cut to favor house connections • Piped connections to tanks exist in Rua da 8 Esquadra • Sagrada Esperanca, high demands for house connections. Suggested that people with house connections should subsidize SP
Locations	• Reduced land availability in some areas • Majority opted for building in public spaces • Some interest in placing SP in resident's yard		Sector 19PR: Limited available space, unauthorized housing

	• Houses cannot be destroyed • Specific locations for SP named in some area • Selection by technicians with community • Depends on number of SP planned for each area • Local Administration must confirm land availability		
Distance/ Time	• Willing to walk 100 to 500 meters • Waiting time will be related to number of standposts and water pressure		
Water Tanks	• Majority buy water from tanks • Many tanks not filled because it is too expensive		Zone 4 has no water sellers with tanks
Service Standpost	• Regular daily service • Good pressure and acceptable coverage • 06.00 to 18.00 • User Education Campaign	Men reluctant to have the SP open in the evening for security reasons	Sagrada Esperanca: indignant that government proposing SP in urban areas on the eve of the millenium.
Models	• Nationally made taps • Protection for SP or at least for taps • Need for protection depended on location of SP	Women did not want to fill buckets on their heads	
Illegal Connections	• Major problem • Community Inspections teams suggested to <u>detect and report only</u> • Police or Local Administration must be responsible for applying sanctions. • Sanctions must be significant • Maverick EPAL employees must be controlled		Sector 19PR particularly antagonistic towards EPAL
Organization Committees	• Water Committee – Residents Commission – Local Administration • Residents Commission Local Administration • Lead must be taken by Local Administration • Local Administration must give credentials to community structures and supervise the management		• Zone 4 has no Residents Committee since 1992 • 19PR, no Residents Committee described
Monitor	• Proposals for selection by Water Committees, Residents Commissions and/or Local Administration • Proposals for payment by EPAL, Local Administration, User contributions and voluntary rotation schemes	Where voluntary rotation schemes proposed, the women insisted that it must be men because there was no such thing as “unemployed women” in the bairros	19PR: an agent outside community must control monitor. Fear of conflicts arising
Payment	• 20liters x 4 @ 50,000Kw	Women prefer payments which can be	Sagrada Esperanca: More wealthy residents

	• Monthly payments • Daily rate of 50,000Kw • 25liters x 5 @ 50,000Kw	made daily in relation to consumption	were most indignant about making poor people pay for water
Management of Money	• Coordinator of Water Commission/Treasurer of Residents Commission manages money • Bank account with multiple signatures or • Deposit with Local Administration		
Institutional Context	• Community deals directly with EPAL • Community deals with EPAL through the Local Administration • Department of Community Services should be involved		
Private Operator	• EPAL's performance is too poor to consider introducing private operators as yet • If introduced there must be local leasing arrangements allowing for consumer control • Would cause conflict between operator and community		

5.3.1 Geographic Areas and the Institutional Context

The major issue to recognise in terms of planning is that areas which are geographical adjacent and have similar characteristics may have lived dramatically different experiences in the peri-urban context. The previous local collective experience with EPAL, Local Administration and local community structures will influence the proposed solutions to problems. In Maianga communities were consulted in recently populated settlements like Rocha Pinto and in well-established areas like Madeira, and Prenda. In the latter areas, some adult participants were born there. Parts of Rocha Pinto are considered unauthorized settlements (Saca Penda) where residents have no expectations from the system and parts of Prenda are middle class areas and residents continue to believe that the system is there to serve them. Grades of opinions between these two poles also exists. Overall, women are more likely to articulate a belief that "the system" has abandoned them. The reluctance to believe that the proposed project will be executed stems from repetitive negative experiences whereby

a) problems are perceived to be ignored by the authorities
b) a solution is promised and not delivered on
c) the attempt at implementing a solution is technically poor and/or poorly planned. It is then perceived as exacerbating rather than solving the problem.

5.3.2 Level of Supply

Maianga presents a challenge to planners. In the long term, the demand for piped connection exists in all the areas consulted. In the short term, communities in Rocha Pinto, where residents have never had a water supply, are willing to participate fully in the development of a public water project. In the remaining areas, the same communities have residents with different expectations. In some cases there is a high percentage of piped connections but the majority have no running water. Many residents expect to be able to renew their domestic connection when the new pipes are laid. The demand for standposts is based on an expectation of

a) an acceptable coverage with a sufficient number of standposts.
b) Good water pressure
c) Water every day and all day

Anything less will be considered a poorly planned attempt at a solution. People need to be able to collect water every day, at least twice a day. Women who work outside the home (an apparent majority) cannot afford to wait for lengthy periods in queues. In most areas, participants did not approve of building standposts in a resident's yard. In some cases, the community had a previous negative experience. In other cases, they simply anticipated major confusion in a neighbour's yard and they doubted that any one family would tolerate this in their family yard.

5.3.3 Illegal Connections

Much of the project area in Maianga is likely to have a high level of illegal connections. Hence many groups recommended deactivating the old pipelines. It was clear that

a) Those communities will only be willing to act on illegal connections if the level of service justifies defending the service. If the service is irregular, runs for short periods at a time and there are only a small number of standposts, the beneficiary communities will feel no motivation to defend the service.
b) Local Communities are prepared to detect illegal connections and inform the "indicated authority". They expect the "Authority" to apply the sanctions. If sanctions are not applied immediately and effectively, the communities will cease to co-operate with the authorities.

5.3.4 Cost Recovery

The majority of people consulted considered it reasonable to pay EPAL the cost of producing the water. Most people were also willing to pay the maintenance of the standpost. Participants in Rocha Pinto were happy to support the costs of the management of the standposts i.e. pay the guards from community contributions. In other areas, where water was less expensive, participants proposed management solutions such as:

a) Department of Community Services in the Local Administration appointing their staff to do it. Participants argued that many of the staff with the Community Services were effectively on the public payroll but did no work. Other people felt that the position of monitor was much too vulnerable and some authority outside the community should employ the monitor.
b) EPAL. The argument for this option was that EPAL was the state body mandated to provide water and they should assume their responsibilities.

The majority opted for systems of payments, which were daily and related to consumption. Women especially insisted that payment would have to be daily because they, the women, managed their household budgets on a daily basis and because a monthly system for collecting money would be too complex to manage.

5.3.5 Management Options

Participants were concerned that the management option adopted would ensure them a good quality service. Secondly, the participants were consistently influenced by low expectations. They just found it difficult to believe that the government was seriously interested in providing them with water. Hence, their reaction was that if, by chance, they were to benefit from a water project, they wanted to maintain the control as local as possible. The rationale seemed to be to prevent the project evaporating before their eyes.
Therefore their reaction to a private operator was negative because

a) They perceived it as an option, which deprived the consumer of any control over the quality of the service.
b) Their experience of private management seemed to be that of rising prices and falling standards
c) They felt that the level of service provided by EPAL was not good enough to attract serious private interests
d) They were greatly concerned that the government institutions did not have the capacity to regulate private operators effectively.

It was equally clear that participants had reservations about the capacities and sometimes the interest and commitment shown at the level of the Local Administrations. But they indicated that they felt that they had some leverage over the Local Administration. They, therefore, felt that they could work with the Local Administrations to find an acceptable management option.

In Rocha Pinto, participants seemed confident that the community could find a collective solution. In the other areas, the participants indicated that individuals increasingly sought individual solutions to collective problems. Participants frequently decried the inability of the Local Administrations to apply sanctions where residents show anti-social behaviour. In Maianga, participants always referred to the Municipal Administration as the "Local Administration". Most participants did not consider that the Communal Administrations were functioning in the interests of the community.

The management options proposed by most groups suggested

- varying levels of community participation,
- sought channels of accountability to the users and
- Suggested government supervision at a local level.

Overall, the role of EPAL was defined as provision of a regular supply of water with pressure and effective supervision of their own field staff. Water Commissions seemed to reflect a desire for more tightly applied community control. In some areas it may have been a reflection of a weak Residents Commission.
Th management of the money was most clearly defined by the groups in Rocha Pinto. None of the other groups had clearly defined options, which satisfied all members of the group.

The Municipal Administrator in Maianga preferred a private management option. But he felt that if the population disagreed, then it would be politically unwise to apply the option. He also felt that it would be very difficult to implement a private scheme if the users were opposed to the scheme.

5.3.6 Community Structures

The striking characteristic of the community structures was the degree to which they differed between groups. Some areas had moderately active Residents Commissions; in others Residents Commissions no longer existed. Some areas seemed not to have Bairro Co-ordinators. Some Bairro Co-ordinators obviously felt that they were working within impossible constraints. In some areas of Rocha Pinto, where there were no obvious community structures, the community seemed to have some confidence in their ability to solve problems collectively. In other areas where communities talked about organising themselves, they referred to "informing" the Local Administration rather than engaging them. But it was also clear that there are only two conceivable authorities in the lives of people in these areas, the Local Administration or the Police.

In many areas, the invited participants did not join the discussion groups. Rocha Pinto was the only area where researchers got an impression that the community did regularly meet to discuss collective solutions to problems.

5.4 Review of Focus Groups from Kikolo

Table 5.1.4: Kikolo

THEMES	MAIN COMMENTS	MEN/WOMEN	AREA SPECIFIC
General Issues	• Water is very expensive • Water is poor quality and people cannot afford to boil it • Relate poor quality water to diarrhea diseases • Want a well designed project • Demand for piped connections • Children fetching water are involved in road accidents • They live beside the main water line and do not have the right to water		• Some people spend more on water than food (Bairro Jesso) • Participants annoyed that brothel sunk in November 1997 not left open to use water for washing • Kikolo was the only referring to the health implications of poor water supply
Locations	• Selection by Coordinator of Bairro • Selection by Residents Commission and Community • Individuals could donate land • SP should be built near houses for reasons of security • Houses should not be destroyed. Lack of urbanization is the governments fault • Availability of land should be confirmed by Local Administration • Opposing opinions about placing standposts in resident's yards		• Concerned about coverage. Since secondary pipelines are not included in the project, only people near the pipelines will benefit significantly from the project. (Dalamuleba) • In Bairro Jesso, the Coordinator suggested that his bairro needed 30 standposts • Dalamuleba residents suggested two standposts per block
Distance/ Time	• Distances suggested from 30 to 300 meters • The waiting time and distance depends on the number of SP and the water pressure • The length of time some people will wait will depend on how much money they have	• Women said they loose money by waiting and the maximum time they can devote to fetching water is 30 minutes • Women said that they could not walk more than 30 meters with a 30 liter basin on their head	
Water Tanks	• Most people can not afford to build tanks • Many who have tanks can no longer afford to fill them • Significant rise in price since 1997		

	• Prices vary with source of supply • Most families spend a minimum of 500,000Kw daily • Concern about poor maintenance of tanks		
Service Standpost	• 04.00 – 12.00 and 15.00 – 20.00 • standposts only or piped connections on demand	• Women want standposts open in the evening • Women disapproved of allowing people fill their tanks with hosepipes from the SP	Groups suggested closing at lunch-time
Models	• Protected taps, four taps • Drainage for irrigation • Taps with detachable levers • Rejected head fill system		Irrigation channels requested in bairro Jesso
Illegal Connections	• Community Inspection and Authorities should apply sanctions • Connections to tanks should not be allowed Or • Coordinator detects illegal connections and reports them • Population could not complain on each other • Persons in authority should behave correctly	Men thought that the control of illegal connections was straightforward. Women disagreed and warned that it could cause major problems.	Bairro Jesso referred all issues to the Coordinator
Organization Committee	• User Education Campaigns are important • Coordinator supervises the project and controls it Or • Monitor – Water Nucleus – Residents Commission • Monitor – Inspection Team – Residents Commission		• Jesso seemed to have no experience of collective action. They "complied" with orientations from the Coordinator • The other bairros showed a particular spirit of discussion and negotiation and had confidence in their ability to organize things. • With the exception of Jesso, the groups indicated that informing the community would generate more active participation
Monitor	• Women must be present when monitor is chosen • Community plus Coordinator choose monitor • Monitor should be paid; daily, weekly or monthly • Two guards for each standpost • Payment should be related to performance	Some men had suggested voluntary women monitors	Dalamuleba suggested that there be a woman and a man monitor for each standpost

	• Characteristics of a good monitor described		
Payments	• Flat rate per month per household • Monthly rate of 1,500,000Kw • Daily payments of 50,000 to 100,000Kw • 80 liters @ 50,000Kw • Regular payment is dependent on water supply	Women preferred daily payments	• Men in Jesso suggested they pay monthly like as for electricity
Management of Money	• No discussion of accountability • Monitor – Treasurer – Commission – Bank Account • Treasurer hold maintenance fund		Jesso not prepared to discuss accountability
Institutional Context	• Water Nucleus – Res. Commission – Local Administration • Residents Commission – Local Administration		• DalaMuleba and Sector 5: active Residents Commission • DalaMuleba: clear lines of authority based on consensus
Private Operator	• Positive for Private Operator: no community conflict about money, efficient. No headaches for consumers • Positive without explanation • Negative – poor quality service, poor maintenance	Women generally opposed to private operators	• For: Farol das Lagostas and Jesso • Against: Dalamuleba

5.4.1 Geographic Areas and Institutional Context

Kikolo is one of five administrative areas in the Municipal area of Cacuaco. Kikolo has a tapestry of local community settlement patterns. It includes areas where residents have lived a lifetime (Kikolo sede) and areas, which are relatively new bairros, such as Farol das Lagostas, Boa Esperanca and Jesso. Participants in DalaMuleba particularly described recent population influx. Much of this population movement may be from one bairro to another, within Luanda.

Sector 5 in Kikolo described a recently elected Residents Commission in 1992. This Commission was elected on the people's initiative because two of the companies in the area wanted to remove the people from the land they occupied. The Commission took the problem directly to the Provincial Governor. The Governor decided in favour of the people, gave them title to their land and ordered the Municipal Administration to recognise their Commission. This independent pro-active Commission contrasts greatly with Boa Esperanca 111, where participants knew of a Residents Commission which had been appointed, but had no idea who they were or what they got did. In Kikolo Sede, the local party structure seemed to have indicated the participants. The participants insisted that the Residents Commission would manage the project but none of them knew any member of the Residents Commission and were unsure whether the President of the Commission actually lived in the bairro.

The implications are that in some areas, communities are likely to insist in participating in the management of the project and in other areas, they may prefer that the Local Administration decide how the standposts should be managed. Both types of communities will want a clearly defined regulatory structure. Cacuaco also has a Local Delegation of EPAL. The participants obviously expected to be able to solve their problems at the level of the Municipal Administration.

5.4.2 Level of Supply

Few of the residents have piped connections with the exception of connections to peri-urban farms.

People did expect that EPAL should develop a level of service, which corresponds to a yard tap in the long-term. They understood that EPAL could only produce greater volumes of water in a stepwise fashion and were happy in an intermediate period with a standpost level of service. The issues they raised were those raised by other areas:

a) there must be an adequate number of standposts
b) The supply must be daily and with sufficient pressure
c) The women in particular wanted early morning and late afternoon opening hours

Many participants emphasised the importance of good quality technical design for the project. They mentioned that the existing water pipes in their area were very poor quality and very small. They thought that those kinds of pipes were an excuse rather than a solution. The areas where there was a lower population density, participants suggested design modifications, which would allow them, use the run off water for irrigation.

There was no real issue of building in a resident's yard because the bairros were low-density bairros.

Groups in Dala Muleba and Jesso particularly, considered that building standposts on the main pipeline only was a partial solution to the problem. They felt that the correct approach would be to build primary and secondary pipelines in the same area such that some users did not have to walk much greater distances than other users.

5.4.3 Illegal Connections

All the participants thought that the "Authorities" should take a firm position on illegal connections. A number of groups recommended public information campaigns with the application of stringent sanctions thereafter. Many groups suggested a proactive community position with community inspection teams. Other communities were very concerned about creating a potential source of conflict in the bairro. These communities clearly wanted the Local Government to assume complete responsibility for detection of illegal connections and application of sanctions. But the overall indications were that if the project provided an acceptable level of service, users would be motivated to maintain that service.

5.4.4 Cost Recovery

In Kikolo, there was no expectation that water would be free. The majority of the participants were quite happy to pay EPAL, the standpost monitor and any maintenance costs. Their primary concern was the provision of main pipelines and the regular supply of water. As in other areas, women preferred a daily system of payment. In some cases, it was even proposed to pay the monitors daily. In Kikolo, a number of participants, exclusively men, discussed a monthly system of payment in some detail. Some of the groups had positive experiences with paying on a monthly basis for electricity supply. Men felt that community peer pressure would prevent people defaulting on payment. Most of the women did not agree and considered that

a monthly payment system would be subject to a high rate of default. The interviews in the market place reinforced the women's preference for daily payments. It is also likely that it is primarily the women who pay for water.

The payment levels suggested by the groups, both on a daily and a monthly basis were realistic. There was also a widespread recognition that EPAL was likely to bill the water in relation to consumption and if they needed to pay more they were prepared to do so.

5.4.5 Management Options

Kikolo was the only area where some of the groups discussed the private management option with an open mind. The groups who were in favor of a private management option described previous positive experiences with the supply of electricity. They described a model where a private middleman negotiates the electricity supply on their behalf. The electricity was bought in both cases from SONEFE. Neither cases involved licenses or franchises. In both cases, a local entrepreneur saw an opportunity. He negotiates with SONEFE to buy electricity from them and he sells it to his clients. Those who supported the option saw it as more efficient and less likely to cause problems within the community. One of the reasons that many women were opposed to a private management option was that it had potential to cause conflict between the operator and the community. Some women interviewed in the market place anticipated that the only control mechanism they would have for a private operator would be "to beat him up" if he raised the price of water. The women also raised the issue of the collective nature of a standpost and the individual nature of an electricity connection. Some of the men also asked if licenses would be awarded without requiring the private operator to make any contribution to the costs of the capital investment.

The group in Dala Muleba, who were absolutely opposed to a private operator, graphically described a situation where their standpost would break down. They, the users, would ask the guard to report it to the private operator. The guard would ask them for money to take a taxi to the house of the private operator. They would give him the money. He would disappear for the day and come back to inform them that he had not found the private operator at home. The wife of the private operator would say that her husband was in Belgium or the Lundas and she would not know when he was due home. When the private operator would return from his travels, he would present the users, through the guard, with innumerable reasons why he could not pay for the repair of the standpost.

Their conclusion was that they, the users, would be paying the full cost of the operation and a margin of profit but that they would have to fight constantly to maintain an acceptable supply of water. The other frustrating aspect for them was that they also anticipated having to deal with a guard, an employee, with no decision-making powers. Essentially, many people feared that the government had no capacity to regulate a private operator. Their preference was to deal directly with the Local Administration, where they anticipated being able to negotiate and influence decisions to some degree.

The groups not in favour of private management suggested various options for community management, all within the context of Local Administration supervision. Many proposed community inspection teams to control the illegal connections. In Kikolo, when groups proposed a Water Commission, it did not seem to suggest lack of confidence in the Residents Commission as in Maianga. It seemed to indicate a delegation of tasks within the community in a spirit of informed community participation. The men in Kikolo Sede who had suggested voluntary women monitors could not think of anyone they knew who might accept the job on a voluntary basis. They also agreed that they themselves would not agree to do it voluntarily.

The options for the management of the money ranged from a model

a) where the community accepted no responsibility as in a private management option or the option where the Bairro Coordinator was completely responsible for the management to
b) where the community managed the money from the point of collection right to banking and payment of EPAL.

In a number of groups, participants described the personal qualities required for a good standpost monitor. It was clear that users required a person who would be polite, helpful, with personal authority and commitment to the job. Most groups emphasised the importance of the users participating in the selection of the standpost monitors.

5.4.6 Community Structures

In most of the groups, it was clear that people were accustomed to coming together and discussing problems and seeking collective solutions. In Kikolo Sede, none of the invited participants turned up for the discussion. In all other areas, the people invited turned up and in some cases they were prepared for the discussion. In five of the discussion groups people were clear how things worked at the level of their bairro. Overall, there

was less criticism of and lack of faith in the Local Administration structures compared to the discussions held in Maianga and Cazenga. In many cases, members of the Residents Commission participated actively in the focus groups without unduly influencing the discussion. Again, where local bairro structures were weak (Boa Esperanca) participants referred to the police as possible arbitrators of problem situations.

In DalaMuleba and Compao, the participants described active, representative Residents Commissions. In Boa Esperanca, participants had little familiarity with the Residents Commission and in Bairro Jesso, the participants consistently referred to the Bairro Coordinator as the only person with authority in the bairro.

5.4.7 Local Administration and Management

Currently, the Cacuaco Municipal Administration has two models of standpost management in operation. Some standposts operate with a community management model where the community collect users fees, pay EPAL, pay the Local Administration and maintain the standpost. In the second model, the EPAL delegation manages the standposts. EPAL collect user fees but they are not held locally but transferred to the Commercial Department of EPAL at Provincial level. The Administrator was particularly unhappy with the latter model. He said that when the standposts broke down, the community tended to complain to the Local Administration. The Administrator would refer the matter to the EPAL delegation who had no immediate disposable funds for maintenance or repair. Hence, though EPAL was theoretically managing the standpost, the Local Administrator was obliged to find a solution for the problem in collaboration with the users. The Local Administrator was in favour of management by the Local Administration in collaboration with the communities.

5.5 Review of Focus Groups from Ngola Kiluanji

Table 5.1.5: Ngola Kiluanji

THEMES	MAIN COMMENTS	MEN/WOMEN	AREA SPECIFIC
General Issues	• Criticism of previous projects which built SP when the water pressure was too low • Hoped that the technical planning would be good quality • Doubted government commitment • Demand for renewal of domestic connections		• Zona Central was supplied by one SP drawn off the water line to the refinery • Other areas had previous experience of standposts
Locations	• Should not be built in resident's yards • When the number of SP is decided, the technical team can consult the Residents Commissions		Val Saroca A and B, build near the drainage valleys
Distance Time	• 20 to 200 meters • wait 20 minutes to one hour • waiting time depends on number of standposts and water pressure	• description of physical abuse of women at the FINA SP	
Water Tanks	• Significant rise in price since 1997 • Many people can no longer afford to fill their tanks		
Service Standpost	• opening hours, 05.00 – 21.00, 05.30 – 08.00 and 16.00 – 18.00	• Women say long waits at the SP cause disputes at home with their husbands • Women want evening hours	
Models	• Four taps • Locally produced taps • Remove taps daily • Negative reaction to filling buckets on the head	Women preferred having somebody lift the bucket onto their head	
Illegal Connections	• Community Inspection and Reporting • Report to Local Administration or Police • Sanctions must be applied by Authorities • Good technical design, good quality pipes and deeply laid pipes		Previous standposts had been sabotaged by uncontrolled illegal connections. Some areas felt more established and organized now. (Val Saroca)

Organisation Committees	• Public Education Campaigns • Monitor – Residents Commission – Communal Administration		Positive Community Experience of engagement with Communal Administration
Monitor	• Qualities of SP monitor • Selected at public meeting with the Residents Commission • Paid from user contributions • Recognized (credential) by the Communal Administration • Suggested demobilized soldiers for job		Val Saroca suggested a stimulus rather than a full payment
Payment	• Accepted paying EPAL, guard and maintenance • No group suggested monthly payments • 30 liters x 3 for 50,000Kw • daily rate of 100,000Kw		50,000Kw for 200liters where water price is low (S.Jose)
Management Of Money	• Monitor – Treasurer or Coordinator • Monitor – Treasurer – Communal Administration		
Institutional Context	• Residents Commissions liaise with Communal Administration. • Regular reporting and meetings • Communal Administration should deal with EPAL		
Private Operator	Negative • Will want to make a quick buck • Will despise the user • No solution for the poor • Corrupt inspectors • Conflict between external operator and the community		

5.5.2 Geographic Areas and Institutional Context

Ngola Kiluanji is one of three communes of the Municipal area of Sambizanga. Ngola Kiluanji is a relatively homogenous area. The average time of residence ranged from twelve to nineteen years. Many groups consulted had some previous experience of using standposts. All of the four groups consulted in four different sub-areas gave similar relatively positive descriptions of their experiences with Local Administrations. The participants were more reluctant to believe in Provincial Government commitment to improving the infrastructure in the bairro. They also pointed to poor technical quality of previous interventions in their bairro.

5.5.3 Level of Supply

They were also interested in the same level of supply as other groups. They wanted a daily supply, morning and afternoon with a sufficient number of standposts to ensure a small waiting time.
The areas where standposts are proposed have no piped connections or a very low number. In those areas, such as Sao Jose, where there are a significant number of piped connections, there will be a demand for yard taps.

5.5.4 Illegal Connections

Groups did feel that the community could be vigilant and report illegal connections but again, the sanctions would have to be applied by "the Authorities". Some groups felt that there would be no problem gaining the active support of the authorities because staff of both the police and the Local Administration lived in the bairro and would be affected by illegal connections if they were ignored. One group emphasised the importance of laying good quality pipes and laying them sufficiently deep.

5.5.5 Cost Recovery

All of the groups were prepared to pay EPAL and the maintenance. Some few people were reluctant to pay the monitor a full salary, suggesting a community contribution less than the value of a salary. All of the groups opted for daily user payments. A minority suggested a fixed daily rate and the majority opted for a rate related to water consumption.

5.5.6 Management Options

None of the groups opted for a private management option. Their opinions were based on a negative perception of the quality of service provided by private operators. They also seemed to feel that a private operator would despise them because they were dependent on his water supply. Contrary to their perception of private enterprise, they seemed to have confidence in the commitment of the Communal Administration to support them. Some also said that as communities, they were more organised now than they had been some years back. All of the groups opted to work through existing Residents Commission. Most groups suggested that a member of the Residents Commission manage the money. Some opted for a community model of management. In this model, the Residents Commission reported regularly to the Communal Administration and the users. Other groups suggested a modified community model where the collection of money and the day to day management would remain in the hands of the community but that the money would be deposited with the Local Administration and managed by them.

Some of the men also felt that the monitors job required people who were calm and self-disciplined. They seemed to feel that the monitors were subject to a lot of provocation and verbal abuse. People left their homes in bad temper because of personal problems and their first tendency was to "let off steam" at the standpost monitor.

5.5.7 Community Structures

Local community structures were clearly defined by participants. With the exception of Bairro Frescura in Sao Jose, all the participants described their Residents Commissions and indicated the number of members. In some cases they provided job descriptions and examples of activities undertaken by the commissions.

5.5.8 Local Administration and Management

In Sambizanga, the Local Administration has some two years experience of managing standposts in collaboration with the community at both Municipal and Communal levels. The Local Administrator in Ngola Kiluanji is quite happy with the current model of community management supervised by the Local Administration.

5.6 Review of Focus Groups from Hoji Ya Henda

Table 5.1.6: Hoji Ya Henda

THEMES	MAIN COMMENTS	MEN/WOMEN	AREA SPECIFIC
General Issues	• There is water in the Rivers Bengo and Kwanza. Bringing water to Luanda is a matter of political will and technical competence • There is water in the bairro but it is too expensive for us • Will the government fulfill its promise this time? • If water was cheaper, we could buy other things with our money		• Sector 10 built three SP with community contributions some years post independence. A state construction company re-directed the pipe to their workshop and the water stopped flowing in the bairro • Demand for house connections in Sector 7 and 8
Locations	• Did not recommend building in a resident's yard • Available public land • Houses should not be destroyed • Increased population in recent years • Allocate SP by blocks • Sites identified by the Residents Commission and confirmed by Local Administration		Sector 10 and 14 named places for SPs
Distance Time	• Ranged between 100 – 500meters • Waiting time is related to number of SP and water pressure	• Women are not willing to walk more than 100 meters with a weight on their heads • Women are willing to wait 15 minutes	In Sector 7 and 8, will buy water from vendors with tanks if SP is distant
Water Tanks	• Many cannot afford to fill water tanks • Some rent out water tanks • People can no longer afford to build water tanks • Some people deposit money with tank owner and use water until credit is used up • Significant rise in prices since 1997		
Service Standpost	• 06.00 – 11.00 15.00 – 19.30 • 06.00 – 19.00	Women insist on evening opening of S.P.	In Oleo Queimado, one person suggested a collective storage tank. Most people disagreed.
Models	• nationally produced taps • four to eight taps • grid protection on taps • remove taps • when there is water, the community could contribute to building a cabin for the standpost	• Women were more likely to suggested removing taps at the end of the day • Some women suggested building a pedestal wall of 1.5meters to help them lift the buckets on their heads	

Illegal Connections	• Needs sufficient number of SP with adequate pressure • Community inspection brigades • External agency cuts illegal connections • Application of sanctions (fines) • No permitted house connections		Bairro Coral confident that residents can control illegal connections at level of Residents Commission
Organisation Committees	• Organization must be local to SP • Guard – water commission – Residents Commission • Guard – Residents Commission		Oleo Queimado: in reality, younger people are people with initiative who solve problems
Monitor	• Full-time • Paid by Community Contributions • paid by EPAL • selected by people or • selected by Residents Commission • Description of characteristics of monitor	• Older people suggested that EPAL pay, younger people agreed that community could pay • Unemployed men available in the community	
Payment	• Payment related to consumption • flat daily rate, 50,000Kw and 100,000Kw • 4 x 20liters @ 50,000Kw • Monthly rate; suggestions ranged from 1,000,000Kw to 20,000,000kw • Pay for maintenance or make collections for maintenance • Accept that EPAL must be paid for water		20,000,000Kw, monthly rate, was suggested by the Bairro Coordinator only in Sector 14
Management Of Money	• Guard only. Report to users • Guard – treasurer – Residents Commission – Monthly meeting of users • Not deposit with Local Administration		Sector 14 only suggested using a bank account
Institutional Context	• Community structures directly with EPAL • Community structures inform the Local Administration • Residents Commission holds meetings with users • Users deal directly with EPAL		• No Residents Commissions in Sector 7 and 11 • Sector 10 and 14 have active Commissions • Sector 8, inactive Commission • State owned, collective property likely to be poorly maintained
Private	Negative:		

Operator	• No regulation of private sector • Disputes between operators and EPAL • No user control of price • Operators will not respect user • Private operators are dishonest, interested in quick profit only • Private Operators will not be prompt in repairing SP		

5.6.1 Geographical Areas and Institutional Context

Hoji Ya Henda is one of the Communes of the Municipal area of Cazenga. Cazenga is a huge peri-urban sprawl with three Communes, Tala Hadi, Cazenga and Hoji Ya Henda. The population numbers at least 800,000 and is likely to be approaching 1,000,000. Hoji Ya Henda and Cazenga have Communal Administration structures. The Hoji Ya Henda administration has been established recently. The average number of years of residence ranged from twelve to fifteen years, with the exception of the group in Sector 8, where the average length of residence was 2.8 years. The participant groups suggested varying capacities of community organisation, ranging from weak as in Oleo Queimado and Sector 8 to quite strong in Bairro Coral. Bairro Coral was the only area to describe previous experiences of collective action to solve community problems. None of the groups indicated articulation between the community and the Local Administration in Hoji Ya Henda. One group thought that if they deposited the money with the Local Administration, they would have difficulty accessing it. Where sanctions were discussed in relation to illegal connections, the groups considered it imperative that the agent who applies sanctions should be external to the community. No group described clearly how this might happen and some referred simply to reporting the incident to the police.

Most of the groups also imagined a system where the users would deal directly with EPAL. They also wished to be able to deal locally with EPAL. They wanted to pay for their water locally and present service complaints at a local delegation of EPAL.

5.6.2 Level of Supply

The level of demand is similar to other areas. Participants in the focus groups wanted a daily service, a sufficient number of standposts to offer acceptable coverage and good water pressure. Many indicated that this was a fundamental requirement for any level of community participation. In some groups, the women indicated clearly that if the service did not compare to the water tanks in relation to waiting times and queues, they would prefer use the water tanks. Requests for an increased number of taps are also related to a wish to reduce waiting time in queues.

The current use of water tanks in the area varied. Some owners who could not afford to fill their tanks, rented the use out to another neighbour. This was the only area where people described a system where a user deposits money with a tank owner and consumes water until the credit is spent.

5.6.3 Illegal Connections

In some areas people had previous experience of sabotage of standposts with illegal connections. All of the groups emphasised the importance of preventing illegal connections. Some thought that their communities would be willing to report illegal connections. Many participants emphasised the fundamental importance of the standpost coverage being adequate with sufficient water pressure. If a an acceptable level of service was not provided, it would not be possible to control illegal connections. One area, Bairro Coral, considered that their community was sufficiently well organised to be able to control illegal connections at the level of the community. All emphasised the importance of sanctions being applied consistently. They all thought that the agency applying the sanctions should be hierarchically superior to the community structures.

5.6.4 Cost Recovery

All participants agreed that EPAL should be paid for the water. Most groups opted for a payment system related to consumption. The rate suggested was 50,000Kw for 60 or 80 liters. Participants in Bairro Coral discussed a monthly payment system using cards. The rate suggested was 1,000,000Kw per month. In some cases, it was suggested that the community contribute separately for payment for repairs. All groups included the payment for the guards in their regular contributions.

5.6.5 Management Options

The discussion of a management option is generally related to a community's previous experience. The experience provides them with reference points for debate. In Hoji Ya Henda, there were few previous experiences of collective action. Hence, most groups found it difficult to describe a functioning management system.

- All groups tended towards a system where the community could influence the process and some groups emphasised the importance of a local user control
- Most groups could describe the tasks of a standpost monitor
- Few groups had clear ideas about the management of money. They all agreed with the principle of accountability but had difficulty suggesting viable mechanisms to ensure accountability.
- None of the groups proposed an active relationship with the Local Administration

The reaction of participants to a management option by private operator was similar throughout the Municipal area of Cazenga. Their experience suggested to them that

a) private operators are generally dishonest people seeking to make a "quick buck"
b) they anticipated conflicts between the private operator and EPAL and they predicted that the users would be the victims of this conflict.
c) They emphasised that there were no real regulatory mechanisms for private operators
d) They anticipated that the users would have no control over the price
e) They were convinced that the private operator would not respect the users. This issue arose in many areas throughout the study. It does not refer to respecting people's rights. It refers to an idea that these external operators would control their water supply and to add insult to injury, they were likely to be rude to the users.

5.6.6 Community Structures

Some of the areas had very active Residents Committee who clearly represented residents and worked on their behalf. Other areas had no Residents Committee and one area knew they had one but did know of any activity undertaken by the same Residents Committees. Overall, none of the groups demonstrated community cohesion as shown in Bairro DalaMuleba or Rocha Pinto. In different groups, participants described how it would be difficult for an adult in the community to correct somebody else's child who was misusing the standpost. Many of the groups indicated a community willingness to participate in activities in the community interest but it would clearly be a new experience for them.

There is also some indication that the conflict in 1992 has left a legacy of mistrust in some areas.

5.7 Review of Focus Groups from Cazenga and Tala Hadi

Table 5.1.7: Commune of Cazenga and Tala Hadi

THEMES	MAIN COMMENTS	MEN/WOMEN	AREA SPECIFIC
General Issues	• It is the governments job to bring us water • We need to see concrete action to believe in this project • Demand for yard taps • Demand for restoration of household connections • Want a well designed, professionally implemented project • Want cheaper water so they can buy other things with their money	• Women consider that men are not always correctly informed on the water issue • More women participate on Mondays	• Poorly organized SP are a nuisance (Mabor-Malhas) • Previous community built SP in Sector 15 were poorly managed • Demand for piped connections, Mabor Malha • Demand for renewed house connections in Cazenga Popular and Tala Hadi
Locations	• SP should be organised by blocks • Not necessary to destroy houses; will cause discontent • Lack of urbanisation is fault of govt. • Government compensation • Recent population growth. Need for greater number of SP • Technicians select locations in consultation with Residents Committee • Local Administration needs to confirm land availability	• Women said that the govt. would never compensate real value of house • Women in Mabor-Malha named suitable locations	• Recent population growth in established areas like Cazenga Popular • Review locations of old standposts and select new ones (established areas)
Distance Time	• Not prepared to walk far • 100 to 400 meters maximum • People collect water once or twice daily • Small storage capacity • Maximum time was 30 minutes	• Women want smaller distances e.g. 100,200 meters. Distance is walked a number of times in one day • If there are queues, women will use private tanks	
Water Tanks	• Some for house consumption, some for sale • Many tanks are no longer being filled • Significant price rise since 1997		• Sector 16 feel they have few tanks in the bairro contributing to the high cost of water • Sector 21 suggested connections to tanks rather than SP if the water supply is not daily
Service Standpost	• Daily water supply, open all day, 06.00 – 18.00 • Sufficient water pressure and coverage	Women want evening service	• Piped connections available on demand or not at all (Mabor-Malha)

	• No queues		
Models	• Four taps to reduce queues • If water supply is good, community will contribute to building protection for SP • Meters (one group only) • Grid protection for taps or remove taps in the evening	Women disapproved of head filling mechanism	
Illegal Connections	• Old pipes should be replaced • Community Inspection – Residents Committees – EPAL • EPAL applies sanctions • Supervision of EPAL field staff • If service is poor, there will be illegal connections	Women thought that their communities were not likely to act in the collective good	• Prohibit house connections in Phase 1 (Sector 15) • Articulation between Residents Commissions and local EPAL delegation to reduce falsification of documents • Illegal connections are major problem in Tala Hadi
Organization Committees	• Public User Education (majority) • Inspection Committee – Water Commission – Residents Committee – Local Administration	Women are too busy earning a living to get involved in community politics (confirmed in market interviews)	• Sector 16, people not accustomed to assuming a collective responsibility. Not likely to spontaneously maintain public property
Monitor	• Rotate responsibility in community • Full time paid monitor (majority)	• Women disagreed with rotating the responsibility. Payment would depend on whether people did the job out of boredom or because they needed money. • Women always work. Only men are likely to be at home unemployed	• Discussion of voluntary guard in Mabor – Malhas and Sector 21 • Monitor appointed by Local Administration in Cazenga Popular
Payment	• Reluctance to pay EPAL • 80 to 100liters for 50,000Kw and 100,000Kw • Monthly payments	• Men only reluctant to pay for water • Monthly payments suggested only by men. Women insist on daily payments	• Reluctance to pay for water noted only in Mabor-Malha and Cazenga Popular
Management Of Money	• Collected by monitor • Monitor – Water Commission – Residents Comm. • Monitor – Residents Commission • Monitor – Local Administration • Money should not be kept in peoples homes	Payment of EPAL must be accompanied by a woman (Mabor – Malha)	• Belief in honesty of community selected leaders (Mabor-Malha) • Management by Church Commission (Sector 16)
Institutional Context	• Clear role for monitor • Clear role for Residents Commissions • Need for Local Delegation of EPAL		• Cazenga Popular familiar with Local Administration management of SP. Approve of model

	• Doubts about capacities and motivation of Local Administrations • Need to develop Community Services Department of Local Administration		• Residents Commission, strong and representative in Mabor Malha • Sector 16, doubt their community capacity to organize themselves • Coordinators have varying capacities
Private Operator	Not opposed to the concept but raise the following constraints • No legal framework for statutory regulation • Users will not control the service • Likely to get poor quality service • Operators will bribe inspectors	Women said that operator would not respect them and they would have no control of prices	• Possible to have private operators where licenses are locally authorized (Mabor-Malha) • Private operators should contribute to initial investment (Mabor-Malha) • Private operator should be from the bairro (Sector 16)

5.7.1 Geographical Area and the Institutional Context

The Commune of Cazenga includes area such as Mabor Malhas which have been recently occupied and resemble areas of Kikolo like DalaMuleba. Here the populations movement is from the provinces or increasingly from other areas of Luanda. The residents have organised themselves with a view to facilitating the future construction of an infrastructure in the bairro. Then, there are more established areas like Cazenga Popular where residents are more likely to be long-term residents. People began moving into Cazenga Popular from the rural areas in the nineteen sixties. It is densely populated and there are significant numbers of inappropriately constructed houses. The attitudes shown by participants in the focus groups ranged from verbal aggression shown to the researchers as accessible "representatives" of a defaulting government to one of interested engagement in the hope that this project might prove an exception and come to fruition.

Some Residents Committees seemed to articulate with the Local Administration (Cazenga Zona 18) but it did seem that the initiative came primarily from active Residents Committees. The Residents Committees and or the Co-ordinator organised at the level of the bairro and "informed" the Local Administration. Those participants who presented an opinion on the Local Administration clearly felt that the Administration was limited in terms of financial and human resources.

In areas where participants had previous experience of a water supply in the bairro, the participants demonstrated marked antagonism towards EPAL. They felt that EPAL had institutionally ignored the widespread anarchy of illegal connections. Many participants also felt that EPAL was singularly responsible for the current situation because they did not supervise their own field staff.

5.7.2 Level of Supply

Participants made similar demands in relation to supply as in other areas. They wanted good standpost coverage with adequate water pressure. The standpost should be open all day. If there were queues or delays they would prefer buy water from the tanks. Many considered the water vendors as local private operators but the water was expensive. They expected a better option to compete favourably with these vendors in terms of distance and waiting times but to be more affordable.
In Mabor Malha, residents expect the service to be upgraded to yard taps because many have come from neighboring countries where this level of service is provided in cities. Residents of Tala Hadi and Cazenga Popular will wish to renew their household connections when the main pipes are rehabilitated.

5.7.3 Illegal Connections

In areas where there have been previous household connections or standposts, the practice of making illegal connections has been established. It arises particularly when water pressure drops. Residents begin to seek individual solutions to their water problems, which are less time consuming. The issues that participants raised were

a) effective supervision of EPAL field staff to prevent them collaborating with residents making illegal connections
b) articulation between the local Residents Commissions and local delegations of EPAL to prevent falsification of documents authorising piped connections
c) Running Public User Education Campaigns at the beginning of the project
d) Clear legal framework for the application of sanctions and the consistent applications of sanctions
e) Sanctions should not be symbolic in nature

5.7.4 Cost Recovery

Overall people were prepared to pay for a service if it fulfilled their basic water needs. Most of the payments suggested are compatible with full cost recovery and many would generate significant profit. In Cazenga, people articulated very clearly the concept of an acceptable level of service. The discussions indicate that the effectiveness of a cost recovery scheme will depend primarily on the quality of service provided. If the quality of service does not correspond to the current service provided by water vendors, users are likely to revert to using water vendors. Users will only believe in a better service when they see a better service operating in their bairros.

5.7.5 Management Options

Participants in Cazenga were more open to a private management option than in many other areas. They identified potential advantages as better maintenance of the standposts and less headaches for the population. But the definitive preference for a non-private management option lay in the widespread belief that the government was in no position to regulate a private operator. The users thought that they could exercise some influence on a government service provider. In the case of the private operator, they anticipated that user complaints would be ignored because the private operator could afford to bribe the regulators. Again, the participants tended to design a system, which was subject to local control by the user. The position of the monitor was clearly defined but there was some differences of opinion about payment for the monitor. Most

groups attributed the supervision of the monitor to the Residents Commissions. There was a clear demand for a local delegation of EPAL. The role and importance of the Local Administration varied with previous experiences. In some cases, the communities had never articulated with the Local Administration and in other areas, a strong Residents Commission had on-going dialogue with the Local Administration. In Cazenga Popular, participants were familiar with the Local Administration model of standpost management and were unreservedly in favour of the same model. They gave the following reasons for their preference:

a) it could be expected to give them a regular supply of water at an affordable price
b) the users would not have the headache of managing or controlling the standposts

5.7.6 Community Structures

The quality of the Residents Committees varied:

1. Some committees were strong, representative and known by the participants
2. Some groups confirmed the existence of a Residents Committee but none of the participants knew the members
3. And some areas definitely had no Residents Committees.

The participants' attitudes to Bairro Co-ordinators also varied. Some were clearly considered hard working and well motivated while others were considered opportunist and interested only in the income they could derive from their position.

6. Conclusions and Recommendations arising from Consultation.

6.1 Priority Zones

The priority zones identified for water supply in the Survey component were confirmed and further investigated in the qualitative component of the study.

- These areas did indeed pay more for water and raised issues such as the opportunity costs involved. Participants complained that they had to pay very high prices for water and thus could not afford to buy sufficient food or clothes.
- Users walked greater distances in these areas.
- It was also clear that it would be difficult to prioritise and manage standpipes in areas with existing household connections. There would be conflicting interests in these communities between standpipes users and residents with household connections. It would also be very difficult to curb illegal connections in the same areas.
- Interestingly, the zones with greatest need were also the zones where participants in focus groups were more likely to describe a capacity for community organisation with previous experience of collective action to solve a community problem. Some of the priority zones in Cazenga were exceptions, either showing a poorly developed capacity for community organisation or lacking confidence in the commitment of the local representative structures. (e.g. Cazenga 1 and 11, Casa Americana and Combustiveis).
- Participants in zones with greatest need were also more likely to be able to describe mechanisms for management of the standpipes and were more likely to suggest paying the total non-subsidised cost of water production and distribution.
- There will also be a demand for commercial connections in these zones.

6.2 User Willingness to Pay

- Beneficiaries were willing to pay EPAL for the production of the water and spontaneously spoke of prices related to the volume of water consumption.
- The majority of the participants, particularly those consulted in priority zones, were willing to include the other running and maintenance costs in the tariff paid by the user.
- The majority of the participants wished to pay as they consumed water. It was clear in the discussions that it was primarily women who collected and paid for water. Women manage their household budgets on a daily basis. Women also articulated more clearly that monthly household collections or payments, required a greater institutional and community management capacity compared to a "pay as you use" system. The majority of the current payment systems use a "pay as you use" system.
- In some cases, potential users wished to pay for maintenance as the situation arose. This is not unusual in an economic context where inflation and/or devaluation are always a threat. Also, few of the identified zones have nearby banks and there is no post office savings mechanism in Angola as in other countries in the region.
- Users were willing to pay for an acceptable level of service only. All of the participant groups described an acceptable level of service as
  a) a standpipe which is open all day, with particular emphasis on evening opening for women
  b) good water pressure to reduce waiting times
  c) water available within an acceptable walking distance from their homes.

Model for Cost Recovery

PUBLIC STANDPOST COST - BENEFIT ANALYSIS

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DATE: 5/1/98

	YEARS => 1	2	3	4	5	TOTAL COST	% OF TOTAL
CONSTRUCTION COSTS	3,273					3,273	5.1
RUNNING COSTS							
Monitor's salary	1,200	1,200	1,200	1,200	1,200	6,000	9.4
Tools for monitor	200	0	0	0	0	200	0.3
Payments to EPAL (30%)	5,832	5,832	5,832	5,832	5,832	29,160	45.5
Payments to Mun. gov. (20%)	3,888	3,888	3,888	3,888	3,888	19,440	30.3
Repairs	1,200	1,200	1,200	1,200	1,200	6,000	9.4
						60,800	94.9
TOTAL COSTS	15,593	12,120	12,120	12,120	12,120	64,073	100.0
BENEFITS							
Water (m3)	10,800	10,800	10,800	10,800	10,800	54,000	
Water ($ value)	19,440	19,440	19,440	19,440	19,440	97,200	
NET BENEFITS ($)	3,847	7,320	7,320	7,320	7,320	33,127	

Notes: 1. The amount of water provided at the standpost was based on 25L/person for 1200 people every day. (900m3 per month)

2. Value of water calculated at KZR50,000 per three buckets (USD 1.80/m3)

The above cost-benefit analysis model is based on real costs. The price is tied to the amount consumed, which encourages conservation and discourages waste. It also provides resources for maintenance and extension of coverage. Recent international reviews confirm that subsidised public water programmes consistently benefit those with highest consumption. (Output to Purpose Review, Two Regions of Ghana, ODA, 1997).

The policy document prepared by the Direccao Nacional de Aguas in 1995 proposes the following norms

a) that the development of water supply services in Angola should be based on tariffs which allow the recovery of production costs initially. These tariffs should be gradually raised to cover the total costs of production and distribution. (Directriz 21)
b) The tariff should not be uniform but adapted for the costs of different systems in different contexts. (Directriz 22)
c) That local user communities should be involved in the process of developing Water Supply Programmes. (Directriz 32 and 33)

This document also considers that the private sector should be considered as a resource. It underlines the importance of developing a legal and institutional framework for the further development of the sector. The tariff policy was applied from October 1995 until October 1996, when it was abandoned for domestic consumers but continues to be applied for commercial and industrial consumers

6.3 Discussion of Management Models and Implications for Institutional Change

The experiences of cost recovery and management, which have been documented in the recent years in Angola are:

- Lobito/Benguela Infrastructure Rehabilitation Project (PRUALB), financed by an IDA loan. Somewhat less than three hundred standpipes were built by 1997. This programme provides subsidised water. Consumers with household connections pay less than consumers at public standpipes. Public standpipes are managed by leaseholder. The water authority is expected to control and monitor the operations of the leaseholder. A Beneficiary Study is in course for this programme, implemented by OXFAM, Gt. Britain and Ireland...In Huila, the provincial government have opted to cross subsidise the peri-urban and rural water programmes with revenue from the sector of domestic consumers.
- ACORD support a community water project in Viana, Luanda where the users contributed to the construction of the standpipes and pay for on-going maintenance and minor repairs.
- Development Workshop projects have supported EPAL to build 200 standpipes in the nine municipal areas of Luanda. Different management models have evolved in different administrative areas. All of the four municipal areas included in this Phase 1: Extension Programme, have had previous experience in managing standpipes in their area of authority.
    a) Sambizanga has 49 standpipes currently operating. They are managed on a combined model of community management with local administration supervision. The finance is managed by the community and they pay a percentage to the local administration and EPAL.
    b) Maianga has 27 operating standpipes. They are managed as in Sambizanga
    c) Cazenga has 21 standpipes built by DW-EPAL. These are managed by the local administration who appoint standpipe monitors and manage the finances. The responsibility of maintenance is not clearly defined. The method of payment for EPAL is also not clearly defined.
    d) Cacuaco has approximately 20 standpipes. There are two management models operating in Cacuaco. Some standpipes are managed as in Sambizanga and others are managed directly by EPAL.
- Vila de Mata Water Project (Cazenga) began as a pilot private sector project, supported by the World Bank. There are no available documents describing the project. In 1996/1997 the management reverted to the Municipal Administration because of user dissatisfaction with the private sector management.

The existing documented descriptions of the experience include:

a) Managing Public Water Standposts: Privatisation or Community Based Management. Lessons from Five Case Studies in Angola. Univ. of Guelph, Canada, December 1997. This includes case studies in Luanda and Lobito.
b) Inquerito sobre a Saude Ambiental da Populacao, PRUALB, Agosto 1997. A quantitative study to assess the impact and coverage of the PRUALB intervention.
b) Diagnostico da Situacao Institutional e Organisativa do Sector de Aguas na Provincia de Huila. Quest Consult and Consultoria Austral for the Embassy of Holland, Dec. 1997. A thorough description of a provincial water system.
c) Both ACCORD and DW have project reports and project evaluation documents available.

6.4 Management Model

6.4.1 Potential stakeholders

The focus group discussions identified three clear stakeholders, the potential beneficiaries/users, the local administrations and EPAL. Management of standpipes by the private sector was discussed in all groups. The

majority of the people consulted rejected the private sector as a potential manager/stakeholder for the following reasons:

a) they considered the private sector as poorly developed and decapitalised with no previous experience in service provision.
b) Participants clearly described entrepreneurs as "people out to make a quick buck at their expense".
c) Participants felt that there was little institutional capacity and no legislative framework in order to regulate private sector participation.
d) Participants considered that the users would loose control over the quality of service provision if there were private sector involvement. (The Case Study of Lobito, included in the The Five Case Studies referred to in 6.3 would suggest that this was a valid concern).

Hence, though many groups approved of private sector involvement in principle, they rejected it as a management option for the standpipes because of previous negative experiences and because of the current context of a weak private sector. There was also concern that it had potential to generate conflict between the manager and the users.

6.4.2 Management Models

There were some design characteristics, which were similar to the majority of the management systems and ideas proposed in the discussion groups.

a) the majority of the beneficiaries wanted to have some control over the quality of service
b) only a service which provided water every day and all day would be likely to stimulate significant community participation
c) Most users wanted to participate in the selection of the standpipe monitors. There seemed to be two main reasons for this; one they wanted to ensure that responsible people would be chosen for the job and secondly, they wanted to ensure that the people chosen would not contribute to conflict and tension in their communities.
d) There were few precedents for the successful management of money in the community. Most groups indicated that they wanted financial systems which facilitated accountability and control of their contributions. Participants could clearly describe the problems they anticipated but few groups could describe accountable systems for managing money.
e) Illegal connections will be difficult to control in communities where they arise. They are more likely to be a problem in communities which have had a water supplied previously through a piped system. Control of illegal connections would require the intervention of an institution considered hierarchically superior to the community.

6.4.3 Outline Framework for a Management Model

Any framework model requires the inclusion of the three stakeholders, the user communities, the service provider, EPAL and the local administration bodies.

User Communities

The most important conclusion from the focus group discussions is that strengthening of Residents Committees is singularly important for the structured involvement of the users groups.

- Communities with active, representative residents committees were more likely to be better organised and more likely to have previously solved other community problems. Communities where there was no local structure or where the existing structure exercised control rather than facilitated community initiatives showed little or no capacity for community organisation.
- A legislative framework already exists for the Residents Committees.
- It is a recognised means of community representation with a tradition.

The suggested tasks of the residents committees were

a) Participation in the definitive selection of the locations of the standpipes.
b) Facilitation of the selection of the standpipe monitors.
c) Creation and supervision of inspection brigades to prevent illegal connections
d) Supervision of the day to day running of the standpipes
e) Articulation with the local administration and provision of information on the quality of service provided.
f) Some communities suggested that the residents committees manage the cost recovery component of the programme.

The implications are that the programme must invest in the development and strengthening of the residents committees in order to ensure sustainable community participation and user protection.

EPAL – Service Provision

The focus group discussions indicate that EPAL should have representations at least at the level of the municipal area. Users want to be able to pay bills locally and report faults locally. It is also crucially important that EPAL respond rapidly to reports of illegal connections. Many groups also suggested that

closer liaison between EPAL and the residents committees could prevent many of the false authorisations of piped connections.

The emerging role for EPAL is as a technical provider of services. Quality provision of services requires a structured mechanism for the presentation of complaints, which is accessible to the client. It is also mandatory that the service provider should react efficiently and effectively when complaints are made. There would also seem to be potential for EPAL to develop some capacity in public relations and marketing, providing for community awareness and public education on efficient and hygienic use of water resources. The consultant does not recommend that EPAL develop a capacity for social mobilisation.

Local Administrations

Clearly, the capacities and coverage of local administrations vary. In some areas of Maianga and Cazenga, residents did not even feel that they had a local administration; but, the majority of the participants felt the need for a functioning local administration. None of the groups consulted thought that the Provincial Government was likely to defend their interests. However, though local administrations are weak, there is no alternative institutional mechanism for structuring public services in the peri-urban areas. To a large extent, the continued vacuum in terms of public services for the poor is as a result of weak local administrations with poor technical capacity and no means of accessing resources.

Secondly, it is not feasible that EPAL sign contracts with user groups at each standpipe. It is likely to be more efficient to have packaged contracts at the level of communal administrations. The potential role for the local administrations is

a) to become the institutional client for EPAL
b) to provide supervision and technical support for the residents committees
c) to manage the cost recovery component in collaboration with the residents committees.

To some extent, some of the tasks inherent in the above roles are already performed by local administrations. However, there is no structured model or mechanism and the work is done in an ad hoc fashion. It is thus impossible to assess the quality of the work currently being done or assess the performance of local administration staff in relation to community expectations. The Municipal Department of Community Services is formally responsible for local involvement in service provision. The implications of the active participation of the local administrations are:

a) that the current staffing of the Departments of Community Services is reviewed; that elderly staff are retired; that appropriate job descriptions are developed with corresponding qualifications.
b) That a training needs analysis is done for the Department of Community Services with the subsequent design of a training programme and on-going capacity building.
d) Particular attention must be paid to their potential role in the provision of financial services and their role in social mobilisation support for the residents committees.

The following table outlines the essential components for a sustainable management model for water provision in peri-urban Luanda. (Adapted from The Question of Sustainability, 23rd WEDC Conference 1997, Durban, S.Africa, L.Duncker.)

Table 6.1.1: Components for Sustainable Management

Installed and functioning systems	Competent Stakeholders	Strong Organisation
• Community decisions in installation • Adequate coverage and water pressure • Efficient operation and maintenance • Complete cost recovery	• Management skills • Technical skills • Leadership skills • Skills in Social Mobilisation • Public/User Education	• Decentralisation • Systems and support for learning and problem solving • Mechanisms for client feedback, systems review and planning • Mechanisms for dialogue, collaboration

7. Standpipe Design Criteria

The following criteria were used as a framework for the design and location of the public standpipes. The criteria are based on World Health Organization guidelines, but also draw heavily on past Luanda-based experience in order to maximize the impact of the limited number of standpipes to be constructed.

7.1 Connection to Primary Network

As stated earlier in the report, discussions with the client have indicated that secondary extensions to the primary network are not likely in the short term. As a result, all of the standpipes to be constructed within this project will have to be connected directly to the primary lines. A number of options were considered for connecting the standpipes to the primary network. Together with the client it was decided to use an “antenna” system, whereby two standpipes could be connected to a single small diameter pipe running perpendicular to the primary pipe to a maximum distance of 200 to 250 meters.

As detailed in the initial report submitted in December 1997, it is recommended to connect the first standpipe at 75-80 meters from the primary pipe and the second standpipe 225- 240 meters from the primary pipe. This will enable the standpipes to serve the population living within 300-350 meters of the primary network.

It is not advisable to extend the small diameter pipes beyond 250 meters from the primary network because of the increased likelihood of illegal connections. Generally, the primary lines are to be located along main roads where the control of illegal connections is easier. From experience in Luanda, standpipes connected more distant than 200 meters from these roads suffer from increased vulnerability to illegal connections.

7.2 Number of Standpipes Users

According to the Short Term Master Plan, the primary network will be designed so as to guarantee 22m of available pressure head in the peripheral area of the network (R1 - Volume II - page 146). With 15 m of pressure head at the standpipe, each tap should provide about 20 liters per minute. Assuming a maximum of 300 users per tap, a target consumption figure of 25 liters per person per day, and a water loss of 10%, the target population could collect their daily water requirements within 7 hours per day.

Therefore, a standpipe with four taps should be able to adequately serve up to 1200 people. In the high-density musseques of Luanda, 1200 users correspond to about 150 households (8 people per household). From past experience, a standpipe with 150 contributing households can generate more than sufficient funds required for maintenance and management.

7.3 Maximum Walking Distance

The objective of the project should be to reduce as much as possible the distance that people must walk to collect water, since water consumption, and therefore health benefits, increase with the amount of water consumed. However, the relationship between water consumption and distance is not linear. A number of studies have shown that at a certain threshold distance a plateau is reached whereby reducing the distance further does not produce an increase in consumption until it is less than one hundred meters from the home [Cairncross]. Therefore, ideally the project should attempt to bring water within 100 meters of every house.

In the zones with high population densities (400-500 people per hectare) it is, indeed, feasible to provide a standpipe within 100 of every house. However, in the lower density areas (250 to 300 people per hectare) it is recommended that the maximum walking distances be increased slightly to a maximum of 150 metres. This will enable a greater number of households to benefit from the limited number of standpipes to be constructed.

8. Model Standpipe Designs

Four model standpipe designs have been reviewed. Drawings of all four models are included in the Appendix 5 of this report. Three of these designs are based on the standpipes currently being constructed by EPAL (in collaboration with the NGO Development Workshop). The fourth model is based on the standpipes constructed in the Vila de Mata area of Cazenga by the Provincial Government of Luanda.

The three models used by EPAL/DW are all currently being constructed in all nine municipalities of Luanda. According to the EPAL construction team, the decision regarding which of the three models to construct depends on the water pressure available at each site. Where the pressure is sufficient (i.e., minimum of 3m of pressure head) the "superficial" model is constructed. Where the pressure is lower (i.e., 1.5 to 3 m) the "meio subterraneo" model is used. Finally, in cases where the water pressure is very low (i.e., <1.5 m), but the need for a standpipe is urgent, the "subterraneo" design is used. The choice of design is made in the field by the construction supervisor after measuring the pressure head available.

A detailed review of these designs will be conducted during the fieldwork next year. However, based on an initial review of these designs, the following design features are worth noting:

- the perimeter walls of the standpipe reduce spillage from the standpipe to surrounding ground
- structure is built mainly with concrete blocks
- there is a drainage pit which is lined with concrete blocks
- there is a grill on the drain (for filtering garbage) which can be opened for cleaning the drainage pipe
- there is an isolation valve contained in a lockable valve box
- the valve box is large enough (50cm x 50cm) to facilitate repairs
- the standpipes have only two taps
- the taps are locally manufactured and available in local markets

The standpipes constructed in Vila de Mata have the following design characteristics:

- there is no perimeter wall to reduce spillage from standpipe
- the standpipe has four taps
- there is an isolation valve contained in a lockable valve box
- the valve box is small, provoking some complaints from EPAL maintenance staff
- the structure is built using poured concrete
- there is drainage pit filled with course gravel

The advantages and disadvantages of each of the designs should be analyzed in detail during the fieldwork in the next phase. For example, the implications of using concrete blocks or poured concrete will be analyzed in terms of construction costs, capacity of local construction companies, durability, etc. The relative merits of standpipes with two or four taps should also be considered in detail. Potential users consulted in the focus group discussions indicated that they specifically approved of the following design features

a) perimeter walls to prevent spillage
b) a drainage pit because accumulating stagnant water was a significant concern for many participants.
c) the isolation valve in a lockable box, because it facilitated community/user control of the facility.
d) Locally manufactured taps to facilitate the users in the procurement of new taps when taps were damaged

There were two further interesting design proposals. Residents in low-density areas suggested soakaway drains to facilitate the use of the water for irrigation. One group of women suggested a 1,5 meter wall to help them place the buckets on their head. Women participants rejected the option of a design feature whereby they could fill the buckets directly on their heads. This modification was introduced in Vila de Mata to facilitate the male monitors who tired of helping the women users lift the buckets onto their heads.

9. Optimal Standpipe Locations

9.1 Distribution by Zone

Table 9.1.1 below lists all the zones considered for the construction of standpipes as well as the number and type recommended for each zone. As the table illustrates standpipes are recommended for only 22 of the 43 zones. A total of 418 standpipes are recommended, 406 standpipes with 4 taps each and 12 standpipes with 2 taps. The zones correspond to the zones in Table 2.1.1. The standpipe locations are included in the maps in Appendix 1.

Table 9.1.1 Distribution by Zone of Standpipes to be Constructed

Name of Zone	Estimated population	no. of standpipes to be constructed		Estimated population per standpipe
		with 2 taps	with 4 taps	
Cacuaco				
Chendovava	13,200	0	0	
Boa Esperanca	6,250	0	0	
Sovinagres	3,600	0	0	
Control	9,000	1	7	1,100
Compao	11,000	0	9	1,138
Mbala	4,800	0	4	1,200
Fabimor	4,800	0	4	1,200
Induve	2,000	0	2	1,200
Ngangula	23,250	4	18	1,100
Farol Lagostas	3,400	2	2	880
	81,300	7	45	
Cazenga				
Vila Da Mata	19,250	0	0	
Cavop	28,500	0	0	
Nzamba 1	31,500	0	0	
Madeira	7,200	0	0	
Cariango	9,000	0	0	
Matopa	48,500	0	0	
Mabor	18,400	0	0	
Agua Bruta	17,500	3	13	1,100
Tonang	20,000	0	0	
Palmerinha	16,500	0	0	
Tala Hadi	31,500	0	0	
4 De Fevereiro	6,000	0	0	
Patricio	14,000	0	0	
Espirito Santo	6,300	0	5	1,200
Cazenga 2	30,000	0	25	1,200
Coral	25,000	0	21	1,200
Tira Pistola	10,000	0	0	
Mario	18,500	0	15	1,200
Cazenga 1	57,000	0	48	1,200
Combustiveis	33,000	0	28	1,200
C.Americana	22,500	0	18	1,139
Mabululu	14,000	0	12	1,200
Cambalacho	13,500	2	10	1,100
Sonefe	22,000	0	18	1,200
	519,650	5	213	
Maianga				
Jumbo	16,000	0	0	
Tourada	24,000	0	20	1,171
Prenda	30,000	0	24	1,154
Engenharia	12,500	0	0	
Sag.Esperanca	8,400	0	0	
Rocha Pinto	78,400	0	65	1,200
	169,300	0	109	

Name of Zone	Estimated population	no. of standpipes to be constructed		Estimated population per standpipe
		with 2 taps	with 4 taps	
Sambizanga				
Madame	6,200	0	0	
Marconi	32,500	0	25	1,117
Val Saroca	20,000	0	15	1,101
	58,700	0	40	
TOTAL	828,950	12	406	

9.2 Location Within Each Zone

Appendix 1 contains 22 different maps, one for each zone for which standpipes have been recommended. These maps have the individual standpipe locations marked on them. These locations should be considered approximate locations only. The consultant's experience in Luanda has shown that the musseques of Luanda are dynamic places where the pace of change is rapid. In low-density areas, new constructions, both legal and illegal, are steadily occupying what appear to be "unused" spaces, including road right-of-ways. Following the consultation process of the focus groups, it is clear that in both low and high-density areas, the user community must be consulted on specific locations. The reasons that the users wish to be contacted at the time of construction is in order to provide their input on security, ease of access and maximum coverage of standpipes. The concerns that were frequently raised in the focus groups were

- Placement of standpipes in areas where children were less likely to be victims of car accidents
- The issue of building in a resident's yard seemed complex and the conclusion of the consultation process would be to build standpipes on public land where possible. Most participants tended to feel that building standpipes in a residents yard would be likely to generate conflict in the community but there are some very high-density areas in Maianga and Cazenga where it may have to be considered as an option.
- Some communities explored the option of connecting private tanks to the standpipe line to facilitate the storage of water. The majority felt that it was not a viable option because it would be impossible to prevent these people from exploiting other residents in times of water shortage.
- The distance which users were prepared to walk to collect water. It was clear that people who currently paid most for water were likely to walk further. But in every community, the users make their own decisions about how far they are prepared to walk. In some communities, users indicated that they would use the existing vendors if the standpipes were more than 200 meters from their homes. In others zones, users considered 500 meters an acceptable walking distance.

The locations identified on the maps are sufficient for contracting terms. Definitive locations will have to be identified at the time of construction in consultation with the users and the local administrations.

10. Pipe Sizing

Appendix 6 provides a table of pipe size calculations as they apply to the small diameter pipes for the "antennas" connecting the standpipes to the primary network pipes. Pipes were sized to limit the predicted head losses due to friction within the "antennas" to a maximum of 7 meters. This will provide a minimum of 15 meters of available pressure head at the standpipe. Only 50 mm and 37 mm HDPE pipes have been recommended with the pipe sizes indicated on the individual maps in Appendix 7.

11. Cost Estimates

Appendix 7 contains detailed cost calculations for standpipe construction costs. The results are summarised below in Table 11.1.1. The costs are listed not by standpipe but by "antenna" in order to include piping costs and connection costs to the primary network.

Table 11.1.1 Estimated Standpipe Construction Costs

	No. Recomended	Unit cost (USD)	total cost (USD)
Antenna with 2 x 4-tap standpipes	197	$6,546	$1,292,012
Antenna with 2 x 2-tap standpipes	0	$5,621	$0
Antenna with 1 x 2-tap and 1 x 4-tap standpipes	12	$6,053	$70,484
			$1,362,496
BUDGET			$1,380,000

12.Packaging of Contracts

The packaging of the contracts is designed to facilitate the involvement of the Local Government in the process of site selection and in the supervision of the construction contracts. The consultant recommends that the construction contracts be packaged by "Comuna" (Commune).
The following packages are proposed:

PACKAGE	COMUNA	ZONES	No. ST.PIPES
A	Rocha Pinto	Rocha Pinto	65
B	Maianga	Prenda, Tourada	44
C	Kikolo	Control, Compao, Mbala, Fabimor, Induve, Ngangula, (? Farol das Lagostas)*	52
D	N'Gola Kiluanji	(? Farol das Lagostas) Marconi, Val Saroca	40
E	Hoji Ya Henda	Coral, Mario, Mabululu, Casa Americana	66
F	Cazenga	Espirito Santo, Agua Bruta, Cazenga 1, Cazenga 2, Combustiveis, Cambalacho, Sonefe	152

* Farol das Lagostas was previously included in the Municipal Area of Cacuaco and is adjacent to Fabimor and Induve with similar socio-cultural characteristics. It has now been administratively included in the jurisdiction of N"Gola Kiluanji. The decision on which package to include it in may be either pragmatic (Kikolo) or administrative (N'Gola Kilunaji). In the above table, for the column *Standpipe Number*, it is included in Kikolo.

Appendixes

Appendix 1 Research Tools and Questionnaires

GRUPOS DE DISCUSSÃO

FASE 1, EXTENSÃO DA REDE DE AGUA EM LUANDA

Março 1998

Municipio: Comuna:

Sector: Bairro:

Caracteristicas do Grupo:

Equipe de Trabalho:

Data: 10-03-1998

	NOME	Baldes/ Pessoas em casa	Tempo de Residencia	OCCUPAÇÃO	*FONTE DE AGUA

*Favor de indicar se tenham tanques proprios para agua em casa.

INTRODUÇÃO

Os trabalhos para fazer os Planos para a primeira Fase da Extensão da Rede de Agua em Luanda estão em curso. A empresa de consultoria contractada pela EPAL é Louis Berger International. Este equipe de estudo trabalha em colaboração com Louis Berger. Este projecto prevê 500 chafarizes distribuidos por certas zonas de Maianga, Cazenga, Sambizanga e Cacuaco. As nossas equipes estão a consultar as populações que vivem nas zonas aonde que é previsto rehabilitar as condutas primárias de agua. Assim, estaremos a fazer perguntas a vôces em relação a como que poderão ser organisados chafarizes cà no vosso bairro. O relatorio feito por nós será entrega a EPAL, o Governo Provincial de Luanda e a equipe tecnica para Angola do Banco Mundial.

PREENCHIMENTO DA PRIMEIRA PAGINA DA GUIAO

APRESENTAÇÃO DA EQUIPE

PERGUNTA DE ENTRADA

- Apresentação dos participantes
- Localisação do sitio ex. Sector, Bairro, Rua

PERGUNTA DE TRANSIÇÃO

O que vôces pensam da proposta do Governo para abastecer agua no vosso bairro atraves dos chafarizes ligados a rede de EPAL?

1.0 LOCALISAÇÃO

Demonstrar na mapa ou expliquar aonde que será a conduta nova

1.1 Como que võces pensam escolher os sitios para localisar os chafarizes no vosso bairro?

- Que tipo de local é apropriado para a construção de um chafariz publico?
- Se não tiver terreno publico disponivél, aonde que poderá ser construido o vosso chafariz?
- Será possivél construir num terreno que tem dono ou no quintal de alguém? Como que vão fazer para que esta pessoa não se diz *dono do chafariz?*
- Se for preciso destruir umas casas para rehabilitar ou construir uma conduta nova, qual será a vossa atitude neste caso?
- Como que vôces vaô evitar ligaçôes clandestinas?

1.2 Distançia e tempo de espera

- Qual a distancia que vôces aceitam andar para chegar ao chafariz para cartar agua?
- Qual é o tempo maximo que vôces podem gastar no trabalho de cartar agua?
- Como que poderão organisar as bichas para evitar confusão e demoras?

1.2 Tanques de agua

- Quem são as pessoas que tenham tanques proprios em casa?
- Todos que tenham tanques proprios vendem agua?
- Quais que poderão ser as razões paraque um dono de um tanque abastece gratuitemente outra pessoa?
- Acontece que paga-se preços diferentes para agua nesta zona? Como?

1.3 Consumo e abastecimento de agua

- Uma familia nesta zona carta quantas baldes de agua por dia?
- Todo mundo carta todos dias? Como?
- Para as pessoas terem agua suficiente, é preciso a agua correr por quantas horas por dia?
- Qual é a melhor hora para ir cartar agua?
- **O que vôces acham melhor, agua todos os dias um bocado**

Ou

Agua todo dia, um dia sim, um dia não.

2.0 MODELOS

Demonstrar o modelo do chafariz. Expliqua que será uma coisa semelhante a este modelo.

2.1 Que tipo de torneira que é melhor?
(torneiras importadas e robustes ou torneiras mais fracas mais poderão ser encontrados no mercado local)

2.2 Nesta zona, será precisa construir uma proteção para as torneiras?
Porque? Como?

2.3 Em Cazenga, há chafarizes aonde foi modificada a sistema para facilitar as signoras encherem a balde por cima da cabeça. O que que vôces pensam desta sistema?

3.0 ORGANISAÇÃO DO CHAFARIZ

EPAL irá abastecer o vosso chafariz e vai facturar a agua abastecida. O preço corrente de agua cobrado por EPAL é

3.1 Quem é que vai tomar conta de vosso chafariz?

- Como que vão escolher este pessoa?
- Vai trabalhar voluntariamente ou será paga?Porque?
- Se será paga, como que isto será organisado?
- Quais que serão as tarefas desta pessoa?

3.2 Pagamentos

- Como que vão pagar agua?

(diaria, por balde, por semana, mensalmente)

- Como que será controlado o preço de agua?
- Se o operador ou o monitor aumenta o preço, quais as medidas que vôces podem tomar?
- Aonde que vai ficar o dinheiro recolhido?
- EPAL necessariamente tem que ser paga mensalemente. QUEM é que vai fazer este pagamento e COMO?
- Suponhamos que vôces pagarem a agua mais a pessoa indicada não pagou EPAL. EPAL vai cortar a agua na mesma. Quais as medidas que vão tomar nesta tipa de situação?
- Aonde vai ficar o dinheiro para manutenção ou reparação do chafariz?
- As pessoas que controlam o dinheiro vão prestar contas a QUEM e COMO?
- Qual é a sistema que vôces podem applicar para controlar o dinheiro e evitar que o vosso dinheiro não seja desviado?

3.3 Preço de Agua

- O que vôces consideram um preço justo para um balde de agua? Expliquar as razões?
- Se tiver lucro na venda de agua, qual deve ser o destino deste lucro?

4.0 EPAL e Administração Local

4.1 Como que é organisada a Administração Local neste aréa?

- Há Commisões de Moradores neste bairro? Expliqua para nós como que estes funcionam?

4.2 Qual que será a colaboração vossa com a Administração Local neste assunto de agua?

4.3 Que tipo de mecanismo deve existir para que vôces podessem reclamar problemas com abastecimento de agua com expectativo que aquilo resultasse?

4.4 Operador Privado

- Se for um operador privado, como que deve ser cedido as licenças de operação
- Como que o operador privado será fiscalisado?
- Qual o preço que estão dispostas a pagar para agua ao operador privado?
- Se o operador privado aumentar o preço, qual será a vossa atitude?
- Se não estiverem satisfeitos com o serviço do operador privado, quais as medidas que poderão tomar?

Appendix 2 Water Costs by Zone

DADOS POR PREÇO DE ÁGUA (MAIS BARRATO PARA MAIS CARRO)

Nome de Zona	Municipio	No.de Inque.	Ha	densi-dade/ ha	total pop. est.	pess. /casa	% com lig.	% com lig. corre	% com dist. <200m	% com tempo min.	% com $/m3	prioridade para a construção de chafarizes e a explicação porque	no. de chafarizes recomendado /4.4ha	/600pes	/1200pes	/2.2ha	no. de chafs. exist.	Chafarizes a construir 2torn.	4torn.	Nome de Zona
CHENDOVAVA	Cacuaco	50	33	400	13,200	7.0	6%	6%	69%	35	$ 3.91	4 preço «$5/m3	0	0	0	0	0	0	0	CHENDOVAVA
BOA ESPERANCA	Cacuaco	50	25	250	6,250	7.8	18%	18%	89%	18	$ 4.02	4 preço «$5/m3	0	0	0	0	0	0	0	BOA ESPERANCA
SOVINAGRES	Cacuaco	26	9	400	3,600	7.4	0%	0%	92%	77	$ 5.65	2 preço «$6/m3	0	0	0	0	0	0	0	SOVINAGRES
CONTROL	Cacuaco	47	36	250	9,000	8.7	2%	2%	97%	21	$ 6.41	1 «10% com lig. Domestica	8	15	8	16	0	1	7	CONTROL
COMPAO	Cacuaco	25	22	500	11,000	6.9	8%	8%	95%	60	$ 6.96	1 «10% com lig. Domestica	5	18	9	10	1	0	9	COMPAO
MBALA	Cacuaco	25	12	400	4,800	8.2	0%	0%	94%	28	$ 7.93	1 «10% com lig. Domestica	3	8	4	5	0	0	4	MBALA
FABIMOR	Cacuaco	25	16	300	4,800	6.6	0%	0%	100%	17	$ 8.15	1 «10% com lig. Domestica	4	8	4	7	0	0	4	FABIMOR
INDUVE	Cacuaco	10	4	500	2,000	7.7	0%	0%	50%	17	$10.00	1 preço »$10/m3	1	3	2	2	0	0	2	INDUVE
NGANGULA	Cacuaco	100	93	250	23,250	7.3	0%	0%	89%	45	$12.07	1 preço »$10/m3	21	39	19	42	0	4	18	NGANGULA
FAROL LAGOSTAS	Cacuaco	25	17	200	3,400	7.1	0%	0%	95%	4	$17.72	1 preço »$10/m3	4	6	3	8	0	2	2	FAROL LAGOSTAS
		383	267		81,300													7	45	
VILA DA MATA	Cazenga	70	77	250	19,250	6.5	3%	3%	57%	28	$ 4.02	4 preço «$5/m3	0	0	0	0	0	0	0	VILA DA MATA
CAVOP	Cazenga	60	57	500	28,500	8.1	42%	32%	95%	15	$ 4.78	4 preço «$5/m3	0	0	0	0	11	0	0	CAVOP
NZAMBA 1	Cazenga	65	63	500	31,500	8.0	23%	11%	83%	23	$ 4.89	4 preço «$5/m3	0	0	0	0	2	0	0	NZAMBA 1
MADEIRA	Cazenga	42	18	400	7,200	7.5	24%	2%	49%	29	$ 5.33	2 deslocam-se distante	0	0	0	0	0	0	0	MADEIRA
CARIANGO	Cazenga	20	18	500	9,000	8.0	25%	15%	100%	23	$ 5.65	3 25% com ligação domestica	0	0	0	0	0	0	0	CARIANGO
MATOPA	Cazenga	104	97	500	48,500	7.3	40%	37%	93%	24	$ 5.65	3 21% com ligação domestica	0	0	0	0	0	0	0	MATOPA
MABOR	Cazenga	40	46	400	18,400	7.4	20%	10%	100%	19	$ 5.87	3 20% com ligação domestica	0	0	0	0	1	0	0	MABOR
AGUA BRUTA	Cazenga	60	70	250	17,500	6.8	0%	0%	65%	29	$ 7.93	1 «10% com lig. Domestica	16	29	15	32	0	3	13	AGUA BRUTA
TONANG	Cazenga	40	40	500	20,000	8.0	23%	8%	82%	36	$ 8.48	2 23% com ligação domestica	0	0	0	0	0	0	0	TONANG
PALMERINHA	Cazenga	21	33	500	16,500	5.5	57%	43%	100%	13	$ 8.80	3 »40% com lig que corre	0	0	0	0	0	0	0	PALMERINHA
TALA HADI	Cazenga	60	63	500	31,500	8.7	92%	73%	97%	6	$ 8.80	5 quais todas c/ lig domestica	0	0	0	0	0	0	0	TALA HADI
4 DE FEVEREIRO	Cazenga	20	12	500	6,000	5.9	65%	40%	90%	18	$ 9.02	3 »40% com lig que corre	0	0	0	0	0	0	0	4 DE FEVEREIRO
PATRICIO	Cazenga	21	28	500	14,000	9.6	48%	29%	100%	68	$ 9.46	2 48% com ligação domestica	0	0	0	0	0	0	0	PATRICIO
ESPIRITO SANTO	Cazenga	25	21	300	6,300	7.2	4%	0%	50%	103	$10.11	1 preço »$10/m3	5	11	5	10	0	0	5	ESPIRITO SANTO
CAZENGA 2	Cazenga	50	60	500	30,000	6.8	0%	0%	82%	15	$10.65	1 preço »$10/m3	14	50	25	27	0	0	25	CAZENGA 2
CORAL	Cazenga	80	50	500	25,000	8.3	14%	5%	95%	35	$10.87	1 preço »$10/m3	11	42	21	23	0	0	21	CORAL
TIRA PISTOLA	Cazenga	20	20	500	10,000	8.8	55%	35%	100%	86	$11.74	2 35% com lig que corre	0	0	0	0	0	0	0	TIRA PISTOLA
MARIO	Cazenga	40	37	500	18,500	8.0	28%	20%	79%	22	$11.96	1 20% com lig que corre	8	31	15	17	0	0	15	MARIO
CAZENGA 1	Cazenga	100	114	500	57,000	7.5	6%	1%	56%	28	$12.72	1 preço »$10/m3	26	95	48	52	0	0	48	CAZENGA 1
COMBUSTIVEIS	Cazenga	115	110	300	33,000	7.7	1%	0%	97%	11	$13.80	1 preço »$10/m3	25	55	28	50	0	0	28	COMBUSTIVEIS
C.AMERICANA	Cazenga	60	45	500	22,500	7.6	2%	0%	93%	13	$15.65	1 preço »$10/m3	10	38	19	20	2	0	18	C.AMERICANA
MABULULU	Cazenga	50	35	400	14,000	8.8	20%	6%	100%	19	$15.65	1 preço »$10/m3	8	23	12	16	0	0	12	MABULULU
CAMBALACHO	Cazenga	50	54	250	13,500	7.1	0%	0%	71%	13	$16.52	1 preço »$10/m3	12	23	11	25	0	2	10	CAMBALACHO
SONEFE	Cazenga	50	55	400	22,000	7.2	0%	0%	79%	23	$19.89	1 preço »$10/m3	13	37	18	25	0	0	18	SONEFE
		1263	1223		519,650													5	213	
JUMBO	Maianga	29	32	500	16,000	8.3	59%	55%	100%	13	$ 6.09	4 »40% com lig que corre	0	0	0	0	0	0	0	JUMBO
TOURADA	Maianga	30	48	500	24,000	7.3	10%	7%	70%	36	$ 6.85	1 «10% com lig. Domestica	11	40	20	22	1	0	20	TOURADA
PRENDA	Maianga	48	60	500	30,000	7.7	21%	8%	74%	50	$ 8.48	1 <10% com lig. Que corre domestica	14	50	25	27	2	0	24	PRENDA
ENGENHARIA	Maianga	15	25	500	12,500	9.5	53%	0%	88%	24	$10.22	2 53% com ligação domestica	0	0	0	0	1	0	0	ENGENHARIA
SAG.ESPERANCA	Maianga	46	21	400	8,400	8.3	43%	7%	87%	81	$13.70	2 43% com ligação domestica	0	0	0	0	0	0	0	SAG.ESPERANCA
ROCHA PINTO	Maianga	193	196	400	78,400	7.2	3%	1%	88%	27	$15.00	1 preço »$10/m3	45	131	65	89	0	0	65	ROCHA PINTO
		361	382		169,300													0	109	
MADAME	Sambizanga	50	31	200	6,200	7.8	56%	40%	100%	5	$ 5.76	4 »40% com lig que corre	0	0	0	0	6	0	0	MADAME
MARCONI	Sambizanga	75	65	500	32,500	7.7	13%	3%	100%	45	$12.28	1 preço »$10/m3	15	54	27	30	4	0	25	MARCONI
VAL SAROCA	Sambizanga	75	40	500	20,000	7.5	0%	0%	72%	36	$15.65	1 preço »$10/m3	9	33	17	18	3	0	15	VAL SAROCA
		200	136		58,700													0	40	
		2207	2008	416	828,950	7.6	17%	10%	84%	30	$10.22		0	837			34	12	406	

SUMÁRIO DOS DADOS DO INQUERITO SOBRE O BASTECIMENTO DE ÁGUA

Nome de Zona	Municipio	No.de	Ha	pess.	% com	% com lig.		% que nao	casas c/tanque		casas sem tanque								
						% com			% abast.		fonte de ultima vez			distancia		tempo			L/pess
		Inque.		/casa	lig.	corre	tanq.	abast.	por cist.	$/m3	torn.viz	tanq.viz	chaf.	<100m	<200m	min.	KZR/20L	$/m3	/dia
CHENDOVAVA	Cacuaco	50	33	7.0	6%	6%	30%	43%	47%	$4.40	11%	86%	0%	46%	69%	35	36,000	$ 3.91	27
BOA ESPERANCA	Cacuaco	50	25	7.8	18%	18%	24%	50%	8%	$3.26	55%	42%	0%	37%	89%	18	37,000	$ 4.02	18
SOVINAGRES	Cacuaco	26	9	7.4	0%	0%	4%	0%	100%	$6.21	0%	100%	0%	64%	92%	77	52,000	$ 5.65	28
CONTROL	Cacuaco	47	36	8.7	2%	2%	28%	42%	54%	$5.20	3%	94%	0%	68%	97%	21	59,000	$ 6.41	17
COMPAO	Cacuaco	25	22	6.9	8%	8%	12%	0%	67%	$8.15	0%	55%	41%	55%	95%	60	64,000	$ 6.96	20
MBALA	Cacuaco	25	12	8.2	0%	0%	36%	0%	100%	$6.09	6%	94%	0%	81%	94%	28	73,000	$ 7.93	32
FABIMOR	Cacuaco	25	16	6.6	0%	0%	12%	0%	100%	$3.41	0%	100%	0%	73%	100%	17	75,000	$ 8.15	22
INDUVE	Cacuaco	10	4	7.7	0%	0%	40%	0%	100%	$6.63	33%	50%	17%	17%	50%	17	92,000	$10.00	12
NGANGULA	Cacuaco	100	93	7.3	0%	0%	43%	12%	88%	$7.03	0%	100%	0%	54%	89%	45	111,000	$12.07	21
FAROL LAGOSTAS	Cacuaco	25	17	7.1	0%	0%	24%	17%	83%	$5.76	11%	89%	0%	42%	95%	4	163,000	$17.72	11
		383	267																
VILA DA MATA	Cazenga	70	77	6.5	3%	3%	10%	20%	57%	$2.24	0%	40%	43%	32%	57%	28	37,000	$ 4.02	33
CAVOP	Cazenga	60	57	8.1	42%	32%	27%	33%	31%	$6.21	50%	16%	16%	70%	95%	15	44,000	$ 4.78	29
NZAMBA 1	Cazenga	65	63	8.0	23%	11%	2%		0%	$0.00	63%	28%	0%	42%	83%	23	45,000	$ 4.89	20
MADEIRA	Cazenga	42	18	7.5	24%	2%	7%	0%	67%	$3.78	33%	44%	15%	21%	49%	29	49,000	$ 5.33	23
CARIANGO	Cazenga	20	18	8.0	25%	15%	5%		0%	$0.00	11%	79%	11%	53%	100%	23	52,000	$ 5.65	24
MATOPA	Cazenga	104	97	7.3	40%	37%	20%	8%	14%	$3.87	22%	20%	30%	78%	93%	24	52,000	$ 5.65	33
MABOR	Cazenga	40	46	7.4	20%	10%	30%	33%	67%	$5.93	18%	79%	0%	93%	100%	19	54,000	$ 5.87	25
AGUA BRUTA	Cazenga	60	70	6.8	0%	0%	28%	12%	88%	$7.44	0%	26%	44%	37%	65%	29	73,000	$ 7.93	19
TONANG	Cazenga	40	40	8.0	23%	8%	58%	30%	61%	$4.40	65%	35%	0%	35%	82%	36	78,000	$ 8.48	21
PALMERINHA	Cazenga	21	33	5.5	57%	43%	52%	36%	64%	$3.88	0%	20%	60%	30%	100%	13	81,000	$ 8.80	16
TALA HADI	Cazenga	60	63	8.7	92%	73%	38%	0%	9%	$3.11	32%	3%	0%	97%	97%	6	81,000	$ 8.80	59
4 DE FEVEREIRO	Cazenga	20	12	5.9	65%	40%	50%	20%	50%	$3.69	0%	50%	10%	20%	90%	18	83,000	$ 9.02	23
PATRICIO	Cazenga	21	28	9.6	48%	29%	19%	0%	75%	$4.08	12%	76%	0%	76%	100%	68	87,000	$ 9.46	52
ESPIRITO SANTO	Cazenga	25	21	7.2	4%	0%	4%	0%	100%	$9.32	0%	100%	0%	17%	50%	103	93,000	$10.11	28
CAZENGA 2	Cazenga	50	60	6.8	0%	0%	24%	33%	67%	$3.37	37%	63%	0%	47%	82%	15	98,000	$10.65	21
CORAL	Cazenga	80	72	8.3	14%	5%	29%	25%	61%	$6.94	14%	84%	0%	49%	95%	35	100,000	$10.87	21
IRA PISTOLA	Cazenga	20	20	8.8	55%	35%	20%	0%	100%	$4.47	19%	81%	0%	81%	100%	86	108,000	$11.74	29
MARIO	Cazenga	40	37	8.0	28%	20%	40%	0%	81%	$4.00	0%	100%	0%	38%	79%	22	110,000	$11.96	21
CAZENGA 1	Cazenga	100	114	7.5	6%	1%	30%	30%	70%	$7.56	31%	56%	4%	30%	56%	28	117,000	$12.72	18
COMBUSTIVEIS	Cazenga	115	110	7.7	1%	0%	45%	14%	81%	$5.44	0%	100%	0%	71%	97%	11	127,000	$13.80	18
C.AMERICANA	Cazenga	60	45	7.6	2%	0%	28%	18%	82%	$6.27	12%	81%	5%	84%	93%	13	144,000	$15.65	17
MABULULU	Cazenga	50	35	8.8	20%	6%	54%	12%	85%	$5.79	13%	74%	4%	61%	100%	19	144,000	$15.65	13
CAMBALACHO	Cazenga	50	54	7.1	0%	0%	38%	11%	95%	$6.21	0%	87%	0%	42%	71%	13	152,000	$16.52	15
SONEFE	Cazenga	50	55	7.2	0%	0%	52%	23%	77%	$7.20	8%	88%	4%	38%	79%	23	183,000	$19.89	16
		1193	1168																
JUMBO	Maianga	29	32	8.3	59%	55%	24%	71%	0%	$0.00	0%	77%	0%	82%	100%	13	56,000	$ 6.09	20
TOURADA	Maianga	30	48	7.3	10%	7%	10%	0%	33%	$5.43	19%	78%	0%	41%	70%	36	63,000	$ 6.85	21
PRENDA	Maianga	48	68	7.7	21%	8%	21%	18%	60%	$8.12	53%	42%	3%	24%	74%	50	78,000	$ 8.48	22
ENGENHARIA	Maianga	15	25	9.5	53%	0%	47%	29%	100%	$6.85	38%	63%	0%	75%	88%	24	94,000	$10.22	20
SAG.ESPERANCA	Maianga	46	21	8.3	43%	7%	15%	43%	43%	$12.53	49%	51%	0%	59%	87%	81	126,000	$13.70	24
ROCHA PINTO	Maianga	193	196	7.2	3%	1%	30%	7%	95%	$5.90	9%	87%	0%	70%	88%	27	138,000	$15.00	17
		361	390																
MADAME	Sambizanga	50	31	7.8	56%	40%	46%	18%	65%	$4.01	41%	30%	4%	81%	100%	5	53,000	$ 5.76	19
MARCONI	Sambizanga	75	65	7.7	13%	3%	29%	18%	77%	$5.57	0%	89%	9%	74%	100%	45	113,000	$12.28	23

VAL SAROCA	Sambizanga	75	50	7.5	0%	0%	13%	0%	100%	$5.89	6%	94%	0%	35%	72%	36	144,000	$15.65	19
		200	146																
		2207	1971	7.6	17%	10%	29%	18%	69%	$5.88	18%	66%	7%	55%	84%	30	94,000	$10.22	22

Appendix 3 Technical Specifications for Standpipe Design

PIPE SIZE CALCULATIONS FOR PUBLIC STANDPIPES CONNECTED TO THE PRIMARY NETWORK

PREPARED BY: DEVELOPMENT WORKSHOP

REVISED ON: 06/04/98

Flow /tap (l/min)	no. of taps	total flow (l/min)	Lth. (m)	Flow (l/s)	Size (mm)	Vel. (m/s)	Rnlds. No. (E+4)	Darcy f	W&H C	Pipe Loss
20	4	80	75	1.33	25	2.718	6.794	0.019	154	21.68
20	4	80	75	1.33	37	1.241	4.591	0.021	150	3.37
20	4	80	75	1.33	50	0.679	3.397	0.022	149	0.78
20	2	40	150	0.67	25	1.359	3.397	0.022	150	12.55
20	2	40	150	0.67	37	0.620	2.295	0.024	148	1.93
20	2	40	150	0.67	50	0.340	1.699	0.026	144	0.46
20	8	160	80	2.67	37	2.481	9.181	0.019	150	13.02
20	8	160	80	2.67	50	1.359	6.794	0.019	153	2.89
20	4	80	160	1.33	25	2.718	6.794	0.019	154	46.24
20	4	80	160	1.33	37	1.241	4.591	0.021	150	7.20
20	4	80	160	1.33	50	0.679	3.397	0.022	149	1.67
20	6	120	80	2.00	25	4.076	10.191	0.019	149	52.02
20	6	120	80	2.00	37	1.861	6.886	0.019	153	7.33
20	6	120	80	2.00	50	1.019	5.096	0.020	152	1.71

Appendix 4 Standpost Construction Costs

Standpost Construction Costs

Antenna with 2 x 4 tap standpipes	197	$6,546	$1,292,012
Antenna with 2 x 2 tap standpipes	0	$5,621	$0
Antenna with mixture of standpipes	12	$6,053	$70,484
			$1,362,496
BUDGET			$1,380,000

Costing Assumptions:

1. Excavation is calculated at 0.55m3 per person per day. Therefore, to dig the trenches by hand at 1m deep and 0.6m wide, each person can dig 3m of trench per day.

PUBLIC STANDPIPE CONSTRUCTION COST

ANALYSIS DATE: 04/04/98

BASIC CHARACTERISTICS: 2 public standpipes with 4 taps each connected to the same mains pipe using an "antenna" system. Soak pits 3m deep and 1.5m dia with concrete cover. Lockable valve cover and 2 lockable covers for taps (each standpipe).

ITEM	UNIT	QUANT	/UNIT COST (USD)	TOTAL COST (USD)	% OF TOTAL COST
Materials					
Water	m3	1	5.00	5.00	0.1
Sand	m3	1	30.00	30.00	0.5
Gravel	m3	0.6	60.00	36.00	0.5
Cement	50kg bag	30	7.00	210.00	3.2
Mild steel bar 10mm	m	50	1.00	50.00	0.8
Concrete blocks 10cm	unit	320	0.60	192.00	2.9
Concrete blocks 15cm	unit	300	1.00	300.00	4.6
Concrete blocks 20cm	unit	40	1.50	60.00	0.9
Soak pit cover (1.5m dia.)	unit	2	50.00	100.00	1.5
Valve box cover	unit	2	50.00	100.00	1.5
Tap protection cover	unit	4	75.00	300.00	4.6
GI union 1"	unit	10	3.00	30.00	0.5
GI elbow 1"	unit	12	3.00	36.00	0.5
GI tee 1"	unit	6	3.00	18.00	0.3
GI pipe 1"	m	6	10.00	60.00	0.9
Padlock	unit	6	5.00	30.00	0.5
Drainage grille	unit	2	50.00	100.00	1.5
Globe valve 1"	unit	2	10.00	20.00	0.3
GI/HDP Brass Union 1"	unit	2	10.00	20.00	0.3
Drainage pipe 4"	m	8	8.00	64.00	1.0
Saddle brace for mains pipe	unit	1	50.00	50.00	0.8
GI pipe 2"	m	1	15.00	15.00	0.2
Gate valve 2"	unit	1	20.00	20.00	0.3
GI/HDP Brass Union 2"	unit	1	20.00	20.00	0.3
HDP tee 2"	unit	1	20.00	20.00	0.3
HDP reducer 2"-1"	unit	2	15.00	30.00	0.5
HDP pipe 25mm	m	10	1.50	15.00	0.2
HDP pipe 37mm	m	0	2.00	0.00	0.0
HDP pipe 50mm	m	240	3.00	720.00	11.0
				2651.00	40.5
Labour					
Plumber	pers.-day	10	20.00	200.00	3.1
Mason	pers.-day	10	20.00	200.00	3.1
Assistants	pers.-day	40	10.00	400.00	6.1
Excavators	pers.-day	90	10.00	900.00	13.7
Logistician	pers.-day	5	40.00	200.00	3.1
Supervision	pers.-day	1	200.00	200.00	3.1
				2100.00	32.1
Transport					
6 MT Bedford c/ driver	hours	10	20.00	200.00	3.1
Land Rover c/ driver	weeks	2	500.00	1000.00	15.3
				1200.00	18.3
Unforeseen overheads 10%				595.10	9.1
TOTAL COST OF CONSTRUCTION				**6546.10**	**100.0**

PUBLIC STANDPIPE CONSTRUCTION COST

ANALYSIS DATE: 04/04/98

BASIC CHARACTERISTICS: 2 public standpipes with 2 taps each connected to the same mains pipe using an “antenna” system. Soak pits 3m deep and 1.5m dia with concrete cover. Lockable valve cover and lockable covers for taps (each standpipe).

ITEM	UNIT	QUANT	/UNIT COST (USD)	TOTAL COST (USD)	% OF TOTAL COST
Materials					
Water	m3	1	5.00	5.00	0.1
Sand	m3	0.6	30.00	18.00	0.3
Gravel	m3	0.4	60.00	24.00	0.4
Cement	50kg bag	20	7.00	140.00	2.5
Mild steel bar 10mm	m	30	1.00	30.00	0.5
Concrete blocks 10cm	unit	320	0.60	192.00	3.4
Concrete blocks 15cm	unit	200	1.00	200.00	3.6
Concrete blocks 20cm	unit	40	1.50	60.00	1.1
Soak pit cover (1.5m dia.)	unit	2	50.00	100.00	1.8
Valve box cover	unit	2	50.00	100.00	1.8
Tap protection cover	unit	2	75.00	150.00	2.7
GI union 1”	unit	6	3.00	18.00	0.3
GI elbow 1”	unit	6	3.00	18.00	0.3
GI tee 1”	unit	2	3.00	6.00	0.1
GI pipe 1”	m	5	10.00	50.00	0.9
Padlock	unit	4	5.00	20.00	0.4
Drainage grille	unit	2	50.00	100.00	1.8
Globe valve 1”	unit	2	10.00	20.00	0.4
GI/HDP Brass Union 1”	unit	2	10.00	20.00	0.4
Drainage pipe 4”	m	8	8.00	64.00	1.1
Saddle brace for mains pipe	unit	1	50.00	50.00	0.9
GI pipe 2”	m	1	15.00	15.00	0.3
Gate valve 2”	unit	1	20.00	20.00	0.4
GI/HDP Brass Union 2”	unit	1	20.00	20.00	0.4
HDP tee	unit	1	20.00	20.00	0.4
HDP reducer	unit	3	15.00	45.00	0.8
HDP pipe 25mm	m	10	1.50	15.00	0.3
HDP pipe 37mm	m	225	2.00	450.00	8.0
HDP pipe 50mm	m	0	3.00	0.00	0.0
				1970.00	35.0
Labour					
Plumber	pers.-day	8	20.00	160.00	2.8
Mason	pers.-day	8	20.00	160.00	2.8
Assistants	pers.-day	32	10.00	320.00	5.7
Excavators	pers.-day	90	10.00	900.00	16.0
Logistician	pers.-day	5	40.00	200.00	3.6
Supervision	pers.-day	1	200.00	200.00	3.6
				1940.00	34.5
Transport					
6 MT Bedford c/ driver	hours	10	20.00	200.00	3.6
Land Rover c/ driver	weeks	2	500.00	1000.00	17.8
				1200.00	21.3
Unforeseen overheads 10%				511.00	9.1
TOTAL COST OF CONSTRUCTION				**5621.00**	**100.0**

PUBLIC STANDPIPE CONSTRUCTION COST

ANALYSIS DATE: 04/04/98

BASIC CHARACTERISTICS: 2 public standpipes, 1 with 4 taps and 1with 2 taps each connected to the same mains pipe using an “antenna” system. Soak pits 3m deep and 1.5m dia with concrete cover. Lockable valve cover and lockable covers for taps.

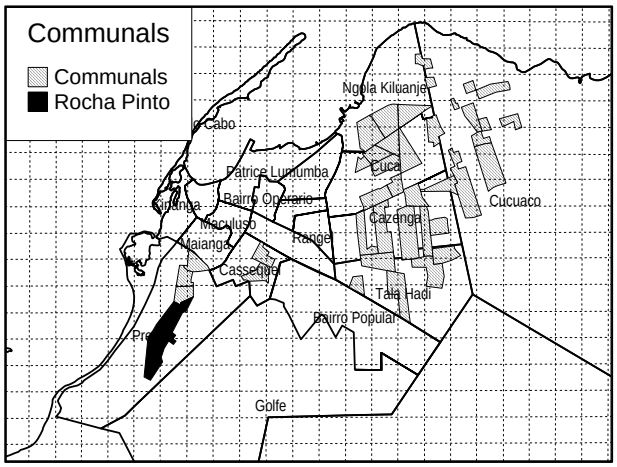
ITEM	UNIT	QUANT	/UNIT COST (USD)	TOTAL COST (USD)	% OF TOTAL COST
Materials					
Water	m3	1	5.00	5.00	0.1
Sand	m3	0.8	30.00	24.00	0.4
Gravel	m3	0.5	60.00	30.00	0.5
Cement	50kg bag	25	7.00	175.00	2.9
Mild steel bar 10mm	m	40	1.00	40.00	0.7
Concrete blocks 10cm	unit	320	0.60	192.00	3.2
Concrete blocks 15cm	unit	250	1.00	250.00	4.1
Concrete blocks 20cm	unit	40	1.50	60.00	1.0
Soak pit cover (1.5m dia.)	unit	2	50.00	100.00	1.7
Valve box cover	unit	2	50.00	100.00	1.7
Tap protection cover	unit	3	75.00	225.00	3.7
GI union 1”	unit	8	3.00	24.00	0.4
GI elbow 1”	unit	9	3.00	27.00	0.4
GI tee 1”	unit	4	3.00	12.00	0.2
GI pipe 1”	m	6	10.00	60.00	1.0
Padlock	unit	6	5.00	30.00	0.5
Drainage grille	unit	2	50.00	100.00	1.7
Globe valve 1”	unit	2	10.00	20.00	0.3
GI/HDP Brass Union 1”	unit	2	10.00	20.00	0.3
Drainage pipe 4”	m	8	8.00	64.00	1.1
Saddle brace for mains pipe	unit	1	50.00	50.00	0.8
GI pipe 2”	m	1	15.00	15.00	0.2
Gate valve 2”	unit	1	20.00	20.00	0.3
GI/HDP Brass Union 2”	unit	1	20.00	20.00	0.3
HDP tee	unit	1	20.00	20.00	0.3
HDP reducer	unit	3	15.00	45.00	0.7
HDP pipe 25mm	m	10	1.50	15.00	0.2
HDP pipe 37mm	m	150	2.00	300.00	5.0
HDP pipe 50mm	m	80	3.00	240.00	4.0
				2283.00	37.7
Labour					
Plumber	pers.-day	9	20.00	180.00	3.0
Mason	pers.-day	9	20.00	180.00	3.0
Assistants	pers.-day	36	10.00	360.00	5.9
Excavators	pers.-day	90	10.00	900.00	14.9
Logistician	pers.-day	5	40.00	200.00	3.3
Supervision	pers.-day	1	200.00	200.00	3.3
				2020.00	33.4
Transport					
6 MT Bedford c/ driver	hours	10	20.00	200.00	3.3
Land Rover c/ driver	weeks	2	500.00	1000.00	16.5
				1200.00	19.8
Unforeseen overheads 10%				550.30	9.1
TOTAL COST OF CONSTRUCTION				**6053.30**	**100.0**

Appendix 5 Field Data by Bairro

Municipal Area: Maianga

Bairro: Rocha Pinto, Zona A

Code: Rocha Pinto, Parque Baixo



Zone Characteristics

- Density, 400/ha
- Population estimate, 78,400
- Av. Residence, 17.3 years
- Percent piped connections, 3%
- Percent connections with flow, 1%
- Price of water is 15.00$US/m3
- Proposed number of standposts, 109

General Issues

The group were positive about the proposed project but with reservations about government follow-up. The proposal is good but it is one thing to propose a project in theory and quite another to do it in practice. There are people in this bairro who survive on one liter of water per day. If the government bring water to the bairro we will be grateful. It must be good quality drinking water, with no smell or odd taste.

Many people in our bairro go hungry to buy water.

Some of the men participants commented that standpipes were a good idea but sometimes they cause great confusion. They suggested that people who wished could have piped house connections.

One participant said that, "Living in Rocha Pinto is worse than living in very remote areas" (no mato). My children have never followed a program on television".

Finding locations for the standpipes

The participants pointed out that the selection of locations would depend on the total number of standpipes planned for the bairro. The bairro is divided in blocks (quarteroes). The number of standposts should be allocated by blocks and then the specific locations can be decided.

They explained that the use of unoccupied land or public land must be authorized by the Local Administration. The Local Administration should also indicate land that is available for standpipe construction.

If the land is privately owned, then the owner must authorize the use of his/her land for construction. They considered it unlikely that people will refuse to have standpipes built on their land because they will also benefit from the water. If people are reluctant we can "sensibilisa-los" i.e. raise their awareness, and convince them that living beside the water point is an advantage. A representative from the Residents Commission and the Local Administration should sit in on the negotiations with this person, to ensure that they do not change their mind afterwards.

The participants agreed that standposts and the main pipes should be constructed along existing streets to avoid destroying existing houses. They also suggested that they should be built where there is a drainage network. Otherwise, they will have to dig pits for the overflow.

They suggested that the community selects the places, identify the people involved and then go to the Local Administration and inform them. They thought that if the initiative is left to the local administration it would take too long.

Distance and time involved

People will agree to walk 100 to 150 metres; they will not walk more than that and children in particular cannot carry water more than that distance. The queue of people should not be more than four people. Particularly in the morning people need water before they go to work and they do have time to wait. The organization of the queue depends on collective goodwill and the users good manners. The person selling the tickets is overall responsible but if that person is not respected nobody will obey the rules and there will be total confusion.

Water tanks

People who at one time built tanks of 10,000litres are no longer able to afford to fill them. 10,000litres of water costs 30 to 35 million Kwanzas to day (65 to 76 dollars at exchange rate of 46.000Kwanzas to 1 $USD). These people therefore buy water from the neighbors. Building a water tank is a big investment but filling it also requires considerable capital. Most people who fill their tanks sell the water to survive.

(para garantir o seu sustento). They sell water to cover the costs of their own water consumption and in some cases to make money for food on that day. Many people have water tanks but fewer have sufficient money to buy a fill of water. Some participants commented, " Not everybody sells water; some people fill their tanks just for their own use but you cannot keep water a long time – it goes bad".
Some people do give water to other people for nothing. This is a good thing and these people are good people but mostly, it is not a question of goodness but more a question of not having the means to give to others. "It is always better to die among others than die alone", indicating that people would prefer to be able to help others but mostly they cannot afford to do so.

Price of water/Consumption

The area where water is most expensive is where there is erosion and the water lorries cannot deliver water. The price currently varies between 200,000 and 250,000Kwanzas for 20litres. A family of eight people is likely to need to buy 200litres per day and this means spending 17,500,000Kwanzas in one week on water.
Many families have two 200 liter barrels in their home. They fetch (cartar) 20 to 24 buckets of twenty liters of water every single day. But the amount of water people buy depends on the money they have available. Some people do not have money for one bucket and they buy only a "garafao" (a five-litre bottle). They have no choice and they just have to manage on that amount of water.

Hours of service

It would be nice to have water twenty fours per day but it is unlikely to happen. But we do need water every day. If there is more water in the bairro through the network, prices will automatically drop. But if the supply of water is not regular, the situation will remain the same. Also if the pressure is not good enough, a good service is impossible.
The group considered that twelve hours a day would be appropriate opening hours for the standpost. The best time would be from 05.00 – 17.00hr or from 05.00 – 10.00 and again from 14.00 – 17.00hr. They emphasized that evening time is important to allow people who sell in the market re-fill their water recipients when they come home.

Models

Taps: it is better have national taps (Tornang) that can be easily bought in the market. The taps should have protection grids to avoid vandalism when the monitor is not there. It would also be possible to build an enclosed railing around the standpipe.
They considered any other modifications secondary to the issue of supply. The participants repeatedly said that all they needed was water and any other refinements could be thought about afterwards. They could see no advantage in a system where buckets could be filled on a person's head.

Organization - Monitor

In collaboration with the Residents Committee (Commissao de Moradores), we will select a Water Control Committee (Committee de Fiscalisacao). The actual controller (fiscal) will be selected from the Committee de Fiscalisacao. The Residents Committee will control the Water Committee.
If we have a standpost, it is obvious that we must choose somebody to look after it. We will have a meeting and choose somebody from the community who is interested in the project. Each standpipe zone must have a monitor (fiscal, responsavel) who controls the standpipe. The chosen individuals must stay all day at the standpost and their salary comes from the user contributions at the standpost. Effectively they are standpost monitors and it will be a form of employment.

Their salary will come from the standpost fund, fruit of his/her work. The overall organization will be the responsibility of the community. The money will be collected with either tickets or monthly cards. It is better that the users pay contributions to keep the standpost in good condition. If they get water for nothing they will not value the service. They should pay at the standpost and the monitor collects the money. They should pay enough to pay EPAL, Local Administration, the monitor and the maintenance. The beneficiaries must organize themselves. The water is for everyone and we must be aware of this.

The group defined the organization with confidence but then anticipated the following problem.
"We have had previous Water Committees and sometimes it is the leaders of these committees who ruin the work by making the first illegal connection. Once the leader does it, then the rot sets in".
The also anticipated design difficulties because their bairro is not planned (urbanisado) and people just do what they want.

Role of Monitor

The tasks agreed for the monitor of the standpost were:

- To collect payments
- To sell tickets
- To pay EPAL
- To look after the standpost
- To organize the queues
- To clean the standpost

The group considered it a full-time job.

Organization - Payment

The group suggested paying daily rates of 50,000Kw. Families who wished could pay monthly. They agreed that the payment should be less than what they currently pay to the water lorries but sufficient to pay the costs of the system. Those who want a household connection can go to EPAL and they can have one as long as it does not affect the water pressure at the standpost. But these people must also contribute to the community water fund.

The money should be deposited in a Community Bank Account with a number of signatures to avoid stealing. All the money should be deposited before any money is spent. The person who collects the money should not be the same as the person who manages the bank account. All transactions from the account should be signed by a number of people.

There should be a monthly meeting to present the accounts and the work. The income should compare to the tickets sold and money spent should correspond to receipts and equipment replaced. It would be useful to make an estimation of the number of beneficiaries for each standpost before beginning the project.

Any profits should be invested in improvements in the service such as public laundries.

Institutional Context

All community initiatives and activities must be done with the knowledge of the local authorities.

- The monitor must be recognized by the Local Administration and have a credential from them. The group opted for subordinating the management of the water project to the Local Administration rather than to EPAL.
- When the Water Committee is elected, somebody from the Local Administration must be present at the meeting.
- If there are problems during the project, they will be referred to the Local Administration.
- There is a local Police Station but that is not the same as the Local Administration
- The Water Committee should report to the Local Administration

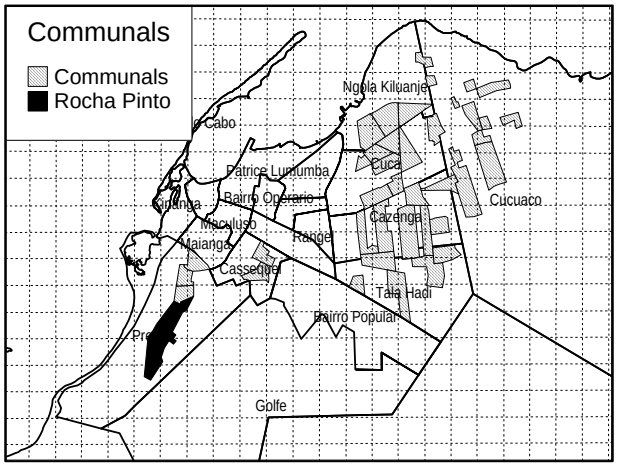
Illegal Connections

If illegal connections are tolerated, water eventually dries up completely. But illegal connections are more likely to be made if the water pressure is low and if the supply is irregular.

Municipal Area: Maianga

Bairro: Saca Penda

Code: Rocha Pinto, Parque de Cima



Zone Characteristics

- Density, 400/ha
- Population estimate, 78,400
- Av. Residence, 13 years
- Percent piped connections, 3%
- Percent connections with flow, 1%
- Price of water is 15.00$US/m3
- Proposed number of standposts, 109

The discussion group was originally planned in a supermarket, which belonged to a private entrepreneur who did not live in the bairro. On the day of the discussion, the local staff had no authorization to allow the meeting take place and an alternative venue was arranged. The people who were originally invited did not turn up. The team spoke to members of a local church who mobilized the residents. The participants were members of three different churches and people who had no church affiliation.
A second meeting was held on the 12-03-1998, with women only, following their weekly prayer hour. The information received in the first meeting was reported to the women and they were asked to give their opinions. This second meeting was held in Tchokwe with a translator.

General Issues

The group wanted to know if the project was planned to happen immediately or in the far distant future. They felt that their situation required immediate action and they should be a priority because of the price they pay for water.

Appropriate Locations for Standposts

The principal issues in relation to locating the standposts were the issues of security and accessibility. They suggested locations near the churches and the police barracks. Some thought that locating it near a church could be inconvenient during the hours of prayer. The group could specifically identify five locations near where the discussions took place. Those locations, which were church property, would require the agreement of the church commission. The participants suggested than when the project was been implemented, the residents could discuss and specifically identify the locations. Locating standposts was considered primarily a community task.
The group also felt that it would be unacceptable to destroy houses to build the main water lines. It would have to be built on a public road. They pointed out that the area is not urbanized, hence there are no sectors or blocks (quarteroes). The participants said that if the project came to pass, the residents could divide the area into zones. They would then need to know how many standposts would be built per zone and they could subsequently locate the standposts. As a general indicator, they said that the surrounding area needed more than five standposts.

Distance and Time

The waiting time depends on water pressure – if the pressure is good, one can fill 20 buckets in 10 minutes. Most people will agree to walk between 50 and 200metres. Many mothers go to fetch water with 3 to five more people, each with a 20-liter bucket.
The person responsible for the standpost should organize the users by order of arrival. There used to be a standpost in 1984, with water from the old pipe going to the Air Force grounds (FAPA-DAA). The queues were organized from 06.00 until 08.00 and the buckets were filled with a hosepipe. People began making illegal connections and the water dried up quickly.

Water Tanks

The considered that the current cost of filling a water tank excessive. 10,000liters of water now cost 35,000,000Kwanzas. This was too much money to pay at one time. One participant who drove a water lorry explained that many of his clients could only pay over time as they sold the water. Some participants offered examples of consumption patterns

- 15 people using 500 liters per day, 100 for drinking and 400 for other purposes.
- 4 people using 250 liters per day

- 22 people using 300 to 400litres per day.

Hours of Service

The people who look after the standpipe should control the hours of opening. Many people have only buckets and do not own barrels; therefore the standpipe must be opened morning and evening. The suggested opening hours included:
05.30 to 18.00 if possible
06.00 to 12.00 and 16.00 to 18.00
06.00 to 08.00 and 16.00 to 18.00
Participants emphasized that the length of queues and time spent at the standpost would depend on the water pressure.

Models

The opted for imported robust taps but said that they could substitute them with local taps when they were broken. (As nossas torneiras de kimbundu). Their comment was that “they did not need luxury in the middle of misery”. (Não queremos luxo Na miseria)

They discussed protection for their standpost. They felt that protected taps was a good idea. They considered that a protective wall and railings around the standpost might be necessary and they were prepared to organize and pay for such improvements themselves. Again, this group repeated a number of times, that they simply required that the provincial government guarantee the basic service and they would organize any improvements themselves. “All we need is water and we can organize ourselves”. (So queremos agua e podemos organisar nos em funcao da quantidade de agua). They commented, “If we want a wall for our standpost, we will build it ourselves. We will collect money among ourselves for the blocks"
There was much discussion about the need for a security wall and the overall consensus was that they should be able to lock their standpost.
They disliked the idea of filling buckets on people’s heads; they said the users would get wet and the bucket was likely to fall.

Payment for Service

The majority of the participants agreed that the services should be paid. One person initially suggested 100.000Kwanzas as a symbolic monthly payment. The facilitator explained that the issue was not symbolic; that this project would be organized on the basis of viable cost recovery. They accepted the idea that EPAL should be paid the real cost of producing the water. They then suggested a value of 50,000Kwanzas per family per day. The said that the amount of water for each family would depend on the pressure. They proposed two systems of payment:
a) a monthly card for people who have the means to manage a monthly domestic budget
b) A daily payment system for the majority whose income was on a daily basis.
The subsequent meeting with women only suggested that the daily system of payment was more acceptable to women. They felt that a monthly system would be more difficult to control with a greater risk of people defaulting.
The sale of tickets at the standpost would control the daily system of payment. Some people suggested that they use the tickets with two copies of numbers, to facilitate the control of the income. They also felt that EPAL should provide them with receipts and liked the idea of a meter (contador) on the standpost.

Organization - general

This subject is complex. Sometimes some people oppose the ideas of others just because they want to be difficult. But we must work on agreement among ourselves (haver entendimento entra moradores). There are sure to be people who are going to be difficult about paying but each of us must police our neighbor. Where a lot of people live together, there are all kinds of people, honest, dishonest and selfish. We will need to organize ourselves to combat vandalism because it will happen. We should also not be afraid of disagreement and criticism. Everybody is entitled to his or her opinion and people will never agree on everything. This was the opinion of an older man.

Another important issue arising in the discussion was the sense of marginalization in relation to Municipal l and Provincial authorities. The group cited two specific incidents.
1. Their community had proposed a community project in association with one of the churches, to build a school and health post. They requested a selected site from the Department of Cadasters in the

provincial government. They waited a long time for an answer and when they got a written response, it stated that Saca Penda was not included in the Urban Plan, therefore the government could not authorize them to use the land. Sometime afterwards, an entrepreneur from outside the bairro arrived with title for the land and has now built a wall around the site. The conclusions they drew from this experience were

a) Saca Penda only existed when they wanted their vote in 1992
b) If their area is not included in the Urban Plan for Luanda, they therefore do not exist and can expect no government intervention on their behalf. They have kept the written official response.

The second incident was more recent, when local government officials (sector not specified) requested that the community contribute to a fund to build a local bread depot. The community contributed, the money was given to the officials but they still have no local bread depot. This time they concluded that one must never trust any official government initiative. They also feel that the Provincial Government is only interested in developing the project Luanda-Sul and they are reluctant to believe that this water project will actually benefit them. The reluctance to believe in any concrete government intention to improve their lot surfaced a number of times during the discussion.

One member of the group suggested that the implementation of the project should be accompanied by a public education campaign on the radio and through the newspaper. Television was not mentioned. The campaign should deal with individual and collective responsibilities.

Organization - Monitor

The group was clearly in favor of the monitor being older; they even mentioned specific names. The factor age and sex seemed related to older men having time available; women, young and old, sold in the market and would not be willing to commit to a daylong job. It was also felt that older men could leave younger men to collect money if they were absent and were more in a position to control vandalism. There was also a discussion on the concept of people with “good sense” (juizo). The men were inclined to the belief that good sense came with age and the women disagreed. Women felt that good sense was an inherent characteristic of a person and had little to do with age. One women added, “we all know some older people in the bairro with no sense and other younger people who show a marked sense of responsibility.

It was also important that the person be available during all of the opening hours. The person who had the key of the standpost could not open it at his/her convenience. The group was also of the opinion that if the standpost was left open and unattended, it would be abused and people would not pay as agreed. The group always referred to the monitor as a man. A subsequent meeting with women only also confirmed that they felt that only unemployed men would have the necessary time to dedicate to the standpost.

Organization- Money

The issue of whom could be trusted to mind money provoked a lively debate. The men seemed to feel that the women were better managers of money. One woman said, “work is collective, responsibility is individual”. (o trabalho e collectivo mais a responsibilidade e individual). The women only group said that responsible individuals can always be found and they had no particular preference by sex. But everybody agreed that the individual chosen should have a house with minimum security. A suggestion that the money be deposited weekly in the bank in Cassenda was approved by all. They saw the payments being made on a monthly basis. They suggested that the people who manage the bank account should include the person who manages the standpost. The monitor and the people who manage the money should present the accounts monthly at a community meeting. The tickets sold should compare to the money in the bank account and all spending explained and justified. The residents should always be informed on the money in the community account and have opportunities to comment on how the standpost is being run.

Private Operator

Initially, the group liked the idea of a private operator. They recognized that having another individual assume the responsibility of running the standpost for them would relieve them of responsibilities. They also thought that one operator running a number of standpost could be effective. But when they began to discuss acceptable profits for a private operator, they realized that might be paying somewhat less than they actually pay now but all the profits would go outside the community. They also feared that the private operator might exploit them and they would have no recourse or mechanism to combat that exploitation. They did discuss the possibility of having community inspectors to control the private

operator but they doubted if this would be effective. The group finally articulated a specific message to the provincial government, saying, and “please say in the report that even if other bairros in Luanda opt for a private operator, that the people of Saca Penda will manage their own standposts We are fed up of being exploited by other people”. They also said that if the government wished to reduce the suffering of the people, it made little sense to give the standpost monopoly to a private operator.

Local Authority

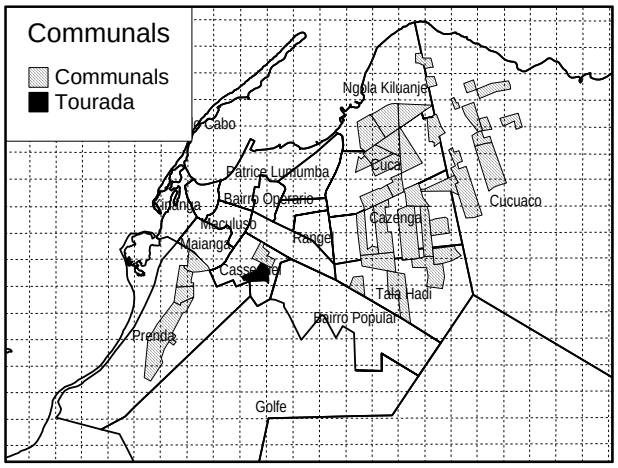
This group obviously did not consider the Local Administrations as a critical part of their lives. They considered their experiences to date as negative. They mentioned that a Residents Commission had being newly elected recently but they had no details about it. They presumed that they would have to channel their grievances or problems through this Commission but had no idea how it might work.

Municicipal Area: Maianga

Comuna : Kassequel, Sector 2
Bairro: Kalemba
Code: Torada

Zone Characteristics:

- Density, 500/ha
- Estim. Pop. 24,000
- Average residence, 30 years
- 10% piped connections
- 7% connections with flow
- Price of water is 6.85USD/m3
- Proposed number of standposts, 32



General Issues

In times past the area of Kalemba did have seven standposts. They were open from 06.00 to 18.00 and each standpost had a monitor. They stopped working because of poor pressure, vandalism and illegal connections. One of the participants asked whether the project would build new mainlines or whether the older ones would be replaced. He said that people had already built on top of the older water lines. Participants also felt that it would be wise to disconnect the old line and build a completely new supply network.

Participants also underlined that the population had increased dramatically and seven standposts were no longer sufficient. Some thought that it would be better to do a census before deciding how many standposts they needed.

Another issue raised was that if the standposts were only rehabilitated in their area, Kalemba, then people would come from other areas to use their standposts. That would be likely to cause major confusion.

Overall the group approved of the initiative and felt that it was a good idea in a first phase to build standposts, which would benefit the majority of the population. They were convinced that there were many illegal connections made to tanks in their bairro and they felt that the most just solution was to cut all those connections and supply the standposts. They mentioned that some people had taken connections from the pipe going to the nun's house and they sold water to their neighbors.

One participant said that his family walked to Jumbo and to Vila Alice to fetch water. Other participants knew of two children who had been knocked down the day before the discussion was held, crossing the road at Jumbo. Other participants referred to the colonial times when services functioned more efficiently.

Most felt that the water situation had become particularly bad since 1992. They said that the Municipal Administration had put taps in unoccupied plots just to alleviate the crisis. (para remediar) The pipes to the taps were laid superficially and the plots were unsupervised. So when ELISAL went to clean away the rubbish, they drove over the pipes and broke them.

The group did underline that illegal connections were as a result of the lack of order and authority and they blamed the government for allowing it to happen.

The Association of Ana Kalemba had undertaken a study in 1995, describing the problems and needs of the people in the bairro. They had presented the results to various institutions in the government and to many NGOs. But there had been no follow-up on the study.

The prevailing feeling was one of depression and the group felt their bairro was becoming worse day by day and they could see no solution.

Location

The technical team would have to work in collaboration with the Residents Commission and the Association. They knew of all of the previous sites and new sites could be identified. The Local Administration would have to confirm the availability of the sites. They did not approve of placing public standposts in any resident's yard. In past times, people could not build without the authorization of the Local Administration. Now, people built any old way and anywhere so that the bairro had houses built without planning, including on top of the old pipelines.

Distance and Time

The women said that they needed water and were prepared to walk distances. But an ideal distance would be 50 meters but they could walk 300 meters. The liked the idea of limiting the distance to 50 meters because of the children. They did not like their children having to walk long distances to collect water.

The group did comment that the length of time they would wait at a standpost would depend on the number of standposts and the pressure of water flow. One woman said that if she found three people before her in a queue, she could ask them to let her go first and fill her bucket. If the standposts were near each other and the first standpost had too many people, they could walk to the second standpost. They commented that they were accustomed to queuing up for water. Overall, they agreed that they would like to loose as little time as possible fetching water and ten minutes seemed reasonable to them. They also pointed out that one of the delaying factors was the number of recipients that people took to fill at any one time. People filled buckets, basins, pots, baths and jerrycans. There were also problems with people keeping places in the queue for other family members and friends. The queues should be organized in order of arrival. If there are two taps, then there should be two queues.

People needed to collect water every day and they wanted the standpost open from 05.00 until 18.00.

Models

They all agreed that the taps would have to be taps available on the local market. They were not prepared to discuss the protection of the taps or the standposts until they saw them. They wanted to see some concrete progress on the project before they discussed that kind of detail.

Organization – Monitor

The group suggested that there be a monitor for each standpost. The Association could supervise the monitor and the standpost. But the group agreed that the monitor would have to be paid by the Department of Community Services (Servicos Comunitarios) of the Local Administration. The community could organize themselves as they were doing with electricity to ensure community inspection and ensure compliance with the norms agreed but the Community Service Department would also have to assume their role. Some participants thought that it was better have religious people in charge of the standposts; they thought that they were more likely to be honest and responsible and sometimes they were willing to work voluntarily.

Finally, the group agreed that the better option was for the guard to be employed by the Community Service Department of the Local Administration. They added that this department already had people on the payroll that had no actual occupation.

Maintenance and Repairs

When there were breakdowns, some participants suggested they would make a collection among the users. They said they knew that not everybody would pay; not everybody paid for the electricity. But they thought the best option was not to fight with people. Most people gave the money when asked and that was usually sufficient to solve the problem.

Other participants did not like the idea of contributions; they said they often caused conflicts with some people accusing others of stealing money.

Yet others said that people had to begin to realize that it cost money to produce water. If the water was supplied, then the users would have to pay. Everywhere in the world people pay for water. Our community can begin to pay also. They commented, “This notion of free water comes from communism”.

Organization - Payment

The group then discussed whether payments should be daily or monthly. The finally agreed that there might be a demand for both systems and they suggested that those who wished could pay monthly and the others could pay daily. They thought that a just price was 10,000Kw for 20 liters. (The tanks currently sell 40 liters for 50,000Kw). Sale of tickets could control the daily payments. (senhas)

The group discussed whether the money should be managed by the Association or by the Residents Commission. In either case, they would be expected to account to the Local Administration. In both cases they thought it would be necessary open a bank account. There was no consensus on the method of managing money.

When the facilitator questioned the group on how they would deal with mismanagement or stealing of funds, the President of the Association seemed to take it as a personal insult. He explained in great

detail to the group, “how he had no need to steal the miserly contributions of his community. He owned a house valued in millions of dollars and he did not need their money”.

Association and the Local Administration

The President of the Association said that the Association could manage the water project under the control of the Local Administration. The Association has their own office in the bairro with a display window. The Association would post information on the price of water, the payments to EPAL and any other transactions made. All of the money would be deposited in the bank account and one individual from the Association , the Treasurer, would be indicated to manage the bank account. All transactions would be effected by cheque or bank transfer.

The President of the Association would have monthly meetings with the community and inform the community of the situation of the standposts.

Municipio de Maianga

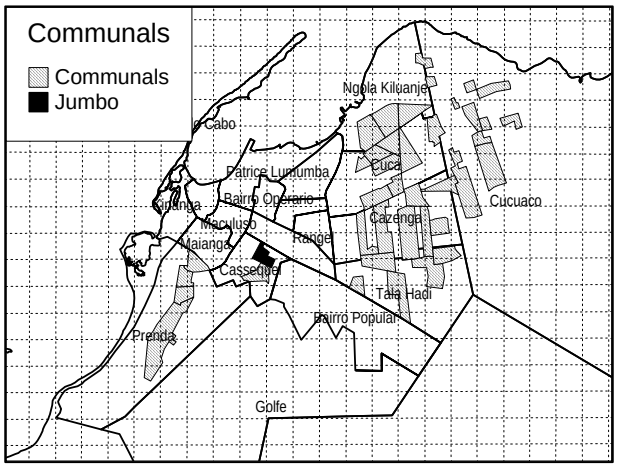
Comuna : Cassequel, Sector 4, Qtr. 35

Bairro: Madeira

Code: Jumbo

Zone Characteristics

- Density, 500/ha
- Estim. Pop. 16,000
- Average residence, 11.8 years
- 59% had piped connections
- 55% connections with flow
- Price of water is 6.09$US
- No proposed standposts



General Issues

The response was positive but again participants indicated doubts whether the project would actually come to pass. The women said that they had been given many promises in the past and there was no reason why the government should fulfill this promise. They underlined that the money they spent buying water could be spent on other things.

Location

The women participants thought that it would be better to place the standposts in a resident's yard. They argued that if the standposts are built in public places, people will treat them any old way. The users were less likely to damage the standpost or cause confusion if the are in somebody else's yard. They felt that if the standpost were on private property, users would come fill their bucket and go away again without causing trouble.

To reduce the risk of the person who owned the yard becoming the de facto standpost "owner" they suggested that before the standpost began to operate, a working agreement would be signed by this person with the Communal Administration which would determine how the standpost would be managed. If there were problems in the future, the users would refer the problem to the Local Administration.

The group agreed that it was unacceptable to knock people's houses. They did not even mention compensation. They simply insisted that it was not an option. One participant said that if the government knocked a house, they would have to build another one. Other participants thought it unlikely that the government would compensate people sufficiently. The majority insisted that the option of knocking houses should not be considered.

Illegal Connections

The group said that when the older residents moved to this bairro, there was water in the bairro. But people made illegal connections and finally fewer and fewer people had water any more.

We did have a standpost recently but then a demobilized soldier built a wall around it and overnight became the de facto owner of the standpost. We complained to the Municipal Administration but they sent an inspector who did nothing. Then we went to talk to the man and he took out his gun and threatened us.

The group explained that if a new water project were to be successful, illegal connections could not be tolerated. There must be provisions for recognized inspectors and when communities complain to the Local Administration, they, in turn, must act on the complaint. The fine (multa) must be a least twice the value of making the connections in the first place. They added, "But something will have to be done about the inspectors – now they control nothing and accept bribes all the time". (ja sabe, quem tem dinheiro e so dar gaseosa a quem não tem).

Distance and Time

The women thought that it was acceptable to walk a distance of five or six houses. The time they would have to wait would depend on the number of standposts built and the water pressure.. If there was strong water pressure, the women were prepared to wait for ten people in a queue. The queues should be organised by order of arrival. Mothers should teach their children to respect the queue. Each standpost should also have somebody in charge; this person should also control the queues.

The participants said that their regular consumption was at least 100 liters per day. If they needed to wash clothes they would fetch twice the regular amount. But they did feel that people were also limited

by the amount of money they had available. They thought a standpost should be opened every day, at least from 06.00 to 18.00. Mondays are very important because it is the day the markets are closed and most women wash their clothes. The women felt that if there was water every day there would be no problem but even water on alternate days was likely to cause more problems than it would solve.

If somebody arrives after closing time they can ask the person in charge of the standpost nicely to allow them fetch water. Then the standpost should be closed again.

Water Tanks

None of the participants had a tank in their home and none of them had piped water. They thought that everybody in the bairro who had a tank had a piped connection. They did not know how many were legal or not. All of the participants bought water from people with piped connections. Most of the people with tanks sold water, some to earn a living and others just to make a bit of extra money. Some people were prepared to give water but normally to their immediate neighbor or to another family member. The cost of water depended on the supply in the bairro. If there was a normal supply, they bought two buckets of 20liters for 50,000kw. When there is a shortage, they can pay 100,000Kw for 20 liters.

Model

The participants approved of the model, particularly the fact that the water was collected in a drain and would not create pools around the standpost. They suggested a three-inch tap and more taps. The taps need protection because children playing would break them. They suggested a grid protection with a lock and key. They did not approve of the system of filling buckets on their head. They said that it was a painful way to fill a bucket of water. The women said that they preferred to ask somebody to help them put the bucket on their head.

Organization – Monitor

The women suggested that a public meeting be held on a Monday. At this meeting the community can elect a person they trust. This person should keep the key to the standpost. They women thought that the monitor should be a man who lived in the bairro and who would not be likely to flee if there were problems. If this person stayed all day at the standpost he would have to be paid. He should not be expected to work voluntarily. The group suggested a monthly contribution, such as 100,000Kw or 200,000kw per month from all the users for his salary. They discussed what they would name the person in charge of their standpost and agreed to call him a *manager*.(gestor). They felt that he would be totally responsible for all the work related to the standpost. His tasks would include

a) look after the standpost
b) open and close it at the correct times
c) collect the daily payments
d) pay EPAL
e) deal with the Local Administration

Organization – Payment

The women felt that the payments should be daily. They thought that monthly systems would be too complicated to manage. Many users would not have the money to pay at the end of the month and not everybody would collect water every day. When asked how they would prevent the manager raising the price, they said that they would select somebody who was honest. But if they did try to raise the price they would have the person replaced. The participants said that if he sold the water to people outside the bairro at a different price, that was his business. They also felt that if one of the residents had no money on any one day, they should be allowed fetch one bucket of water.

They discussed a number of options for where the money would be kept. Some participants were prepared to indicate an older women who would look after it. After some discussion, they agreed that the Coordinator of the bairro should indicate older women who are well known in the bairro. This woman would serve as Treasurer and will keep the money. The manager of the standpost will pay EPAL and present the receipt. The Treasurer will also keep the money for the maintenance.

The facilitator then questioned the group about how they would react to mismanagement of their money. They said that if EPAL has not been paid or money is missing, there will be an investigation and the person responsible will be punished. The manager and the Treasurer will account to the Coordinator. The Coordinator must check the tickets sold in relation to the money in cash. He in turn must hold a monthly meeting with the community and explain what money was spent on what items. After a

prolonged discussion on accountability, the group came to the conclusion that it was better open a bank account. Some of the participants said that if money were kept in an individual house, the standpost money would be mixed with their business (negocio) money. The signatures on the Bank Account should be of the Treasurer and the Coordinator. The account should not be in an individual name but in the name of the bairro.

If there are profits, we could use them to solve our own problems. Somebody who has a particular problem could speak to the Coordinator and the money could be used to solve that problem. Some participants thought that they needed a health post in the bairro.

Local Authorities

The liaison the bairro has with the Local Authorities is through the Coordinator. If they have a problem they speak to him but without any great expectation that he will be able to do anything about the problem. Mostly, they inform the Local Administration but nothing happens. If there are problems with EPAL, the manager will have to deal with them.

Private Operator

The group were not happy with the idea of a private operator. They said that it would be the normal tendency for this person to consider himself important (prepotente). They added, " When there is a shortage of water, the price will rise gradually and then we will find ourselves buying it at that price everyday". And since they needed the water, they would have to pay. They preferred the idea of managing their own standpost and dealing with the problems among themselves.

Municipal Area: Maianga

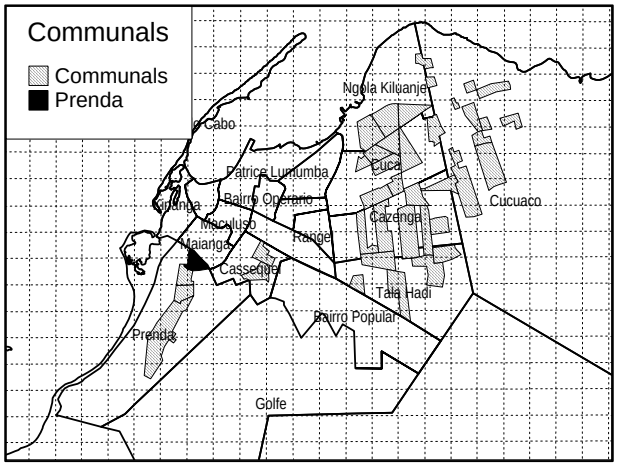
Commune: Prenda

Sector : Zona 6, Rua da 8 Esquadra

Code: Prenda

Zone Characteristics:

- Density, 500/ha
- Estim. Pop. 30,000
- 21% house connections
- 8% connections with flow
- Price of water is 8.48$US/m3
- No standposts proposed



General Issues

The women participated initially, “so that the team would not say that the people in their bairro were not interested. But they did not expect the government to actually implement any project in their favor”. They, therefore, left after forty-five minutes. The women participants repeated on a number of occasions that they doubted that the government would implement a project, which would benefit them. They believed that their bairro did not have water because somebody deliberately decided that they did not matter enough to give them water. They understood that their bairro had waterlines. The fact that they did not have water was as result of somebody deciding that they were not important enough to give them water. (Nos, não estamos na lista de prioridades). They demonstrated a significant feeling of alienation from a system, which they believed deliberately, excluded them.

The described the case of the standpost no. 22 built two years ago. It no longer works because of insufficient water pressure and because the legal household connections took precedence over the standpost water supply. “Now, old people, children and mothers with children on their backs need to walk distances to fetch water. Often children are knocked down by cars. Can it really be that the government are not aware of this situation?”

The participants also emphasized that they were not at all interested in the type of system where tanks were filled by lorries. They described that as a complete waste of time and money. They also said that any solution, which planned an intermittent supply, was also unacceptable. The group repeated that the fundamental problem in their bairro was the lack of water pressure; no water project would be successful if the pressure was not normal in the pipelines. The participants repeated on a number of occasions that the pipeline must be directly to the bairro. They were convinced that if they shared their source line with another bairro, the other bairro would get water and they would get none. The group explained that a significant minority of residents in their bairro had piped connections and many of those to underground tanks. They understood that the project would rehabilitate the primary waterlines and they wondered if it was in the community’s interest to rehabilitate the household connections. After much discussion, they concluded that if they had to choose between standposts and household connections in a first phase, they would opt for standposts, which would benefit more people. If the pressure was sufficient and the standposts well supplied, they could consider at a later stage authorizing household connections. Throughout the discussion, they kept commenting that they would have to see some movement on the project before believing in it. There were also some specific questions that the participants felt they needed to consult a greater number of people before answering on behalf of the community.

Locations

The participants explained that their area was densely population and there were houses built without authorization. They felt that the Local Administration had not managed to control the situation. (não consequiu por a mao por cima). They did agree that there were public plots available, naming the following places

a) beside the police station
b) in front of the Party building
c) in front of Mae Joaninha.

They pointed out that the Local Administration should identify the plots and confirm that they were available.

Some participants thought that it was possible to place standposts in a resident’s yard. They even thought that some people would be specifically interested in having the standpost in their yard. One

participant suggested that if the standpost was in an individual yard, the Local Administration should make an arrangement with this person to manage the standpost. But after further the discussion, the majority seemed to feel that it might work for some time but that it had potential to generate conflict and misunderstandings in the long-term.
The group was not happy about the possible destruction of houses. They knew that many houses had been built on top of the old waterline. They suggested that this old line be replaced because it was damaged beyond repair. Some participants were aware that people had been removed from their houses in Rocha Pinto to make way for the new road. Those people had been re-housed in Viana. Overall they felt that it was better to avoid destroying houses.

Illegal Connections

In past times, things were straightforward. Some people had house connections and those who did not have house connections fetched water at the standpost. The problems began with the reduction in water pressure. Then people began to make illegal connections and there were no proper inspectors to prevent this happening. " One person made a connection and nothing happened to him. His neighbor saw that he had water and did the same thing and soon everybody was doing it and nobody had water any more".
Many people in the bairro have legal piped connections but very few people have water. For a new project to be sustainable, they felt that the most important element was that the Local Administration be in a position to apply sanctions when people made illegal connections. The sanctions would have to be real such that people would think before making an illegal connection. The residents can form a Water Committee, which had an inspection role, but when they report illegal connections, something must be done about it. The also suggested that the Coordinator of the Water Committee liase with EPAL so that the community can be aware of the officially approved house connections. But again they emphasized that water pressure was the key. No project would work if the pressure were poor.

Distance and Time

The participants suggested that 100meters was an acceptable distance to walk to fetch water. The time involved in fetching water would be related to the number of standposts and the water pressure. Currently, they walked to Sambizanga to get water. They felt that the issue of queues was also a result of poor water supply. "People did not fight and cause confusion because they liked doing it, they did it because they needed water". If the project were successful, before the standposts began to work there would have to be a community education campaign. In this campaign, they could deal with management of queues and respect for each other. The participants felt that there were always people who wanted more than others. There would always be people who would want to fill all their recipients, depriving other users of access to the standpost. These were just problems they would have to deal with in the future, "if the project came to pass".

The participants indicated that water consumption depended on the number of people in your house and the money you have available. They thought that any household with more than 10 people would need 200litres in any one-day. They thought opening the standpost every day, from 05.30 until 12.00, would satisfy community needs. At this point in the discussion the women were no longer present and the men were reluctant to have the standpost open into the evening for security reasons.

Water Tanks

Many people in the bairro had water tanks. Most people who have tanks sell water to help them pay for the next fill. Currently, 5000litres cost between 25,000,000Kw – 35,000,000kw. People do not normally give water away because they bought it and they could not afford to give it away. But in Samba, where the water supply is constant, people do give water away for nothing. The retail price varied but 25 liters can cost 150,000Kw in times of shortage. People no longer sold a bucket of 10litres.

Models

They agreed with the basic design but they felt that it was very important that there be a cabin protection that did not allow free access. The felt that otherwise the standpost would be destroyed quickly. The children would play there and vandals would break it. They all agreed that the taps used should be available on the local market.

Organization – Monitor

Initially, the group suggested that somebody who lives near the standpost be nominated to look after it. After further discussion, they reverted to their idea of a Water Commission, which would select monitors

(fiscais) for the standposts. When the question of whether the monitor should be paid or not was raised, there ensued a lively discussion. Some thought that if the person got water for nothing he did not need to be paid. Other participants felt that if he were not paid, he would not take the work seriously and was unlikely to perform the tasks responsibly. Yet others thought that the responsibility of payment should be with EPAL. An older participant called the group to order and reminded them that EPAL was being re-organized to produce and distribute water, not to look after their standpost. So if they wanted somebody to look after the standpost, they would have to find a way to pay them. After this intervention, they agreed that they could create a fund from which money could be taken to pay the monitor. The tasks agreed were

- protect the standpost
- clean the standpost
- sell tickets
- account to the Coordinator of the Water Commission

Organization - Payment

The first reaction from the group was that they would need to know how much EPAL was going to charge for water. Then the Water Commission would meet with the population and discuss how they would organize the payments. The participants did feel that the most viable system would be daily payments where users paid a fixed amount for a specified number of buckets. They suggested four buckets of 20 liters for 50,000Kw. They eliminated the proposal of a daily rate because they said it would be difficult to control. People would give their ticket for that day to other families and the consumption would be greater than the payments. They felt that there was little risk of the monitor abusing his position to raise the price of water, because the Water Commission would decide the price of water.
The participants discussed a number of options in relation to management of money. They agreed that the monitor who collected the money should not keep it. They suggested that the money be deposited daily with the Coordinator of the Water Commission. They suggested that he keep the accounts and open a bank account. The bank account must have two or three signatures. He should also see that EPAL is paid and file the receipts. If there were problems with the payment for EPAL, the Coordinator of the Water Commission would be held accountable. The participants expected the Coordinator of the Water Commission to be able to maintain proper accounts, with a note of debits, credits and receipts. There was also a discussion about whether women or men were better at managing money.
If there were profits, they thought that they should be reinvested in a better water supply for their bairro.

Local Administration

The participants said that the Communal Administration in Prenda was ineffective. They commented, “they spend their time hiding” (esses homens so escondem a cara). They group said that they would prefer to deal directly with the Municipal Administration.

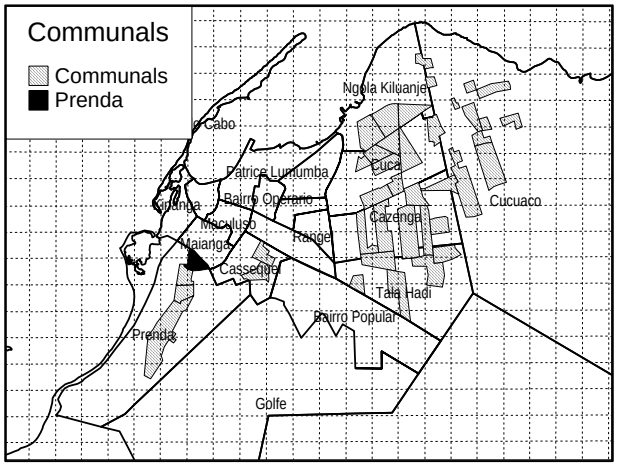
Private Operator

Since the group still maintained that it was unlikely that the project would ever happen, they said that they were unwilling to comment in relation to a private operator. They said that they would prefer see water in the bairro and manage it at community level first. Then when they understood how it worked they were prepared to consider leasing the management but at a local level, controlled by their Water Commission.

Municipal Area: Maianga

Comuna: Prenda, Zone 4

Code: Prenda



Zone Characteristics

- Density, 500/ha
- Estim. Pop. 30,000
- Av. Residence, 15 years
- 21% house connections
- 8% connections with flow
- Price of water is 8.48$US/m3
- No standposts proposed

General Issues

People were open and willing to be positive about the government proposal. They said that the area depended on one standpost. The participants felt that there had been problems with community vandalism in the past but they felt that they were now controlling it. The standpost they used had been broken because of vandalism. A young policeman decided to do something about it and he bought new taps, fixed the standpost and conducted an education campaign in the area. Now the standpost works and there are no problems with vandalism. But the group felt that the government should support the local communities more instead of leaving them to solve their own problems.

Locations

The participants indicated that there were problems with unregulated building of houses in their area and there were not many places available for standposts. They suggested the following locations

a) Jorge da Cruz
b) Praca da Prenda
c) In front of the hospital
d) Where the bread depot was (the bread depot had never been used)

This group thought that it may be necessary to knock down houses but the government must accept full responsibility and compensate the people involved with alternative housing.

Illegal Connections

Illegal connections should be reported to the Residents Commission and they in turn will report them to the police.

Distance and Time

The group said that they hoped that the project would build a sufficient number of standposts. They thought twenty meters was an acceptable distance to walk. They also said that the waiting time was also a function of the number of standposts and the water pressure. They hoped that in the future they would not have to wait longer than five minutes at a standpost. Currently, even with only one standpost, people waited their turn and did not cause problems.

The participants said that most people fetched water daily. They explained that particularly families with small children needed to fetch water daily.

They wanted their standpost open from 06.00 until 18.00, every day.

Water Tanks

The participants did not know of anybody with tanks in their area. If people had tanks, then they were not selling water. When there was no water in the area, they went to Catambor, where they bought water

a) 25 liters from a tank @ 100,000Kw
b) 25 liters from a yard tap @ 50,000Kw

In times of real shortage they could pay 150,000Kw for 20 liters

Model

They agreed with using taps from Tornang, which were available on the market. The taps would have to be protected but some thought that they could continue doing what they did now, remove the taps when the standpost was closed.

They all disapproved of the system of filling the bucket on their head. They said it was painful and it would cause chest deformities (giba).

Organization – Monitor

The community would meet and form a Residents Commission. The Residents Commission would nominate monitors for the standposts. The tasks of the monitor would include

- educating the population in the correct use of the standpost
- paying EPAL
- liaison with the Local Administration
- Collecting money and repairing the standpost when it broke down

If there were serious problems with the waterline, the Residents Commission should report it to the Municipal Administration who, in turn should deal with EPAL.
The monitor would have to be paid and his salary would come from user contributions.

Organization – Payment

The participants suggested monthly payments with cards. The group discussed heatedly where the money should be kept in the community or not. Finally, the majority of the participants agreed that thee most viable option was to deposit money with the Municipal Administration.

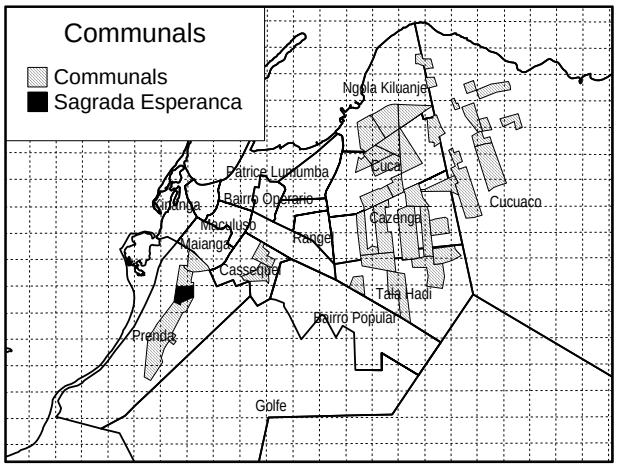
Local Authorities

The area does not have a Residents Commission since 1992. The group thought that it would be reasonably easy to reactivate the Commission if there were a reason. Most participants thought that a reactivated Residents Commission could manage the standposts at the community level but that they needed a more dynamic relationship with the Municipal Administration.

Private Operator

The group said that in theory a private operator could be an efficient way of managing the standposts but they doubted that there would be effective regulation of the same operator. If the government placed a private operator in their community, then the government would be primarily responsible for controlling the operator and ensuring that he provided the community with a good service.
The participants preferred the idea of managing the standposts in conjunction with the Municipal Administration.

Municipal Area: Maianga



Commune de Prenda, Zone 14
Bairro : Sagrada Esperanca
Code: Sagrada Esperanca

Group Characteristics

- Density, 400/ha
- Estim. Pop. 8,400
- Average time of residence, 22 years
- 43% piped connections
- 7% connections with flow
- Price of water is 13.70$US/m3
- No proposed standposts

General issues

The participants indicated that standposts were a preoccupation for poorer people. They themselves would be interested in rehabilitating their household connections. Some of the participants were quite indignant that the government, on the eve of the twenty-first century, was still talking about standposts as a solution to the water problem in the capital city. One participant commented that, "if I am prepared to pay 50USD to fill my tank, why do you think I will agree to walk to a standpost".
The participants suggested that the extension of the water network should have two components, household connections for those areas, which previously had household connections and standposts for the poorer people with no possibility of affording a domestic piped connection. They thought that building standposts in a dense urban area made little sense. They also indicated that building standposts, which compromised household connections, caused more problems than it solved. The participants added that the major issue was replacing the main water pipe. The individual beneficiaries would pay for the household connections. The main water lines must be replaced and illegal connections eliminated. But some of the participants realized that the capacity of EPAL to produce a sufficient volume of water to supply a large number of house connections was also an issue. They described the current problem as one of "demand exceeding supply."

They described their bairro as large and divided into two main areas, one urbanized and one more recently settled with large numbers of unauthorized houses. In the second area it would be difficult to provide them with a network of waterlines because of the way they built their houses. But they also underlined the importance of building a sufficient number of standposts to meet the demand for water.

Location
The participants were not prepared to suggest locations for the standposts. They suggested contacting the older people in the community and seeking out the places where there had been standposts previously. The discussion frequently went around in circles, reiterating that standposts were not a viable solution for water supply. The President of the Council of Advisors to the Municipal Administration (Conselho da Administracao de Maianga) described how the Local Administration had built a standpost in Street 13 and it had lasted five days.
The participants thought that there were sufficient public spaces in the poorer areas to build standposts but the identification of appropriate locations would be the job of the Local Administration.
The group thought that if the government thought fit to place standposts in resident's yards, they could enter into a written agreement with that particular resident. But overall they thought that it was better to build standposts in public places to avoid conflicts and disputes. Some participants commented that the selection of places for standposts should be carefully made to avoid causing undue noise and confusion in a residential area. They also remarked that standposts could become muddy, dirty places with stagnant water.

Illegal Connections

The participants felt that illegal connections were a problem for the police and the Local Administration. But they also underlined that illegal connections arose because of poor water supply and poverty. People made illegal connections to make money, selling water. And people can get away with selling

water, because their neighbors need water. Some participants suggested that the punishments be severe and rigorously applied. When two or three people were seriously punished, other residents would be less likely to make connections.

Distance and Time

The participants indicated that how far people walk depends on their access to and need for water. They thought that an ideal situation would be to be able to fetch water in ten minutes. They also commented that queues, confusion and vandalism in relation to standposts were all related to poor water supply. If the water supply were improved all of these problems would be automatically reduced. People's regular consumption depended on the number of children and adults in a house and on how much water you could afford to buy. People who did not own tanks needed to fetch water on a daily basis and they end up paying more money.

The participants all agreed that water should be supplied every day. They thought that alternate day supply would only cause problems. They suggested that the standpost should be open from 06.00 until 18.00.

Water Tanks

Only three of the participants did not own their own tank. The others said that most people who had tanks sold water. Some people sold water to earn money. Others sold because their neighbors needed water. But they all thought that if the water lines were rehabilitated then there would no need to sell water. They did not think that it was very common for people to give water away because water was very expensive in their bairro. They might give some to a close family member or to somebody who obviously needed the water.
The prices did not vary much. The participants showed indignation towards those whom made illegal connections and then sold water without even paying EPAL. They said that this was the case in Street 13. They quoted the following prices

a) 20 liters @ 200,000kw
b) 50 liters @ 500,000Kw
c) 5000 liters cistern cost 50USD

Models

They recognized the model as the same as the standpost in Engenharia, near the laboratory. The recommended more taps and a sufficient number of standposts. The said that the model of tap was a decision for EPAL to make. The issue of protection depended on the localization of the standposts. Some places would need protection and other places would not.

Organization – Monitor

The participants agreed that the standposts would each need a monitor (somebody responsible for the standpost). They felt that it was the job of the Residents Commission in collaboration with the Local Administration to nominate monitors and the Administration should pay the monitors. The tasks of the monitor are to

- open and close the standpost
- sell the tickets
- deposit the money with the Local Administration
- account to the Coordinator of the Residents Commission
- Inform EPAL about breakdowns

Organization – Payment

The participants disagreed with the idea of making poor people pay for water. Some people thought that poor people do not pay for water in other countries. They felt that the taxes they pay should cover the costs of water for the poor. The President of the Advisory Committee said that it was the role of the Ministry of Finance to allocate money for water programs. They also emphasized that when a poor person paid for water, he bought less food. Some participants suggested that people who have house connections should pay an extra 1-% to contribute to the costs of public water schemes. The facilitator explained the concept of cost recovery and described examples of functioning standposts. Following further discussion, the group agreed that for to pay 50,000Kw per day would be a distinct improvement for people who were currently paying 200,000Kw for 20 liters.

The price would be controlled by the Local Administration in consultation with EPAL. If the monitor attempted to rise the price without an authorization, he would be dismissed. The group suggested that there should be an agreement between the Residents Association and the Local Administration. Each monitor would deposit the money he collects daily. The Administration should pay EPAL and deal with complaints. If money is stolen then the matter must be reported to the police. Stealing was a matter for the police.

The Local Administration should supply the tickets for selling at the standpost. The Residents Commission should hold monthly meetings with the Local Administration where the accounts are checked. The group said that, in principle, the Local Administration is a State Authority, and therefore does not steal money.
The group did feel that if the water supply were consistent there would be money in the fund. They suggested that any profit should be invested in building more standposts.

Private Operators

This group recognized that in normal circumstances, private management could be an efficient way of managing the standposts. But they felt that, in the current context in Angola, it was likely to cause conflict between the users and the private operator. They felt that it should be considered as an option if the Residents Commission and the Local Administration prove themselves incapable of managing the standposts.

Municipal Area: Maianga

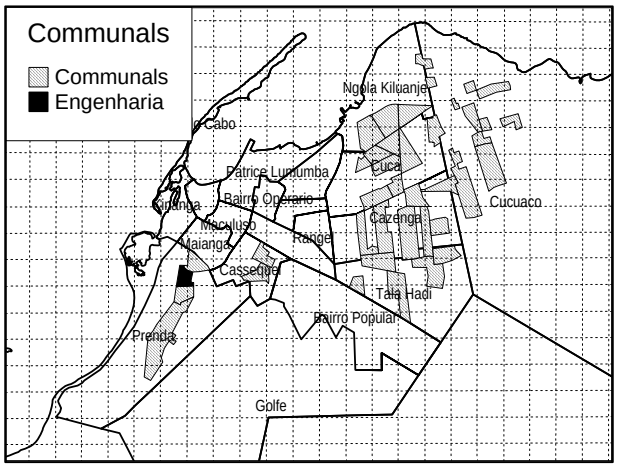
Comuna: Prenda

Sector : 19PR

Code: Engenharia

Zone Characteristics

- Density, 500/ha
- Estim. Pop. 12,500
- Average residence, 22 years
- 53% piped connections
- No connections
- Price of water is 10.22$US/m3
- No standposts proposed



General Issues

The group welcomed the government proposal to put standposts in their bairro but underlined the importance of the proposal being implemented. They showed some surprise that that the government had thought of their difficulties. The participants warned that there were already a number of taps with piped water in the bairro but they functioned as private undertakings and they hoped that this would not be the case in the this project. Last year, a standpipe had been built in their area (DW – EPAL project) but the houses near the standpost complained to EPAL that the standpost reduced the water pressure to their houses. EPAL disconnected the standpost in favor of the house connections.

The participants emphasized the importance of building a sufficient number of standposts to actually address the demand. If there were only two or three standposts it would only cause problems and confusion in the community. Currently, the women said that there were women who began to look for water at 03.00 and 04.00 in the morning.

Locations

The group recommended that the standposts be placed in public places and that a guard is appointed to each standpost. The predicted some problems placing the standposts because since 1992, there was a lot of unplanned housing in inappropriate places. There were also a lot of tiny alleyways that would make laying pipes difficult. The group thought that the government and the engineers should identify possible places and the community could help them. They named a number of past standposts

- Near the Eighth Police Station
- The market of Ango-Chula
- The old standposts which no longer work
- Some of the empty spaces that the children use for playing football

They also mentioned a place which some neighbors had closed off and planted some trees. This caused some discussion because some of the participants said that if these people had gone to the trouble of making a garden there were not going to be happy if their work was destroyed.

Distance and Time

The group said that the distance was not the most important issue for them. They said that the priority issue was a regular dependable supply of water. So they were prepared to walk 500 meters if they were sure of getting water. When asked how long they could wait they explained that that would depend on the number of standposts and the pressure of water. Again, they emphasized the importance of a dependable supply. One participant commented, “If there is water and there are 100 people in front of me, I have to wait. I need water”. Other participants pointed out that many women just could not wait for hours at the standpost because they had to go to the market or to work. Some participants pointed out that one of the other problems with queues was that some people kept places in the queues for neighbors and friends. This meant that the queue never seemed to move forward.

The group said that consumption patterns depended on the number of people in the house and on the money one has. Most people would like to fetch water every day. The group thought that many people would not have sufficient storage capacity in their homes to store water for two or more days. They agreed that the standpost should be opened from 06.00 until 16.00 hours every day.

Water Tanks

Two of the participants owned tanks but no longer filled them because they could not afford to do it. Both tanks in question were 6000L and when they used to fill them, they used it for household consumption only. The group agreed that many people in the bairro had tanks and sold water.

Models

The participants opted for taps made locally which could always be found on the market. They agreed that in their area the taps would need some form of protection. They disapproved strongly of the idea of filling buckets on their heads; the women said it was painful and they could not see the water. Some participants suggested forming a Water Commission which would manage the standposts but under the guidance of the Local Administration. They asked whether the standposts would have any follow-up and technical assistance. They wondered specifically what would happen if there was a problem with the main water line. The facilitator explained that in the event of major problems they would report it to EPAL. The group was not very impressed with this idea and they pointed out that they had complained numerous times to EPAL about the standpost, which was built in 1997, and nothing had been done in their favor. On the basis of this experience, they doubted if the government would actually prioritize an intervention for standposts in their area.

Organization – Monitor

When discussing the selection of a person to be responsible for the standpost, the group again referred to the experience of 1997. They felt that the Local Government should take the lead in selecting monitors for the standposts. The person selected in 1997 began to behave like the owner of the standpost and made other people wait when he filled large numbers of recipients.
They also thought that the Local Government should take the lead in controlling the illegal connections and reporting them to the police. They emphasized that the inspection would have to be other than EPAL because the field technicians of EPAL would have to be subject to inspection. The participants said that the standpost might belong to them but without somebody from the government in charge, there would be conflict and confusion. They community could not appoint a monitor from among themselves; that person could end up dead because of problems and conflicts related to the standpost. They added that residents would always be convinced that the monitor was stealing money.

Some participants described an incident in Golfe, where a standpost monitor escaped a certain death because he was sleeping in his sisters house the night people came to get him in his own house. They also felt that Mr. Joao Gordo, the person who was responsible for the standpost built in 1997 was very lucky that the standpost was disconnected because the population was already preparing a trap for him (cilada).

The group emphasized that for the project to work there must be sufficient standposts. Each standpost could have a group of people in charge, a commission, all of them recognized by the local Government (credenciar). These people would look after the standpost in rotation. The group said that this would avoid any one individual behaving as if he owned the standpost. The members of the community (The Commission) should not be paid. The users would make a regular contribution, which would go towards their food on the day they looked after the standpost. At the level of the Local Administration, one person from the Department of Community Services should supervise the standposts. His job is to visit the standposts regularly and ensure that they are operating normally. The government already covers that person's salary.

Organization – Payment

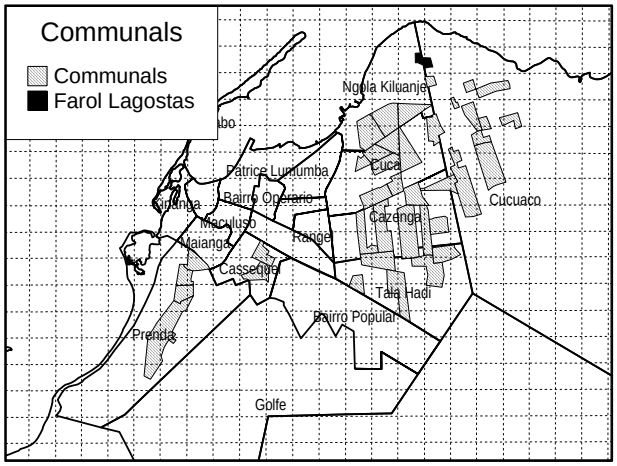
The group proposed a daily payment system, using tickets. They proposed that five jerrycans of 25 liters each should cost 50,000Kw. The Commission would elect a Treasurer from among them and this person would deposit the money in the bank and be responsible for paying EPAL. The Commission would liaise with EPAL and any changes in the price of water would have to be official and discussed first at a community meeting. The group also indicated that at the beginning of the project there would need to be a public education campaign to encourage the population to respect the standposts.

Municipal Area: Cacuaco

Commune: Kikolo, Sector 4,
Bairro: Dalamuleba
Farol das Lagostas
Code name: Farol das Lagostas

Zone Characteristics:

- Density, 200/ha
- Estim. Pop. 3,400
- Av. residence, 4.8 years
- No piped connections
- Price is 17.72USD/m3
- Proposed number of standpipes, 06



General Opinions

Water is a major problem. Not all of us can afford to own tanks and many of us who have tanks cannot afford to fill them. But we do not want to be dreaming aloud and then nothing happens. We need to know if this project is for real or is it just more talk? To decide to give water to people in the Bairro is a normal thing. That is what governments are for but we need to see some concrete action on the project.
We live miserably here. We have no standpipes and nowhere near to fetch water. The industries in the area pay water and need their supply; they are not prepared to give it away to the residents. We are obliged to buy water at the price the sellers wish to sell. Everybody needs water; we want to go to work clean, we want to send our children to school clean. This situation demoralizes people. We live along the water line, which goes to Luanda, but we are not people who are entitled to water!

UNICEF sunk a borehole last November. The water was considered unfit for human consumption and the borehole was closed. The population requested that the well be left for use for cleaning and washing. A number of people in the area use cacimba water for uses other than drinking water.

Locations

The group raised the issue of the size of the bairro. It extends for at least two and a half kilometers. Standposts taken off the main pipeline would only benefit people living in the immediate area of the pipeline. They were collectively agitated about this issue, feeling that the project was poorly thought out and solving a problem as serious as water in one section of a bairro and not in the remainder of the bairro was poor performance on the part of the government. Anybody who lives more than 300 meters from a standpost will not benefit from the same water point. We have only one main road in the bairro, which makes it more difficult to select places. The group all agreed that standposts could not be placed in private yards. There would be too many people using the standpost and it would destroy a residents yard. When the project is in the phase of implementation, the engineering team should inform them how many standposts will be built in the area and the residents will help them select appropriate locations. They also indicated an old pipeline from Sidurgia to Sucanol. Many people have made illegal connections on that pipeline but the group thought that it could be rehabilitated also.

It is not really a viable option to destroy people's houses because they have built on a pipeline. If the government had signaled the pipeline, people would not have built on it. Nobody builds on Sonangol pipeline or on the line to Cimianto or Cimangol. They are indicated with signposts.. Now, if the government never thought to mark these places, they should not knock people's houses after the fact. If they need to knock houses they must provide people with money and land to build.

Illegal connections

When asked about how to prevent illegal connections they answered that their bairro was not like other barrios; they considered themselves organized. With respect to vandalism and illegal connections, the Commission would meet with the older men in the community. They would make these people aware of the implications of not looking after their standpost. These people in turn would speak to their children and their nephews. If somebody sees a child playing at the standpost, they would speak to his parents. His parents would not allow the child do it again. In their bairro, parents assumed responsibility for their children and adults could correct other people's children.

One of the men asked if residents could fill their tanks from the standpost when there was nobody using the standpost. A number of the men thought that was viable but the women disagreed completely. The women said that the resident with the tank would make them buy the water when there was a shortage. They also said that there was no justification for one person getting 5000litres in one day when they were limiting the people in the queue to numbers of buckets. The majority felt that it should be only standposts for all or yard taps should be available for those who wished to pay for it. There was no discussion of how this person who filled his tank with the hosepipe, might pay such a consumption.

Distance and Time

Most people opted for an ideal distance of 100metres or less. They did recognize that some people would come from other parts of the bairro to fetch water. When asked how much time they were prepared to invest in carrying water, they said that would depend on the number of standposts in the bairro and the pressure of water. Ideally, they would like to spend a maximum of 10 minutes but in fact some people will spend more time if the water is significantly cheaper than the tanks.

The group gave a number of suggestions for organizing queues. The first one was sufficient water with sufficient pressure. They followed with ideas such as

- Deciding the number of recipients that any one resident could fetch at one time (they disagreed among themselves on the number, some said one, others two)
- Not allowing people hold other people's places in the queue.

One man said that once people were accustomed to having water every day, there would be less confusion at the standpost. A number of people agreed that the guard at the standpost would have to decide how much water people could take at one time because it would depend on the number of people there at any one time.

The participants all agreed that water should run all day from 06.00 to 20.00. The people representing the local administration thought that it was sufficient for the standpost to be open in the morning only. None of the women present sold in the market place but they all said that women who sold in the market place needed the standpost to be open when they returned in the evening. One woman also said that since she was home all day (an older woman), she would fetch a small amount in the morning and allow other people who lived further away fetch water early on in the day.

Water Tanks

A significant number of people have water tanks. They quoted the following prices for their most recent fill of water:

a) 15,000litres @ 35,000,000 to 40,000,000
b) 12,000litres @ 20,000,000 to 25,000,000
c) 7,000litres @ 25,000,000
d) 8,000litres @ 22,000,000
e) 10,000litres @ 37,000,000

They said the price varied according to the water lorry. Not all of them sold water. Some bought for their house consumption only.

The participants with tanks said they normally sold a bucket of 10litres for 50,000Kw but the price varied with the price they paid for the fill. Most said that when the water in their tank was finished, they needed to add more money to what they had earned from the sale of water to buy water to fill the tank again. Another woman participant commented, "of course you must add more money – you did not think that we should pay for your water!" This would suggest that some people sell water as a survival mechanism rather than as income generation.

This was the one of the few groups where the participants said that, "of course we will give people a bucket of water if they need it. If somebody asks you for a bucket of water, it is because they need it". They explained that only somebody you know (a neighbor) would ask for water. People confirmed that they had already asked and received water for nothing. One young woman said that she had never been given a bucket of water without paying. One of the other men asked her if she had ever asked anybody for a bucket of water. When she answered no, he retorted, "you see, nobody refused to help you; you never asked for help".

Model

The group suggested four taps. There was a suggestion to have a standpost with a tank with a volume of 15,000litres. It was explained that the budget for the standposts was already determined and if they

opted for standposts with more expensive modifications, they would have less standposts. They all agreed to put the issue of a tank aside until the project was a reality with water available in the bairro. They all agreed that the taps would require protection and two ideas were suggested

a) an iron door that would close down over the taps and clamp into the ground
b) iron helmets soldered over the taps.

The group discussed the filling mechanism on the head and felt that the standpost should have both mechanisms, filling the bucket on the carrier's head and filling the bucket on the ground. They also discussed whether the buckets should be filled by a hosepipe outside the standpost or whether users should have access to the taps. There was no consensus on this issue.

Organization – Monitor

The group agreed that the residents would appoint a Water Commission, which would be subordinate to the Residents Commission. This Water Commission would meet with the older men in the bairro and appoint people as managers (responsaveis) for the standpost. They suggested that they be people who live near the standpost. They all agreed in principle that this person should be paid. They also had no problems paying EPAL for the water. The issues, which generated heated discussions, were:

a) how the consumers would pay for water
b) how the money generated would be managed

Consumer Payments

Some of the men preferred a system of monthly payments with registration cards. Other participants disagreed because not everybody will pay monthly. When it comes to the end of the month, they will say they have no money or that they did not fetch water every day that month. One man also said that it was a thankless task, collecting money from house to house. Those people who supported the monthly payment system suggested that payments be calculated on the basis of the number of households. Participants who disagreed with the monthly payments said that households with a small number of people would not be prepared to pay the same as households with large numbers of people. One man suggested that they charge the monthly rate per capita rather than per household.

The majority opted for a daily payment system. Some of the group disagreed with a flat daily rate on the basis that it was open to abuse where people would pay for their daily ticket and then give it to other households. The women were more in favor of a daily rate. They argued that it was an easier method of payment to control at the standpost and it was easier for the users to manage their money on a daily basis.

The issue on which there was no agreement whatsoever was on how to manage the money collected. The ideas outlined were

- the guard who collected the money should give it to a Treasurer at the end of the day. Spot controls could be made on the guard by sitting at the standpost for a day and counting the number of users. There was no agreement on a consistent method of control of the daily income.
- The Treasurer should deposit the money in the Bank. The Treasurer would be responsible for making payments to EPAL, paying the guard and withdrawing money for repairs.
- Some participants wanted an accountable system set up and others said, "as long as I can pay an affordable price for water, that water is always available, I do not mind what the authorities, whoever they are, do with the money".

Private Operator

The majority of this group were in favor of a private operator. Some of the women disagreed. The arguments they presented in favor of a private operator were

a) it was likely to be more efficient
b) that there would be no grounds for conflict within the community related to the management of money
c) that, they the residents, would have less headaches. All they would need to do is pay for their water.

They said that they had good experiences with private operators in the area of Petroangol, where electricity apply was organized via private operators. When the residents had attempted to solve the problems by working with the Local Administration and EDEL, it had been a failure. Now they had a consistent supply of electricity bought from SONEFE and supplied through a private operator. In the water sector, they assumed that the licenses would be conceded by EPAL and they suggested that they, the community, have the opportunity to discuss prices with the operator before he/she began working.

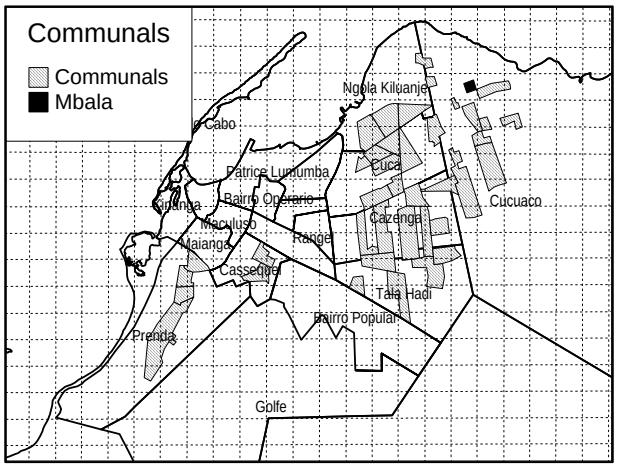
The thought that the Residents commission could provide the inspection support and if there were problems they would refer the issue to the Communal Level Administration.

Municipal Area: Cacuaco

Sector : 1
Bairro: DalaMuleba
Code name: Mbala

Zone Characteristics:

- Density, 400/ha
- Estim. Pop. 4,800
- Av. Residence, 10.4 years
- No piped connections
- Price, 7.93USD/m3
- Proposed number of standpipes, 04



General Ideas

Water is a huge problem in our bairro. The standposts stopped working in 1987 and the tanks began to appear. The local industries were no longer able to give us water after 1987 because their water pressure dropped also. We had four standposts in the bairro; they were fed by lines from Cimangol and from a pipeline to Cimianto. To-day, when there is little water in the bairro, we must go to Kikolo.
"Even when we buy water in the tanks it is poor quality water; many people do not clean their tanks and they are not properly covered. Some of the water lorries are also dirty" (woman). One woman referred to the fact that the GPL lorries, which dispose of septic tanks also, sell water.
One man said, "if you have 50,000Kw you buy water. If you do have money you go thirsty. This is a miserable life"

Locations

There are sites where we had standposts in the past, near the Commissao, Imbondeiro, the wall of Cimangol and one site near the middle of the bairro. But the population has increased enormously since then. This bairro has seven sectors; we need at least one standpost for each sector. When the project is about to be implemented and when the technicians know how many standposts will be built in our bairro, they can consult the Commission, who after consulting with the people, will indicate appropriate locations. There are sufficient public lots in this bairro for standposts.
They all agreed that standposts could not be placed in a resident's yard. They said that no resident would accept that degree of confusion, all day long in the yard. They insisted that the sites would have to be near people's houses for better security – they thought that it would be very silly to build a standpost in the middle of a playing field or in a large empty space. Children would play in it and it would deteriorate rapidly. Like the group in Sector 4 in Dalamuleba, this group also raised the issue of coverage; they were concerned that if only the primary pipelines were built, people living in the interior of the bairro would be discriminated against.

They did not feel that there would be any problem with existing houses on the pipeline. There were houses alongside the FINA oil line but they could not think of anybody who had built on the water line. They did feel that there would be problems with the existing connections to the factories, such as Cimangol, Induve and Cimianto. When the technical team began the work they would have to be careful not to burst existing water lines. If it were necessary to destroy a resident's house, that person should be properly compensated. They quoted the example of the widening of the road in Rocha Pinto, where displaced residents are being allocated houses in Viana 11. There was a discussion about whether a person who had illegally built his house was also entitled to compensation. The majority felt that those who had built their houses had invested hard earned money and were entitled to compensation, whether their house was legal or not.

Models

The group approved of the model and some of the men commented that it was a good design because they the residents could fix it easily and they would not need to be constantly calling technicians to fix it. The group agreed that when the standposts were built and water was running, that they the community would build a house around the standpost for better protection. They also felt that four taps were a minimum to avoid queues and conflicts at the standposts.

Illegal Connections

The men were inclined to think that that the problem was simple. They would appoint a local inspection brigade. The women were of the opinion that it was not that simple. “People will be tempted to make connections to their tanks”. The discussion was lively but the group agreed that

a) that any connection to an individual resident's tank would not be allowed. A person doing that would be warned once by the Bairro Commission and if the crime were committed a second time, the person would be reported to the police. The group said that there would be official community inspectors but all of the residents would be vigilant because it was in their interest to have the standpost working.
b) They also agreed to allow individuals fill their tanks with hosepipes, when the standpost was not being used and at the discretion of the manager of the standpost. People who filled their tanks would have to pay for the volume they took from the standpost.

Distance and Time

The group disapproved of the facilitator asking how far they were prepared to walk to their standpost. They said the decision was not their decision. The project team would decide how many standposts were to be built in their bairro; only then could they know how far they would walk. If there were only four standposts, many residents would have to walk more than 500metres. They thought an ideal distance was between 300 and 50 meters. The women though that they should be able to fill a number of recipients within a period of 30 minutes. The men thought that was expecting too much from a government project.

Queues

The first comment was that if there were sufficient water with sufficient pressure, there would be no problem with queues. Queues were related to shortage of water. They also felt that queues would sort themselves out when the population saw that the water was running every day. They said that people can only fill the recipients they have in their houses, they cannot fill water interminably. The proposal made to reduce problems with queues were

a) decide on a fixed number of recipients that people could fill in one go.

People should not be allowed to fill all the recipients they wanted, when they wanted. Some people wanted to cart water in ten buckets at one time

b) users should be served in order of arrival
c) the person in charge of the standposts should also control the queues.

The women underlined that one person filling barrels could not force another person with just one basin to wait. The women said that many people who made “kapuka” or cement blocks, needed to fetch large volumes of water. One of the older women said that here in Angola, people were accustomed to queues and the real issue was water supply. If the water were supplied, they would figure out how to organize the queues.

One of the issues raised at this point in the discussion and repeated on a number of occasions, was that residents were much more likely to cooperate if they understood how things were supposed to function and why. Hence there should be a community education campaign on the standpost regulations and the role of EPAL. They agreed that if individuals were non-compliant, then the person in charge of the standpost would be authorized to refuse them service at the standposts and they would be obliged to fetch water in Kikolo.

Tanks

Most people who had tanks sold water. The prices quoted for the last time they bought water were:

a) 7000litres @ 15,000,000Kw
b) 5000litres @ 12,000,000Kw
c) 4000litres @ 15,000,000Kw
d) 8000litres@ 20,000,000Kw
e) 5000litres @ 18,000,000 Kwanzas

The retail price was three buckets of 10 liters for 100,000Kw or two buckets of 10 liters for 100,000Kw depending on supply. Most participants who bought water from their neighbors confirmed that they spent a minimum of 500,000Kw daily. They did confirm that many people no longer fill their tanks or fill their tanks infrequently because they cannot afford to pay the money. Those who sold water said that one rarely recovered the cost of the tank by selling the water. They always had to add more money to what they had earned to buy more water. Other people said that they often spent the money they earned

from selling water on a daily basis, buying food. The participants said that people did not give water freely; they would give somebody a cup of water but not a bucket.

They also complained that the water they bought was smelly and dirty. Even if lorries from large companies sold in the bairros, they sold untreated water because the driver was doing this as a sideline at lunch time. The driver could not buy the water officially because his company would have a record of the number of times he filled officially.

Organization of the Standpost
They wanted their standpost open from 05.30 a.m. to 12.00 and from 15.00 to 18.00. They suggested closing it at lunch time to avoid children playing in it and they needed it open in the afternoon to facilitate women coming back from work or the market place.

The job of the monitor would be to
a) control the standpost and prevent damage
b) open and close it at the right times
c) organize the queues
The men suggested that an older man be chosen who had no job, who did not travel and who would be available. The women agreed but all of them insisted that for each man appointed at a standpost, there should be a woman too. They suggested that they should have two people in each sector, one man and one woman. One older woman added that the people should be chosen with care, "that it was not a job for the person who wanted it but rather a job for the person who deserved the job" (não e para quem quer, e para quem merecer). The group also agreed that the persons responsible for the standpost should be remunerated.

Organization – Payments
The group very quickly agreed in principle on a daily payment. They said that when they knew what they would have to pay EPAL, they could decide exactly what the daily rate would be. In discussion, participants accepted daily rates of 50,000 to 100,000Kw. They then described a system whereby the "couple" in charge of the standpost would collect the daily payments. These people would give the money to a Water Nucleus (three people) at the level of each sector. The Water Nucleus would report to the Bairro Commission. Residents could not be members of the Water Commission and the Bairro Commission at the same time. The Water Nucleus would handle the money and payments and transactions in the bank would require two signatures. Money would be deposited regularly in the bank. EPAL would be paid from the bank. After much discussion, they agreed that the people looking after the standpost should be paid on a daily basis. The group discussed the option of paying them monthly by cheque but they finally agreed that it would be less cumbersome to pay them daily. Participants underlined the importance of a "papertrail" in the management of the money but the overall feeling seemed to be that they could tolerate small amounts disappearing as long "as large amounts did not disappear regularly".

The participants discussed whether the people in charge of the money should be church going or not (religiosas). They quickly concluded that religious people had no great advantage in relation to honesty, therefore it was not a criterion that they would apply in the selection of the Water Nucleus. They all agreed that if money was stolen, the culprit should be punished with a prison sentence. (E crime de burla; da cadeia).

When the issue of possible profits was discussed, they commented, "One never has too much money. It is only the problems that are always greater than the money available". (Dinheiro nunca e de mais; e so os problemas que sao mais que o dinheiro). But the group overall agreed that profits from water should go to water, in repairs or improvements in the system.

Private Operator
They spontaneously disapproved of this option. Their negative reactions in relation to the private operator were based on the following beliefs
a) that if the standpost broke down, the private operator would be less motivated to fix it quickly than the users themselves. They graphically imagined a situation where their standpost broke down, the guard put there by the private operator would borrow money from them to get a taxi to the house of the private operator. The same operator would never be available, having traveled to Belgium or to

the Lundas. Even if they located the operator, he would invent all sorts of reasons why he did not have money to fix the standpost at that moment.

b) The profits would leave the bairro. If they managed it themselves, they were more likely to have money in the bank account for all eventualities.
c) The free market had not brought them any great joy. Their experience suggested to them that the implications of a free market for them was that they always ended up paying more for less.

Local Administration

They explained clearly that they had a Bairro level Administration. The bairro had seven sectors; each sector had a Coordinator with an Assistant and a Treasurer. Administrating the seven Sectors, they had a President, Vice President, Treasurer and one person for Community Services. The Vice-President has participated in the discussion in Sector 4 and the President had participated in this discussion. None of these people were remunerated but they all declared that this was their job. The overall impression was that the Bairro Administration was representative.

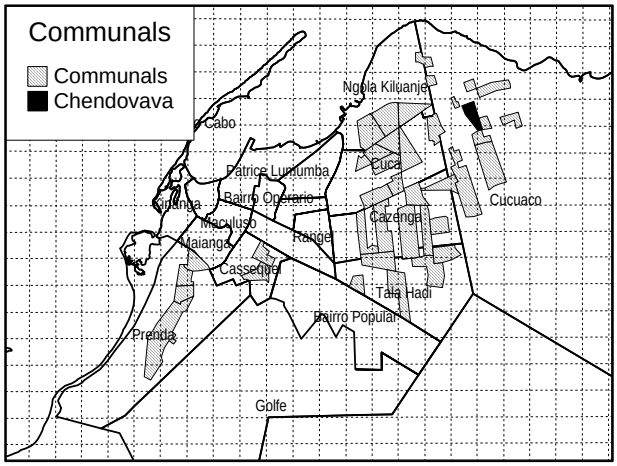
Municipal Area: Cacuaco

Commune: Kicolo

Bairro: Kicolo Sede
Sector: Not known by the participants
Code: Chendovava

Zone Characteristics:

- Density, 400/ha
- Estim. Pop. 13,200
- Av. Residence, 16.5 years
- 6% piped connections
- 6% connections with flow
- Price of water, 3.91USD m3
- No standposts planned



General Opinions

The participants had all been indicated by the Communal Administrator via the President of the Sector. None of the people who had been invited randomly were present. All of the people present had house connections (the quantitative study indicated a low percentage of house connections, 6%). Hence this group were not representative of the bairro.

The participants agreed that in reality few people in their bairro had piped water and those present represented a small minority. But they added that because their area had some piped water, people were not as badly off as in other areas of Kikolo. They specifically named places like Bairro Cardoso, Jesso, Igreja da Setima Dia and near the Cemetery and they felt that those areas should have priority. Those with piped water said that they could offer water to others without payment but that they also paid EPAL, so if they gave too much water away, they would end up paying for other peoples consumption. The two young women insisted that nobody gave water away without payment.

Location

The Communal Administrator had informed the Soba that four standpipes were going to be built shortly in the bairro (These are part of a Development Workshop Water Project). The participants said that there was sufficient public land for standpost construction. But they all agreed that it would not be possible to place a standpost in a resident's yard; they said that the person would be tempted to sell water and might not always allow the standpost to be used when people needed water. They said it would be possible for a "person of good faith" to donate land for a standpost but the land would have to be land that he did not live on. Some of the women said that there were many private connections and pipes above ground that would cause confusion for the planning of a new project. The Bairro was not urbanized and the streets were not straight. But the group insisted that when the project came to pass, the project team could work with the Commission to select the locations for the standposts. When asked about their attitude to the project knocking down houses, the men said that it was possible. "The Government is the Government. They can knock down houses but they must give that person another house, like they are doing in Rocha Pinto". The women said little but they indicated that they did not approve of what the men were saying.

Residents Commission

Very early on the discussion, the group placed the Residents Commission in a front line major role. In response to every question about *who* would do something, the answer was always the "Commission". The participants did not know any member of the Commission, and they did not know the President of the Sector. They thought that the President might conceivably live outside the bairro. But they still insisted that the "highest authority" in the bairro was the Commission and nothing could happen without them being involved. When asked what work had the Commission done recently, the soba answered that they had "made the census for the bairro; but none of the participants could remember participating in a census. The facilitator tried to penetrate the screen of the Commission by asking the participants to pretend that they had been invited to advise the Commission on the Water Project in the bairro. The quality of the focus group improved slightly.

Illegal connections

The participants said that of course there would be illegal connections. If the owner of a private line is not vigilant, people break into the line and make T connections. They said where things belong to the

Government it is even more likely to be damaged. They described the case of a standpost behind the Communal Administration, which had stopped working because of illegal connections. But when asked how they could prevent these illegal connections, the men and the woman with piped connections insisted that there would no problem; “The Commission will be in charge. Before the standposts are built they will check all the houses which have yard taps. If, after the standpost is built, other neighbors suddenly begin to have taps in their yards, it will be obvious to the Commission that they have made an illegal connection. The Commission will report them to the Communal Administration and the punishment will have to be prison”.
Again the vision of the women participants differed somewhat; “one person will make an illegal connection at night time, then another neighbor will see that the first has water and make his own connection and it will go on like that”. The soba suggested that the Commission should meet with the population before the standposts are inaugurated and explain to them how important the standposts are and how they are for the collective population not just for the benefit of a few. This meeting should also explain the sanctions proposed for illegal connections.

Distance and Time

The women said that they could conceivable walk 200meters but less was desirable. They also pointed how older people could walk a maximum of 50 meters. One man said that, “it was sad to see women walking distances with water on their heads.” The soba told the group how women often asked him, “when will we Angolan women stop being obliged to walk with buckets on our heads”. Another man described how in South Africa he never saw women with buckets on their heads, that each house had a yard tap.
When asked how long they were prepared to spend on the work of fetching water, the women said that currently they spend a large part of their day fetching water. Any real improvement would be related to the number of standposts built and the pressure of water. Too few standposts and poor water pressure would mean that they would still spend hours looking for water. The women thought that they would be prepared to wait behind two or three people at a standpipe.
When asked about how they might organize queues, they again indicated that queues were a feature of poor water supply. First of all they would have a line, where users were attended in order of arrival. The women suggested that they apply the system of “montagem” whereby each person could fill the number of recipients they needed. They said that many people needed water to make blocks and kimbombo (local fermented drink). One woman said that when you went to buy bread, there was never a question of controlling the number of loaves you bought. Similarly, those who bought water should be able to buy according to their needs and their pocket. Again, she pointed out that the issue was one of supplying enough water to meet the demand.

Tanks

The participants said that a significant number of people had water reservoirs, which were filled by piped water, but there were tanks filled by cisterns. Piped water cost 50,000litres for 50,000Kw and water from the lorries cost 100,000Kw for 25litres. A water cistern with 5000 liters cost between 20 and 25,000,000Kwanzas. One of the participants with a piped connection said that he sold water because he, in turn, paid EPAL. The women who had no piped water said, that in their experience, if you had no money you got no water. Even if you ask somebody for water because you have no money, people are selfish (ambitiosos) and they will not give it to you. The soba confirmed that there were people who had no money at all, old people abandoned by their family. He said that invariably somebody “looked to them”. (olha para eles)

The women also said that they fetched water every day and that people needed to have access to the standpost in the morning and the evening. One man said that he has seen women carrying water at 21.00hrs. The group felt that the standpost must be open from 06.00 to 18.00hr at least.

Model

The participants thought that two taps were sufficient. One woman added that if the pressure was not sufficient, the number of taps was irrelevant. The women in this group did not approve of the system of filling buckets on their heads. They said it meant that you already began to suffer with the weight before you began walking home.

Organization – Monitor

The discussion initially went around in circles. The men kept insisting that the Commission would do everything and that under the Commission, the houses surrounding a standpost would look after the standpost. Eventually it was possible to discuss independent tasks and components of the management of the standpost but the discussion continued to be relatively superficial. The group agreed that the person selected to look after the standpost should

a) live near the standpost
b) should relate well to people
c) have sufficient presence to be able to control the queues
d) be capable and serious

The men initially said that the people who looked after the standpost would do so voluntarily. They suggested members of OMA, JMPLA or Community Midwives They were then asked whether they personally or anybody else they knew would accept to work all day without payment. They then agreed that it was unlikely that people would work voluntarily. The women said that it was impossible for people to work voluntarily. They added that if the payment for the job were monthly, it would be inappropriate for a woman; women needed to have disposable income daily to look after their families. (Quem esta habituado ao negocio não pode esperar o fim do mes). The women thought that the person in charge of the standpost should be a man, like a guard (proteccao fisica). The women also thought it would be easier for a man to command respect if there were conflicts at the standpost.

When asked about how their monitor would be paid they initially suggested the Local Administration should find funds. When they were reminded that the Local Administration did not have funds the soba suggested that if the weekly payment were 50,000Kw for each family, then the family would pay 100,000Kw per week to cover a salary for the guard. The other members of the group did not comment on the proposal.

Organization - Payment

The men said the payment would be weekly and the amount would depend on the bill from EPAL. The women did not comment. There would be a register of the users. Initially they said that the bill from EPAL would simply be divided among the resident users. When asked if consumers who used 500litres in one day and those who used less that 100litres would pay the same amount, the men were taken aback and the women said that such a system was unworkable. The men then said that everybody knew everybody else and they would know what the average consumption would be. But they did not suggest that consumers pay by consumption; they just said that those who were larger consumers would pay a raised rate.

The money would be collected by a Work Group for Water. This second Commission would be indicated by the Residents Commission. Somebody on the Work Group would be nominated to pay EPAL and would be controlled by the Residents and the Residents Commission. Initially they talked about leaving the money in the hands of the person chosen to manage money but after further discussion they decided that, “money held as home is badly spent” (dinheiro em casa e mal gasto). So the final suggestion was to open a Bank Account but it was not clear how the Bank Account would be managed.

They considered that 300,000Kw per family per week would be an acceptable rate of payment. If there was a profit it could be used for other community projects or to extend water to other communities.

Private Operator

Only the men discussed this option. They were in favor on condition that it was somebody from the bairro. They added that there were many potential private operators living in the bairro.

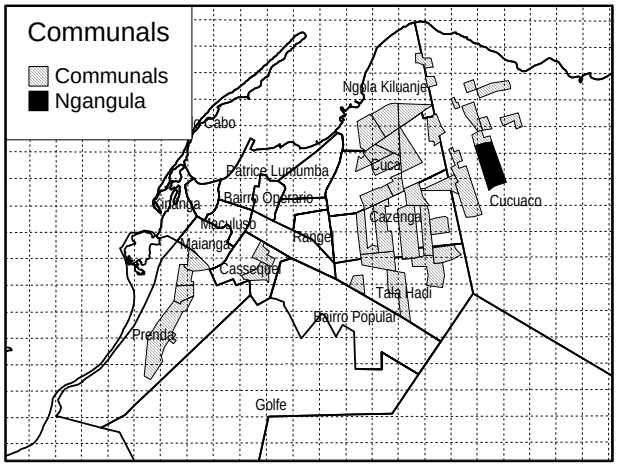
Municipal Area: Cacuaco

Commune: Kikolo, Sector: 8

Bairro; Jesso, Augusto Ngangula
Code : Ngangula

Zone Characteristics:

- Density, 250/ha
- Estim. Pop. 23,250
- Av. Residence, 7.5 years
- No house connections
- Price of water, 12.07USD/m3
- Proposed number of standposts, 32



General Opinions

The contact team, which had formed the focus groups, had originally contacted a local church, where the meeting was supposed to take place. The Coordinator of the Bairro refused to allow the meeting to take place in the church and insisted that it take place in his yard. On the eve of the meeting, the Coordinator was contacted to confirm the meeting and he refused on the basis, "that he had no written or verbal authorization from the Communal Administration to allow such a meeting take place in his bairro". He was given a copy of the EPAL credential, authorizing the study but was still reluctant. After some discussion on the morning of the focus group when the team arrived, he finally agreed to allow the "meeting" take place but we were not allowed to ask questions about the local administration. The Coordinator determined that such questions were political. Finally, the Coordinator of Sector 8 and of Sector 9 were interviewed separately but they clearly, in good faith, thought it was their role to "control" the discussion.

The participants began the discussion with the following:

We depend on the water cisterns and the tanks. If the tanks in the bairro have no water, we suffer. Sometimes you have 100,000Kw and you want to buy water. When you go to the water seller, the price has risen to 200,000Kw because he bought the water more expensively. Then you have to decide whether you will buy water or food.

The pipeline coming to our Bairro is too small and it is made of inferior plastic. We hope that this project is properly designed and that you are not going to put down pipes which will be useless within six months.

The quality of water we drink is also very poor. We are all lucky to be alive

Some participants thought that it would be more realistic in the long term to plan for yard taps.

Locations

They named a number of appropriate locations. They thought that Sector 8 should have at least 15 standposts. The group insisted that the appropriate person to select the locations was the Coordinator of the Bairro. The majority said that they did not think it was possible to place a standpost in a resident's house. They felt that that individual, if he were ill disposed, would prevent people using the standpost and people could not use it at the times they wish. Others thought that some people might have the civic spirit to offer some of their land in the interests of the people. But they said that it would have to be a donation, not a question of the Coordinator negotiating with the individual on behalf of the people. They described an incident when the lorry had supplied the water tanks of the provincial government; the local guard was irritated with the population and refused to put the taps in place and serve the people.

They group agreed that the government could knock down houses in the common good but they would have to compensate the families in question. One participant described how in Rocha Pinto, residents who were illegal house owners were compensated with construction materials. Owners of houses with legal documents were given houses in Viana 11. The other participants did nor comment on this.

Illegal Connections

It was clear from the discussion that the residents would not be willing to participate in control of the illegal connections. They insisted that it was the work of the Coordinator to be vigilant and detect any illegal connections and report them. They said that, "they could not be complaining on each other; that it would cause problems in the bairro". They also said that, "in these times, an ordinary resident knows nothing about nothing" . (Hoje em dia um simples resident nao sabe nada de nada). But they also

pointed out that it was the responsibility of the "authorities" to ensure that their respective representatives functioned correctly. One participant commented that, "the dishonesty begins with the directors and the bosses". (O cambalacho parte dos Directores). The others agreed.

Distance and Time

The group recognized that the number of standposts proposed could not satisfy the needs of the targeted areas. They said that if they had their choice, they would like to walk less than 50 meters. The women felt that they could walk 30 meters with a large basin (40litres). They all agreed that 500meters was much too far to walk. At this point, they said that they needed at least 30 standposts in the bairro. Since the number of standposts was clearly insufficient for their needs, they could consider contributing to the construction of other standposts but only after they have seen water because they have previous experience of losing their money in community contributions.

When asked how much time they were willing to devote to fetching water, they said that the time involved depended on the distance and the pressure of the standposts. If the standpost was at 30meters from your house, you could collect one basin in six minutes. If the standpost was 200meters and there was a queue, one could waste an hour fetching water.

Queues

They said that the queues are related to shortage of water and low pressure. But they pointed out that Angolans were habituated to such an extent that they thought queues were a normal way of doing things. Angolans think that you are supposed to wait for everything. They do not reflect that if things worked properly, there would be no need to wait for everything all of the time. One man added that on the buses, even if there was no queue, people still fought and jostled to get on the bus. Others added that if there was a good supply of water, people who had every recipient full at home were likely to queue at the standpost again out of habit and from fear that to-morrow the water would stop.

Tanks and Price

Few of the participants had tanks and at least two of those with tanks had not filled them because of lack of money. They said that everybody who filled their tank, sold water. The prices the tank owners quoted for their last fill were:

a) 5000litre @ 60,000,000Kw
b) 5000litre @ 25,000,000Kw
c) 9000litre @ 25,000,000Kw

One participant described how a 5000litre tank cost 7,000,000Kw in 1997. The rise in price since 1997 is significant. They explained the differences in prices as been related to who sold the water and when. The retail price was 100,000Kw for 20litres. The price doubled when there was a water shortage. The group agreed that it was nearly impossible for people to give water away for nothing; people could offer a glass of water but not a bucket. Some families let their water tanks if they can not afford to fill them. One participant described how one neighbor allowed him use his tank for one year while his house was unoccupied. The participants said that it was unusual for neighbors to collaborate and contribute money to fill a tank. One man said that that kind of arrangement would cause conflict among neighbors, with each neighbor accusing the other of using more water than he had bought.

They bought water daily and often twice daily. Many felt that they spent more on water than on food. They wanted their standpost open from 04.00 to 12.00 and from 15.00 to 20.00. The group explained that these opening hours were to facilitate people going to work in the morning and women who sold in the market in the afternoon. They felt that access at all hours was important to avoid queues and confusion a the standpost.

Model

They suggested some modification for the design.

a) they want the drain off to be designed so they could use the water for irrigation
b) the taps would have to have a protective covering because the taps would be removed to be melted down for "false gold". They suggested removable taps and welded boxes over the taps with locks.

They were not enthusiastic about the filling system, which allowed women to fill on their heads. They only advantage they could see in the system was that the standpost guard would not have to lift buckets on to women's heads all day long. The women said that it held no particular advantage for them and that they had never yet gone to fetch water that there was nobody available to help them put the bucket on their head.

Organization – Monitor

When the standposts were built, the group indicated that the Coordinator would call a meeting and at which they would select people as guards for the standpost. The guards should live near, be responsible and serious and be polite to people who used the standpost. The younger men said that it was important that the women be present at that meeting because they knew which of the men would treat them with respect when they went to fetch water. The guard would protect the standpost, open and close it at the appointed hours and maintain it in good condition. If he was not doing his job properly, they could complain to the Coordinator, but if the Coordinator did nothing about it, there was not much they, the residents, could do.

Organization – Payment

The issue of payments and management of money caused quite a discussion , which went around in circles because the participants avoided any reference to or debate on accountability. The facilitator approached the question from many angles; it was clear that the participants understood the issues being addressed but they were not prepared to discuss them in public.
They suggested that there be a registration of the users of each standpost. At the end of the month, the bill would come to the coordinator who would then inform each household how much they would need to pay. The group said that there was no problem with all households paying the same rate, even though some would obviously consume more water than others would. They said that was the way they paid for their electricity (they had electricity supplied by SONEFE). The Coordinator would collect the money, pay EPAL and receive a receipt.

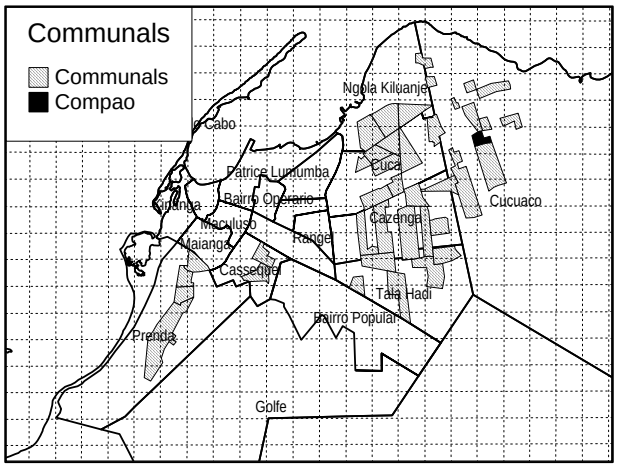
When asked if their guard would be paid or work voluntarily, they agreed immediately that he would have to be paid but some of the older people wanted to know why he could not be paid by EPAL. They said that he had to be paid because if he did not eat, he would not be able to stand up, not to mention look after their standpost. After some discussion, they agreed that if there was water every day, people would be quite willing to pay the guard. They suggested two systems:

a) putting a percentage on top of the monthly household payment for the guard
b) indicating one day a week when water would be paid by the bucket and on that day, the guard would remain with the money. From that money he would pay himself and maintain a fund for small repairs.

One of the participants pointed out that some people did not calculate costs. They refused to pay a small monthly bill for electricity and then spent more in ten days on paraffin for lamps; or they were reluctant to buy a bottle of gas and in less than a week they will spend the same money on charcoal.
At this point one of the younger participants said that since we were talking about managing money, that maybe a solution was to place the standpost in some residents yard and let that person manage it, collecting money and paying EPAL. The others disagreed. But when they were asked their opinions about giving licenses to private operators, they were positive about the idea. Some people said that the private operator should be from outside the bairro, to avoid being influenced by elements in the bairro. But others said they preferred the idea of somebody they knew, whom they trusted. (Alquem de nossa confianca)

Municipal Area: Cacuaco

Commune: Kikolo,
Sector 3, Bairro Compao
Code: Compao



Zone Characteristics:

- Density, 500/ha
- Estim.pop. 11,000
- Average length of residence, 7.3 years
- 8% piped connections
- 8% connections with flow
- Price is 6.96USD/m3
- Proposed number of standposts, 15

General Ideas

We are very pleased if the Government remembered that we need water. But we would like some indication that this exercise will go beyond the paper it is written on. It would seem that the Government and EPAL are somewhat serious if they have sent you to talk to us but we have heard many promises before. Water is our major need. There are other important problems that we can do something about ourselves but we absolutely need the collaboration of the government to solve our water problems. The women must walk back and forth with heavy buckets of water on their heads. They end up having strain and aches and pains. We can go the health post but we do not have the money for that either. Then the water we drink is poor quality; adults and children alike get diarrhea from it. The tanks in which the water is stored are poorly maintained, contributing to further health risks. We have a miserable existence and we really hope that this is not just another paper exercise. (trabalho que fica no papel so) The largest water pipe goes through our bairro to bring water to Luanda and we have a large water tower in the bairro but we have no water. This is not just.

Location

The participants felt that they could not decide on behalf of the other residents. They said that they would call a meeting after the discussion and inform the other residents of the proposed project. They would then make a list of appropriate available places to build standpipes. They agreed that there were plenty of places available. In the case of public land, the local administration will confirm the availability of the land. If we have to use private land we can discuss it with the owner and if he agrees, he will sign an agreement to that effect. Overall, the group confirmed that there are public places and that it would be possible to build on private land for the use of the community. The immediate area had four blocks (quarteroes) and each quarterao should have at least one standpipe.

The group were asked their opinion about destroying houses to build the main pipelines. One older participant said that, “if you decide to put your sleeping mat on the floor, on top of a snake, what are you going to do? You are either going to flee the snake in order not to get bitten or you are going to stay awake, to ensure that he does not bite you. If you built your house on top of a pipeline then you knew you were going to have to move some day”. The group added that some residents have even built on top of the railway lines. They day the government decides to rehabilitate the railway lines they are not going to be able to build around all these constructions. But the group all agreed that even residents who had constructed illegally should be entitled to some compensation and be allocated land.

Illegal Connections

The group had no doubts that the question of illegal connections was not something that they could solve at their level. They felt that if there were problems with the pipelines, it was the government’s job to do something about it. They said that at community level, it was the responsibility of the Residents Commission to know what to and how to do it. “The population cannot take a position on illegal connections. Even within the family, if there are serious problems, the head of the family must take the lead in solving the problems. If the head of the family is drunken and irresponsible then the family suffer because they have difficulty organizing themselves”.

Distance and Time

Again this group indicated that the distance they would walk would depend on how many standposts were placed in their bairro. But they did feel that 200meters was the absolute maximum they would willingly walk. The women said that they could walk the distance of 10 to 15 houses to collect water. People need to be able to fetch water in a maximum time of twenty minutes, otherwise they will be late for work or leave for the market without preparing breakfast. The queues should be organized in function of first come first served and the person looking after the standpost should take responsibility for organizing the queue. They described Mondays as difficult days because Roque Santeiro is closed; hence the women want to wash clothes and therefore needed lots of water. They felt that the solution to the problem was to define how much water each person could fill at one time. One person wanted to know what would happen if the wife of the Coordinator wanted to jump the queue. The majority of the participants felt that the rule of "first come, first served" should apply to all without exceptions. They said that if the Coordinators wife was in a rush to get water, she would have to get up early and be first in the queue. One male participant commented, "There is no such thing as more important people because we all feel the same thirst". The group felt that all these problems of queues and confusion would stop if the water supply was adequate for their needs. People need water to run from 05.30 until 20.00.

Water Tanks

Many people have tanks in the bairro but a significant number can no longer afford to fill the tanks. 5000 liters costs 17,000,000Kw. The sellers all sell at the same price. People may allow you collect water and pay later but there is no question of giving water away for nothing. If one asked for water for nothing, you would be told to go and build your own tank.

Models

The group suggested that there be more taps to avoid the queues. The group agreed that the locally produced taps might be ugly to look at but were easily replaced. The group felt that it was essential to build a protection around the standpost with a door that could be locked. When asked about the system for filing on people's head they group recognized the advantage for the guard in that he did not have to help the women put buckets on their head but it was of no particular advantage to the women themselves.

Organization – Monitor

The group discussed two options.

a) Selecting one monitor for each standpost who lived near
b) Selecting two monitors for each standpost who did not know each other.

The advantage of the first option was that it was only one person to pay. But the second option offered a fallback if one guard was ill and provided for a double control of the money. Some people were concerned that one person alone would be tempted to steal money. The group suggested that the community participate in selecting the guards in a meeting organized by the local administration. The guards should be paid monthly and their payment should be calculated in the price of water paid by the consumer. The group described the tasks of the guards as:

- Controlling the standpost
- Opening and closing the standpost
- Organizing the queues
- Selling tickets
- Counting the money and giving it to the Treasurer every day

The group specified that the tickets should correspond to a volume of water, to avoid people using tickets more than once. The money will be given by the guard to the Treasurer. The Treasurer, accompanied by at least two people should deposit the money in the bank, every Monday. The Bank Account should be in the name of the standposts. EPAL can be paid by cheque and the Treasurer should be able to present the receipts. If the Treasurer cannot account for the money, he should go to prison but after he has paid the community back for any money he stole. The guard will not be able to raise the price because the users will know the price. But the Secretary of the Residents Commission said that for something to be done about an authorized rise in price, somebody will have to complain to the Commission.

Some people felt that the Treasurer should always have a small fund on hand to solve small maintenance problems immediately. The Treasurer will account to the President of the Residents Commission, who in turn answers to the Communal Administrator. The Communal Administrator reports to the Municipal Administrator. Once we, the users, have deposited the money and as long as we have

water flowing and access to money to fix the standpost or the pipelines if there are problems, we do not care what they (the Administration) do with the rest of the money. But if there were significant profits they would like it to be invested in more standposts and in schools.

Local Authorities

The Residents Commission was elected in 1992 with community participation. Their Commission has a President, a Secretary, a Treasurer and three advisers. They have had meetings with the community.

Private Operator

The group thought that a private operator might seem an attractive option but they feared that the private operators would avoid regulation and control and they the users would be the principal losers. They said that the tendency was for private operators to want to make lots of money quickly and they doubted whether somebody who wanted to make a lot of money quickly could provide them with an affordable water supply. The group suggested that a payment of 50,000Kw for 80litres was acceptable

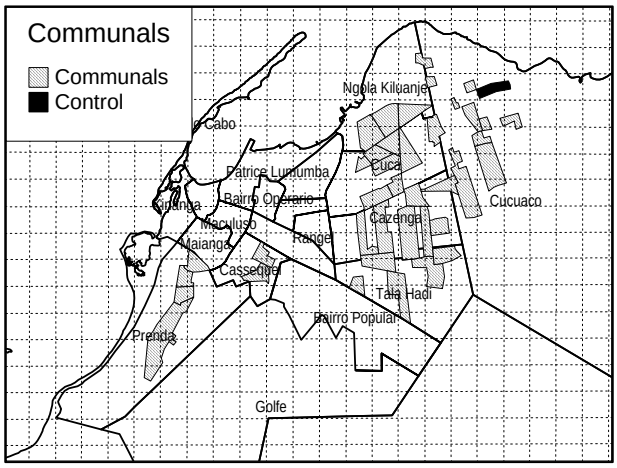
Municipal Area: Cacuaco

Commune: Boa Esperanca 111

Code: Control

Zone Characteristics:

- Density, 250/ha
- Estim. Pop. 9,000
- Av. residence, 7.2 years
- 2% piped connections
- 2% connections with flow
- Price is 4.02USD/m3
- No standposts proposed



General issues

The participants reacted positively in relation to the project proposal and did not mention the doubts in relation to potential implementation that were mentioned by other groups. They did suggest that their bairro should be prioritized and that their pipelines should be built quickly. They did mention that the major pipelines passed by their bairro to bring water to Luanda and the water line to Cimangol also went through their bairro. In spite of having water near them, they were obliged to go full days without being able to afford to buy water to wash themselves or even their children.

Location

The group said that more residents would need to be consulted in order to locate the standposts correctly. But they did say, that once the main waterlines were rehabilitated, each street should have at least three standposts. The group thought that there should be no need to destroy houses; the pipelines could be laid along organized streets. They did not think it reasonable that houses built with great sacrifice by people living in difficult circumstances should be destroyed at all. But if the Government felt this was necessary, then they should compensate the residents whose houses were destroyed. They felt that there was sufficient public land to build the standposts but it would be possible to build a standpost on a private plot and that person would look after the standpost. It would be in his interest because he needs water also. If that person began to exploit the situation and make it difficult for the other users, they would complain to the police.

Illegal Connections

They thought each standpost should have a guard who would also be responsible for detecting illegal connections. But it would be a problem in the area because the population already made illegal connections on the existing water lines. Besides the existing illegal connections, there was a prevailing mentality that what belonged to or was built by the government was state property (e do Estado). Effectively, State property belonged to nobody and could be destroyed at will. Overall the group did not feel that their neighbors had a notion of “collective good” , or that they would be prepared to look after something collectively.

The participants agreed that the standposts would be in everybody’s interest. They suggested that if illegal connections were detected they would inform the police. Some of the participants said that while the community and the Local Administration could manage the standposts, it was the government’s job to regulate and provide inspection services to ensure the pipelines were maintained. They felt that local intervention, at the level of their community, could provoke unpleasant conflicts.
Others said that the issue was straightforward; residents, who overnight appear to have running water should be inspected.

Distance and Time

The men suggested between 100 and 150 meters but the women felt that it should be between 30 and 100 meters to be considered a real improvement in their lives. People were accustomed to waiting at the standposts but they felt that a waiting time of 15 minutes was acceptable. They considered that waiting time and queues were a factor of the number of standposts and the water pressure. If the project provided a good water supply, they would not have to wait long.

Some of the men participants felt that the queues should be organized by the women because they were the ones who fetched water and they were the ones who caused the confusion. But the majority indicated that there should be regulations such as

- First come first served
- Each individual should be allowed to collect a maximum of 100litres at one time.

The ideal opening hours for a standpost would be from 06.00 to 20.00 to facilitate people who sell in the market place.

Water Tanks

Many people in the area had water tanks. Most were filled by water cisterns. Not all of the residents with tanks could afford to fill them. Those who sold water bought from water lorries, sold at 100,000Kw for 20litres but if one bought from the piped water, it cost 100,000Kw for 100litres. But the piped water was primarily for irrigation purposes and people did not frequently sell it. If there was a water shortage the price rose to 150,000Kw for 20litres. The cost of filling a water tank was 12,000,000Kw for 8,000litres. The group did not think that people would give water away for nothing. They commented that, “One would give a cup of water to drink but not a bucket”.

Models

The group approved of the model but they suggested more taps. One of the comments was that the design facilitated cleaning around the standpost. The agreed that the taps would need to be protected from stealing and from children playing; they suggested a grid covering with a lock and key. The group agreed that the taps should be available on the local market. The group discussed the advantages of the system where the bucket could be filled on a person’s head. The men felt that it solved the problem of filling a bucket if one was on their own but the women saw no advantage at all in the system and said that it was a painful way to collect water.

Organization – Monitor

The group suggested that they would have a community meeting. There, the residents would select a water Committee and guards for the standposts. The guard would have to be paid and his tasks would be to

- Control the users
- Clean the standpost
- Open and close the standpost at the correct hours
- Take care of the taps
- Organize the queue.

Organization – Payment

Payment would be daily, using tickets. Each person would pay 50,000kw for a ticket valid only for that day. The residents will be informed of the price and if the guards attempt to raise the price without the authorization of the water committee, the guards will be reported to the police. The Water Committee will have weekly meetings with the population, to review the money collected in relation to the tickets sold. The guards will give the money to the Treasurer of the Water Commission. The Treasurer must live in the bairro. The group identified the President of the Water Commission as the appropriate person to pay EPAL. The group said that they could control the payment of EPAL by checking the receipts provided by EPAL. The Treasurer and the Water Commission would be required to account at least monthly to the users. They thought that the fund for maintenance could stay with the Treasurer, who is subordinate to the President of the Water Commission. When the group discussed the management of possible profits, they agreed that it might be necessary to open a bank account. If there were profits, they identified the following potential community investments:

- Building schools
- A community maternity hospital
- Improve the electricity supply to the bairro.

Local Authorities

The group knew that there existed a local Residents Commission, which had been appointed by the Municipal Administration in 1988. They also knew that the members had changed periodically. But no participant knew any member of the same Commission. When the group referred to authority or external government intervention, they referred normally to the police. They saw a role for the Municipal Administration if there were breakdowns in the water supply; they felt they would need the their support to deal with EPAL.

Private Operator

The reservations this group had in relation to the private operator were similar to other groups

- No existing culture of private delivery of a public service in the interest of the consumer
- Fear that the private operator would not be properly regulated
- Fear that the private operator would corrupt the authorities and exploit the population
- Fear of losing user influence on the service

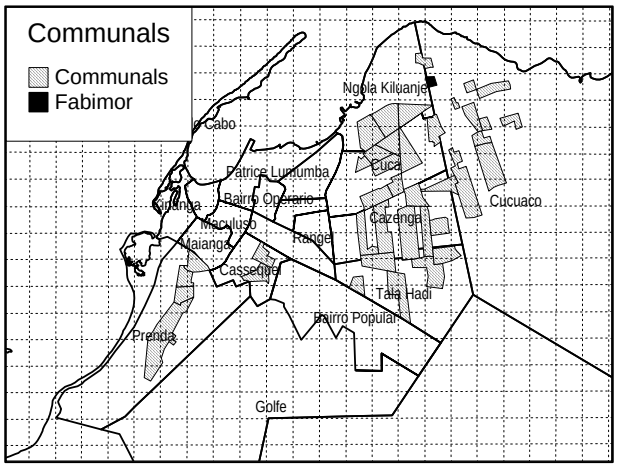
The group thought that the project should attempt community management in association with the Local Administrations first. If that did not work then the government might consider a private operator. But the overall impression given was that they did not consider the private operator as an improvement on their current situation.

Municipal Area: Cacuaco

Commune: Kikolo
Sector 5, Qtr: 1
Bairro: Dala Mulemba
Code: Fabimor

Zone Characteristics:

- Density, 300/ha
- Estim.pop. 4,800
- Av. residence, 3.9 years
- No piped connections
- Price of water, 8.15USD/m3
- Proposed number of standposts, 7



General Issues

The group felt that water supply was a priority intervention for their area. But they did doubt whether a government lead project would actually be implemented. They described the current problems of supply as

a) they were exclusively dependent on tank water which was expensive
b) the water was poor quality and caused a high incidence of diarrhea diseases in their community. They named specific disease problems as cholera and typhoid fever.
c) The water they bought should be boiled for drinking but most residents could not afford to do so.
d) Really poor people in their community were obliged to use well water
e) Children in their community frequently got knocked down crossing the road to fetch water in Kikolo.

The group indicated that they were not the only population in need. They specifically indicated the residents who lived near Acucanor, beyond the railway track as a group who needed an improved water supply.

Locations

The participants suggested that they should have three or four standposts for each block (quarterao). Placing a standpost in one quarterao and expecting other people to walk there was not reasonable. People already suffered by having to walk distances to fetch water. Also poor people were likely to continue using well water if the distances were too great. The group felt that there was sufficient public land available for standposts. They thought that it would be viable to build standposts in somebody's yard. Their opinion was that water supply was such an acute problem that individuals would be prepared to act in the collective good. They also felt that the individual was likely to see the standpost as a benefit for his immediate family. They felt that it would be sufficient to have an agreement with the individual owner before building the standpost.

The President of the Residents Commission said that he had meet with the residents before this meeting to sound out their opinions. He did not feel that it was necessary for the community to be dependent on the goodwill of individuals. He said that there was sufficient public land available.

The group did not feel that it would be necessary to knock down houses in their bairro. They said that they had built their houses, respecting norms and expecting that some day there would be projects to bring services to their bairro. If there was an absolute need to knock down a house, there would have to be a case by case approach to compensating the residents for their houses.

Illegal Connections

The Residents Commission will nominate an inspection team. Before the project begins, the Residents Committee will call a meeting with the residents and explain the benefits of the project. At that meeting we will also explain how people who make illegal connections will be severely punished. Then when the inspection begins to work, people will not be surprised if they are caught making illegal connections and are severely punished. The inspection team will report weekly to the Residents Commission and if there are cases of illegal connections, these will be reported to the superior authorities (estancias superiores). The superior authorities they referred to were the police.

Distance and Time

The sector is divided in blocks. We have five blocks and we would like two standposts per block. That would mean walking about 10 meters. But how far we will walk depends on how many standposts that the project builds. We would be prepared to spend one hour fetching water; at the moment we loose a lot of time looking for water.

The organization of queues would also depend on how many standposts were built. But for each standpost, they suggested a registered list of users. People will always use their own standpost unless it is broken. Using this system, they felt they could organize the queue by registered user and order of arrival. They commented that it would also help if the number of taps on the standposts were increased.

People need to collect water on a daily basis. The ideal situation would be to have access to water twenty four hours per day. But for security reasons, the group suggested that their standpost be open from 05.30 until 18.00hours. The hours, which are busiest, are from 05.30 to 09.00 hours and from 16.00 to 18.00. Women who sell in the market need the standpost open in the evenings. In the middle of the day only children go to the standpost.

Water Tanks

Many people have tanks in the bairro. The group said it was possible for people to offer water to neighbors in need. The price of water is the same if there is a shortage of water because then everybody buys from the same source. If there is a lot of water, then the price depends on much one pays to fill the tank. At the moment water sells at 10litres for 50,000Kw. The group quoted the following prices for filling the tanks:

a) 10,000litres cost 28 to 32 million Kwanzas
b) 6000litre tank cost 15 to 16 million Kwanzas.

Models

Some of the men in the group suggested a new type of tap, which had a detachable lever. They said one could buy it in the market place. They thought that the taps with threads (roscas) broke easily because of the rubber rings. Whatever taps were used they should be available in the local market. They agreed that the taps needed protection. The women absolutely rejected the idea of filling the buckets on their heads; they said it was too heavy and if they had a child on their head it would not be possible. They would also prefer see the water, to make sure it was clean water they were buying.

Organization – Monitor

The local organization of the standpost will depend on the Residents Commission. The Residents Commission will appoint the Inspection Team. The community will elect guards for each standpost but they must be paid because otherwise they can not work. If they are not paid they will not work competently. And if we do not pay them, then we cannot make demands on them. The payment will come from the payments the users make for the water.

The President of the Residents Commission hesitated, explaining that people were complicated. He said, “they were more likely to accept an outsider telling them what to do”. He felt that paying the guards was a simple matter. If the contribution to pay EPAL came to 350,000Kw per month, then each user would pay 500,000Kw per month. That way EPAL got paid, the guard got rewarded and the community did not loose anything either. But he anticipated that some people would complain and would be convinced that somebody was robbing their money. He added that “people are generally complicated. A man lives on a rubbish heap; you point out to him that that is not a good idea to live on a rubbish heap and he suddenly thinks you invented the rubbish heap”. The rest of the group said that he was exaggerating; it was a matter of having regular meetings and explaining to people what was going on.

The tasks of the guards were listed as

- Cleaning the standpost
- Maintaining the standpost and the taps
- Liaison with EPAL
- Controlling the queues
- Controlling the register and the payments
- Informing EPAL of interruptions in water supply

Organization – Payment

They suggested that the payment be monthly. Each user group in a block would be registered and monthly they would pay an agreed price per household. When they paid they would get a monthly card. Some participants thought that this system would be abused by a number of families using the same card but others felt that the guard would know to which families he had given a card. The President of the Residents Commission thought that each family should pay an agreed amount monthly. Some of the other participants did not agree on the basis that families would consume different volumes of water.

The group felt that nobody would agree to keep money in their house so they suggested opening a bank account. They also felt that EPAL should be paid by cheque or by bank transfer. They pointed out that EPAL would give a receipt and if the Commission could not present these receipts they would be called to task by the community. The maintenance money would also be deposited in the bank account and withdrawn when needed. The participants suggested that an acceptable monthly payment was 1,500,000kw per family. If there were profits, they suggested investing it in electricity for the bairro. The President of the Residents Commission thought that an office for the Residents Commission would be a good idea. None of the other participants supported this idea.

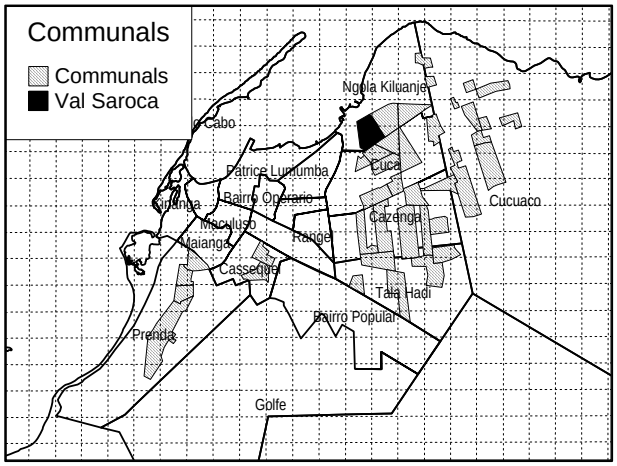
Local Authorities

The bairro elected a Residents Commission in March of 1992. It has six members, President, Secretary, Community Services, Adviser, Assistant Adviser and Treasurer. The President commented,
We recognized that we needed to organize ourselves to defend our interests. When we began to live here initially, we had problems with Socola and Cimianto, two companies who claimed that the land we had built on belonged to them. We elected our Commission and then we went to the then Governor of Luanda, Mr. Kundi Payama. He authorized our occupation of the land and confirmed that it did not belong to the companies in question. Our Commission was then recognized by the Municipal Administration. If we have problems we take them to the Local Administration. If we need to negotiate with EPAL in the future, we will do it through the Local Administration.

Private Operator

There may be advantages to using a private operator but then we will have to pay him the money to pay his workers and to provide him with a profit. If we do it ourselves it will be cheaper and we will ensure that problems are solved quickly.

Municipal Area: Sambizanga



Commune: Ngola Kiluange
Sector: Val Saroca A
Code: Val Saroca

Group Characteristics

- Density, 500/ha
- Estim. Pop. 20,000
- Av. residence 12.2 years
- No piped connections
- Price of water is 15.65USD/m3
- Proposed number of standposts, 19

General Issues

The group was pleased that the Government remembered them but they did hope that the project would reach the point where they would see water flowing in the bairro. They criticized the previous project, which had built standposts when there was no water to flow in the standposts. They hoped that this project would be planned properly and that they would benefit from water. They recognized that the existing standposts did not work because of low water pressure but they thought that the technicians should have thought of that before they built the standposts. They also indicated that they thought that selective decisions had been taken to give water to the area of Comarca and not where they lived. There had been two standposts in 1983, in Sector A and B but these have not worked for a long time. They recognized that though the major initiative was coming from the government, they, the community, would have to participate to ensure the sustainability of the project.

Locations

They said that if there was water flowing in the existing standposts, Sector A would need a further four standposts. There were a number of public places available. They did not think that it was a viable option to build in a resident's yard. The use of a standpost created too much noise and confusion; no resident would tolerate that in his own yard. They also suggested that the standpost be built near drainage valleys to avoid the accumulation of pools of water.

Illegal Connections

The participants thought that the control of illegal connections should not be a problem. People living close to the standpost would be vigilant and would report an illegal connection to the police or the Local Administration. They in turn would react because policemen and Local Administration employees live here also and need water in their homes. Individuals cannot be allowed deprive the population of water.

Distance and Time

The discussed the distance and agreed that there was no point asking for the impossible, so they suggested a minimum of 20 meters and a maximum of 200meters. The issue of how long they might wait to collect water depended on the number of standposts built and the water pressure. Currently, they sometimes waited two and three hours without getting water. They thought a wait of twenty minutes in the future was acceptable.

The group said that people needed to fetch water daily. The women suggested that the standpost be open from 06.00 to 19.00. The women emphasized that it was important that women coming home from the market in the evening should be able to fetch water.

The group felt that there would have to be rules on how to manage the queues and the guard on the standpost would enforce the rules. They suggested that each individual be allowed fill a fixed number of recipients. But they thought that the problem of queues was a function of poor water supply. If there were enough standposts with good water pressure, there would be no problems with queues.

Water Tanks

One of the participants had a tank of 15,000litres. Many other neighbors had water tanks and most sold water. Other participants described the sale of water as "helping the population". Some residents could no longer afford to fill their tanks. The price of water depends on how much the tank owner paid to fill his tank. They quoted recent prices as

- 15,000 liters for 50 to 60 million Kwanzas
- Two buckets of 10liters for 150,000Kwanzas.

Previously, one could buy 15,000 liters for 25 million Kwanzas; then two buckets of 10 liters cost 50,000 Kwanzas.

Models

The group recognized the model from the existing non-operational standposts in their communities. They agreed that the taps be locally produced and that there be protection and a lock for the valve box. They also thought that the taps should be removed daily. The women disagreed with the system for filling the buckets on their heads – they thought that it was too painful. They would prefer that somebody help them put the bucket on their head when it was full.

Organization – Monitor

The group discussed the qualities necessary to be a good standpost monitor. It was clear that they considered it a psychologically demanding job. They said that people had a tendency to leave their homes in bad temper because they had a row with their spouse and then take it out on the standpost monitor. So they felt that it was essential that the monitor be a calm and collected person (ter mente fresca) who would not be tempted to reply crossly to provocation. The person chosen would have to recognize that this was a responsible job and that they were looking after the collective good. The tasks suggested were

- protection of the standpost
- cleaning the standpost
- organizing the queues

They thought that it might be a good idea to have two appointed monitors for each standpost. They suggested that the monitors be selected at a public meeting with the community. This would ensure that the users knew the monitors and were aware of the rules for using the standpost.

Organization – Payment

One of the members of the Residents Commission said that the Residents Commission was studying the possibility of paying the standpost monitors. The rest of the participants proceeded to discuss the payment of the monitor as if had been already agreed. They thought that the monitor's salary should be included in the user payments. The monitor would report to the Residents Commission who would in turn report to the Communal Administration. When the group were questioned about what they would consider a just price some participants suggested 90 liters (three recipients of 30 liters) for 50,000Kwanzas. Some of the men said that it was not possible "to name the baby in the mothers abdomen" (não podemos dar nome a uma crianca que esta na barriga). They said they would prefer wait until they saw water before they decided what they were going to pay for the water..
The majority of the group thought that payment should be daily to avoid misuse of cards and people refusing to pay at the end of the month. Tickets with a date would control the daily payments. They also thought that 50,000Kw should be a minimum payment.

The group agreed that the control of the price depended on the population being correctly informed. It would be the job of the Residents Commission to be informed about any changes in price and they in turn would inform the population. If the monitor raised the price without authorization, the Residents Commission would inform the Communal Administration, who would authorize the replacement of the monitor.

Some of the participants said that the money should be left with the Coordinator and others said it should be left with the Treasurer. There was no real consensus on how money could or should be managed. Some participants referred to incidents when Treasurers had stolen community money. They suggested that the monitor pay EPAL but that he make the payment in the company of the Coordinator of the bairro. If money was misused, the person who did it might even go to prison if they could not explain themselves.

When the group discussed money for maintenance they suggested that this money be deposited with the local administration. Each deposit should have a deposit slip indicating the date, the amount and the people involved. Each month, the monitor and the Residents Commission would account to the community at a meeting.

If there were profits, they could be invested in other projects promoted by the Residents Commission. Some suggested that rubbish removal had a certain priority, particularly where women sold in small markets. The other participants immediately agreed, saying that rubbish accumulation was causing health risks for their children.

Local Administration

The Local Residents Commission has fifteen members. It was re-elected in 1997. The existing Residents Commission was called to the Communal Administration and the new Commission was elected without the participation of the population. There is a tight liaison (estreita colaboracao) between the Residents Commission and the Communal Administration and this facilitates the flow of information. There are community meetings to deal with important issues. Complaints to EPAL would be channeled via the Communal Administration.

Private Operator

The group discussed advantages and disadvantages. They were open to the idea on condition that

a) the licenses were awarded locally
b) That they the consumers would have a say in the price to be applied
c) As long as there were no cuts in water supply

Overall they felt there was a difference between Benguela and Luanda; that private operators might be more likely to be honest in Benguela. They said that the tendency in Luanda was to want to make money quickly. In the event that there were problems with the private operator, they could complain to the Communal Administration but overall they felt it was better that the standposts be managed by the users in collaboration with the Communal Administration. The thought that the private operator might despise their 50,000Kwanzas and simply opt to sell to people with more money. They also felt that if there were a private operator, there would be no way of looking after people with no money whatsoever.

Municipal Area: Sambizanga

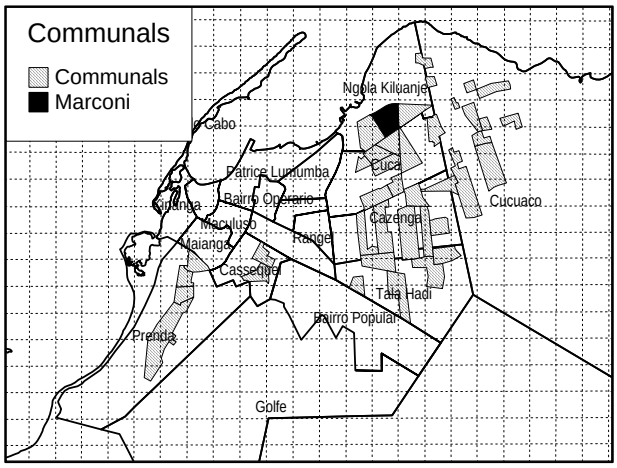
Commune: Ngola Kiluanji

Sector: Central, Zona 16

Code: Marconi

Zone Characteristics

- Density, 500/ha
- Estim.pop. 32,500
- Av. residence, 19 years
- 13% piped connections
- 3% connections with flow
- Price of water, 12.28USD/m3
- Proposed number of standposts, 23



General Issues

The participants were very pleased to be invited to a discussion about water. They interpreted the presence of the research team as an indication of government interest in the reality lived by the population. They felt that if the research was being done, then the government must discuss the problems of the population. Their zone includes four blocks (quarteroes). This area had one standpost in the past and the population used to collect water inside the confines of the Fina Oil Refinery. Fina decided to build another standpost outside the industrial installations but this is the only standpost operational in the area and it is untreated water. The area would need at least four more standposts. Too many people use the Fina standpost so there are long queues and lots of arguing and confusion. The soldiers who guard the Refinery intimidate the users especially after 18.00 hours when women who are home from the market need to fetch water.

The population of S. Pedro de Barra also uses the standpost. That means that people start queuing at 03.00 in the morning. One woman commented that, “If you only go at 07.00 hours, you might still be there at 16.00 hours”. Luckily, the Fina standpost rarely breaks down and is only closed for maintenance and repair. But the women thought that many of the illnesses and pains suffered by women and girls was due to carrying heavy buckets of water long distances.

Location

The group felt that there were lots of available sites for standposts. One could start with the old sites where the standposts have been without water for at least fifteen years. The appropriate places are public places. There are some non-planned houses in the bairro but the group felt that overall there were available places. They did not think that it would be viable to build a standpost in a resident’s yard. They agreed that the need for water was great but the confusion caused by lots of neighbors collecting in one’s yard to fetch water would be unbearable. If the owner of the yard took a position, which was considered negative by the population, they might knock down the standpost or even damage the owner’s property.

They did not agree that houses should be knocked down. They agreed that if constructions were illegal, the government would be entitled to knock them down but they still did not think that this was the right thing to do.

Illegal Connections

Following the construction of the standposts, the population would be informed at a public meeting of the proposed sanctions in the event of residents making an illegal connection. Residents who live near the standpost can be nominated by the Communal Administration as Community Inspectors. Illegal connections are normally done at nighttime and if people were detected, they would be reported to the police and the Local Administration. The group agreed that it was the job of the authorities to sanction the culprits.

Distance and Time

The group suggested that an acceptable distance was 50 to 100 meters but the distance to walk would depend on the number of standposts built in the area. The women said they were prepared to wait an hour at the standpost because at the moment they sometimes had to wait most of the day to get water. They said that this caused disputes in their homes because their husbands suspected their wives of having other reasons to want to be outside the home. They also said that their daughters were subject to abuse by the soldiers guarding Fina. One woman saw a girl being raped but could do nothing because

the soldiers involved were armed. The participants said that soldiers sometimes put grenades around the taps just to prevent the population using the standpost. The Fina standpost was controlled in the past by a community monitor appointed by the Communal Administration. The soldiers threatened this man and he desisted.
The size of the queues depends on the number of standposts. If there are a sufficient number of standposts with water pressure there will be no problem with queues. One of the contributory factors to queues is that because there are so few standposts, users tend to bring large numbers of recipients to the standpost and want to fill all of them before they allow somebody else use the standpost. The participants thought that if there were an adequate number of standposts they could regulate that users could only fill a specified number of recipients at any one time.
The group suggested that the standpost should ideally open from 05.30 until 21.00, every day. The reason that it was necessary to open every day is that many people have a small number of recipients. The busiest hours would be from 05.30 to 08.00 and from 16.00 to 18.00.

Water Tanks

Only one of the participants had a tank of 5000 liters and it is for house consumption. Many other people have water tanks in the area and sell water. The Communal Administration did a study (levantamento) recently of all the tanks in the area. The selling price of water varies between 50,000 Kwanzas for 10liters and 150,000Kwanzas for 10 liters when there is a water shortage. There are a number of residents who have piped connections authorised by EPAL. These connections are supposed to be for consumption only but these people sell water also. Some of the participants said that many residents with tanks could not afford to fill them. One of the participants confirmed that she had a tank, which she has not filled for two years.
People fetch water on a daily basis. If there are heavy rains, many people collect rainwater and the number of people at the standpost is reduced. The group thought it unlikely that people would give water away for nothing. They thought it might be possible for people to give water to a close family member but even then they would only give in small quantities such as a bucket of 10 liters.

Models

They suggested that the taps be locally produced and protected. The group did emphasize the importance of community education but they felt that there was always the possibility of non-users stealing the taps or breaking them. Some suggested that the taps should be removed every evening. The local community policing of the standpost would be done in collaboration with the local administration.

Organization – Monitor

The President of the Residents Commission would call a meeting with the community. Guards would be selected who live near the standpost. Some participants thought that the selected guards should become member of the Residents Commission. The group all agreed without discussion that the guard should be paid. The payment would be included in the user contributions. The tasks defined for the guard were

- Protection of the standpost
- Organizing the standpost
- Cleaning the standpost
- Maintenance
- Organizing repairs

Organization – Payment

The group agreed that payment would have to be daily. They thought that monthly payments would be too difficult to control. Regular users would avoid payment and people from outside the area are also likely to fetch water at the standpost. They suggested a daily rate of 100,000Kw, which would be controlled by the tickets sold.
The group felt that there was little risk of the guard raising the price without authorization if the Residents Commission kept the users informed of the price and other issues. But if the guard tried to do this he would be replaced.
The money collected by the guards will be given to the President of the Residents Commission; he in turn will deposit it in the Local Administration. The payments for EPAL and the guards will be managed by the President of the Residents Commission. Most participants thought that it would be better if all the money were deposited with the Local Administration first. The President would then make necessary payments by withdrawing the money from the Local Administration. The President will then meet

regularly with the population and inform them of the status of the fund, the payments made and the money remaining.
When the group was asked what a fair price was for water, they initially said free water but they recognized that EPAL, as producers of the water, should be paid but did not specify an amount.

They thought that profits could be invested in other projects such as the construction of schools.

Local Authorities

The Communal Residents Commission exists since March 1997. This Commission has 30 members who were indicated by the Provincial Government. They were installed during a Meeting of the Municipal Administration of Sambizanga. At the level of the Commune, each Sector has a president who reports monthly to the Administration. The group felt that any complaints for EPAL should be directed through the Local Administration.

Private Operators

The group did not approve of private operators. They felt that it would be impossible to regulate the price and the operator could afford to corrupt the inspectors. If they were forced to accept private operators, they suggested that the licensees be authorised at the level of the Municipal Administration.

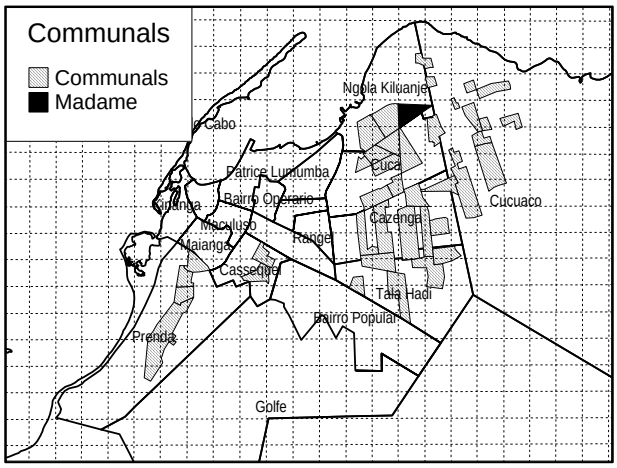
Municipal Area: Sambizanga

Commune: Ngola Kiluanji

Sector: Sao Jose
Bairro: Frescura
Code: Madame

Zone Characteristics

- Density, 200/ha
- Estim.Pop. 6,200
- Av. residence, 14,5 years
- 56% piped connections
- 40% connections with flow
- Price of water is 5.76$US/m3
- Not recommended for standposts



General Issues

The group were pleased that the government was considering extending the water network to the peri-urban areas. But some suggested that since they were doing it, they should borrow enough money to do it properly in one initiative. They suggested replacing all the main waterlines, such as the one on Rua Direita and build a new one on Rua Socola. Some felt that standposts were not the answer; that the project should ensure sufficient production of water to feed household connections. Then less standposts would be required. If the project could only supply standposts at the moment, then each street needed at least four standposts.

One participant said he had lived in Uige until 1984. The city had piped water and people did not have get involved in confusion at standposts. He felt that the current situation in Luanda was a disgrace for a capital city and the government should be ashamed.

Some of the men also thought that the priority was to ensure the capacity of EPAL to produce and distribute water. Extending the network made little sense if there was not going to be sufficient water to fill the pipes.

Location

There are sufficient public places to build standposts. “When the construction team begins to work and they know the number of standposts involved, they can contact us and we will inform the Coordinator. He will show them the old sites and new ones can be located”. The group felt that there would be no space problem but they added that if needed, it would be possible to build a standpost in a resident’s yard. They would not build in anybody’s yard but would select an understanding person (uma pessoa de boa compreensao). They said that the person would sign an agreement with the Local Administration. If the resident, owner of the yard did not respect the agreement, he would be reported to the police.

They rejected completely the idea of knocking houses; they felt it was the job of the engineers to place the water lines where there were no houses.

Illegal Connections

The participants felt that the major issue here was the complicity of the EPAL workers. They also felt it was an example of a situation where the regulations needed to be clear and the authorities needed to assume a position. From the point of view of the community, they could inform the local authorities of connections made but it was up to the authorities to act on the information. They thought it unacceptable that individuals should be allowed compromise the water supply of the community. If the Local Authorities did not react they could report the problem directly to the police.

They also emphasized the importance of educating the public on the use of the standpost before it began working.

Distance and Time

The group left the decision to the women who suggested that a distance of 50 meters was acceptable to walk. When the issue of how long people were willing to wait to fetch water was discussed, the group returned to their idea of house taps. They said that if there were house taps there would no problems organizing and looking after standposts.. But within the context of a project where there would only be standposts, then they have to build sufficient numbers of standposts, with a daily water supply with good pressure.

Water Tanks

A significant number of people have water tanks. Most are supplied with water lorries. Most sell water but some can no longer afford to fill their tanks. The group emphasized that it was not the tanks that were causing the problem but rather the poor water supply that gave rise to tanks. If there were a sufficient number of standposts, people would not buy water in the tanks.
The group quoted 15 million Kwanzas as the current price for 10,000litres. The water was retailed at 50,000Kwanzas for 10 liters.

Model

The approved of the model but suggested that there be more taps. They also suggested the taps, “where the top part is removable and the tap only opens when you put the iron rod in place”.

Organization – Monitor

The men participated most actively in this conversation. They suggested that twenty families use a standpost. The standpost guard should have a card for each family and as the family collects water the card is filled. The cards must be numbered consecutively; then we can know that numbers 1 to 20 collect at standpost number X and numbers 21 to 40 collect at standpost Y.
They suggested that the Coordinator would call a meeting with the community. They could select individuals to guard the standposts. They agreed without discussion that the guards should be paid and said that without the guards, the standposts would be destroyed. The payment for the guards should come from the consumer contributions.
They described the tasks as

a) opening and closing the standpost
b) Preventing abuses at the standpost, especially preventing children from playing there
c) Maintaining a tight control of the families who collected water and their payments
d) Controlling the supply of water. If there are days when water does not flow, they must note it.

Organization – Payment

This topic caused heated debate in which the women participated. There was no real consensus on the issue. The suggestion for debate was 50,000Kwanzas as a daily rate but with a maximum allowance of 200 liters for that amount of money. They did not think that it was either probable or possible that the guard would raise the price of water without authorization. If he did, they would simply replace him.
The guard would deposit the money daily with the coordinator and receive a receipt. They emphasized the importance of the receipt; otherwise they said you would have the guard saying that he had given the money and the coordinator saying that he had received no money. When the group discussed paying EPAL, they introduced the idea of a Commission, which seemed along the lines of a Water Commission. They said that they would create a Water Commission if the project came to pass. The President of the Water Commission would pay EPAL. (They currently had an Electricity Commission, which had organized the supply and maintenance of supply for the bairro. They were happy with the way their Electricity Commission worked).

Local Authority

The group maintained that they had no Residents Commission. The Communal Administration says that S.Jose does have a Residents Commission).

Private Operator

They disapproved of a private operator. They thought that EPAL would need to be providing a much better and regular water supply before they considered offering licenses for private management.

Municipal Area: Cazenga

Commune de Hoji Ya Henda

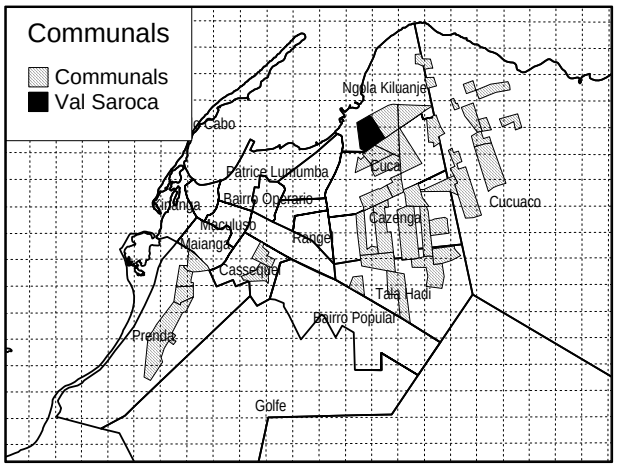
Sector 15A

Cazenga, adjacent to Ngola Kiluanji.

Code: Val Saroca

Zone Characteristics

- Density, 500/ha
- Estim. Pop. 20,000
- Av. residence 12.3 years
- No piped connections
- Price of water is 15.65USD/m3
- Proposed number of standposts, 19



General Issues

The group expressed clear doubts that the water project would come to pass. They said that many had lived there for over twenty years and the government had never shown any indication of recognizing their needs. They also referred to the standposts, which had been built above their area; those standposts had never been operational. So they explained that they had little reason to believe in this project.

Locations

There were not many public places available. When it came to a point where the technical team would begin to work, the population could indicate the available places. They did not think that it would be a good idea to have the standposts dispersed over large areas. It would make the organization (control) more difficult. It would be possible build in a resident's yard. It would be necessary to negotiate with that person and have a signed agreement, which would be deposited with the local administration. The standpost would be in that persons interest also. If there were problems afterwards he could be reported to the Local Administration who should sanction him. An older person who lives on his own might be happy to give up some of his yard. The group thought that placing the standpost in somebody's yard had certain security advantages. But the group underlined that they could only identify specific sites when they knew where the pipeline would run. They explained that the standposts would have to be placed along the main roads. It would not be possible to lay the pipes along the little alleys. (becos)

They thought that it was unlikely to find houses on water lines in the area. One, because when people began to build there was no existing infrastructure and secondly because "people are not stupid enough to run the risk of finding themselves living in the middle of a lake". The latter comment refers to the high risks of the water pipes bursting.

Illegal Connections

Some years ago it was common for people to make illegal connections but then the water stopped flowing altogether. But the majority felt that the bairro was more established and organized now and that it would be difficult for the majority to allow a minority deprive them of their water supply. In previous times, people made these connections at nighttime. Now the Residents Commission has the Civil Defense Brigade and making an illegal connection would be more difficult. One participant added that it would also depend on how the project was designed; the water pipes should be deep and difficult to break into. Some people in the area had legal connections from EPAL and they wanted to know would these residents be able to renew their contract when the new pipelines were laid.

Distance and Time

The participants agreed that 50 to 100 meters was an acceptable distance to walk. They thought that their sector should have at least five standposts. The waiting time and the queues are both related to the number of standposts and the water pressure. If there are sufficient standposts with water pressure, we will have no problems organizing the queues. If there are any problems, the Residents Commission will refer them to the Local Administration.

The opening hours suggested for the standpost were 05.30 to 10.00 and 15.00 to 18.00 hours, daily.

Water Tanks

Many people have tanks that they can not afford to fill. Those who fill their tanks sell the water. It is not possible for people to give water away for nothing, even to close family. One man commented, " Our wives will not even let us take a bath twice a day and if our clothes are dirty, we do not dare complain". The price of water depends on the availability. The current prices are

a) 20 liters for 100,000Kwanzas
b) 5000 liters @ 25,000,000 to 30,000,000 million Kwanzas.

People fetch water, more in relation to their available money, rather than need. "If you have 100,000 Kwanzas you fetch 100,000 Kwanzas worth of water and if you have 200,000 Kwanzas you fetch twice that amount.

Models

The participants approved of the standpost model and they thought that the drain water could be used for irrigating a garden. They preferred the idea of nationally produced taps because of their availability. They did not approve of the system of filling the bucket on the head.

Organization – Monitor

The Residents Commission will select guards. They suggested people who are ex-combatants, who have no further preoccupations in life and need a job. The group felt that the guard should receive a stimulus, indicating that it should be worthwhile but less than a full time salary. Without payment, the person would not have a sense of responsibility.. The group suggested that this person should work for one month first and then the amount of the stimulus could be decided in function of his performance. The tasks of the guard will be to open the standpost during the opening hours, clean it, collect the payments and organize the queues.

Organization- Payment

The payment must be daily. They considered monthly payments difficult to control and collect. The group suggested 100,000Kwanzas as a daily rate. They felt that this would cover the costs of paying EPAL and the guard. They thought it would be difficult for the guard to raise the price. Everybody using the standpost would know the price and he would be reported to the Local Administration, if he abused his position. Then the administration would replace him.

The group suggested that the money be given daily to the treasurer of the Residents Commission. The President of the Commission will pay EPAL. If there are problems with the payment of EPAL, we will ask the President for an explanation. The group commented, " The Treasurer is a person whom we all know and he has his own business. Often he is the one who helps the community. He will have no need to steal our money and we trust him". If there are profits we will invest it in other projects.

Local Authorities

Our Residents Commission is very active. They meet monthly. A copy of the minutes of the meeting is sent to the Communal Administration. We have the capacity at the level of the Residents Commission to organize the water program in the bairro.

Private Operator

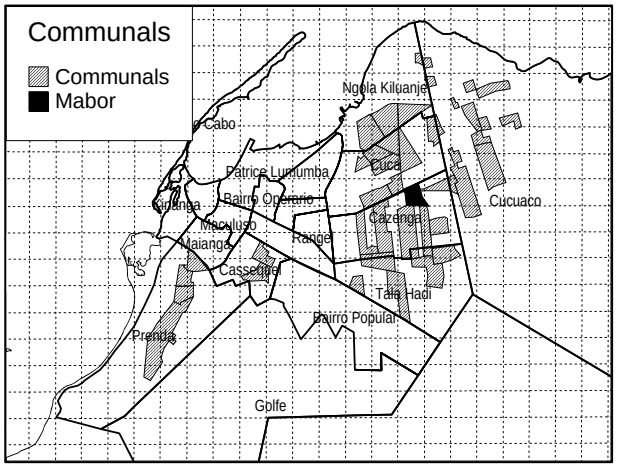
They were unhappy about the idea of a private operator because it was not usual in the water sector and they were not convinced that it would work. They felt that it was likely that conflict would develop between an external private operator and the community.

Municipal Area: Cazenga

Comuna: Cazenga, Zona 18, Sector 21
Bairro: Gamboa ou Sonefe
Code: Mabor

Zone Characteristics

- Density, 400/ha
- Estim. Pop. 18,400
- 20% piped connections
- 10% connections with flow
- Price is 5.87$US/m3
- No standposts proposed



Background

The focus group was held in the café (lanchonete) of one Sr. Gomes. Sr. Gomes lives in a huge yard and was clearly considered as the Coordinator by the participants; their attitude to him was also positive and trusting. He has lived in the bairro since 1974. Another individual, Pedro Albano Pinto also presented himself as the President of Sector 21. This gentleman said the people elected him but the participants never mentioned him during the focus group and none of them spoke to him after the group. Sr. Gomes explained privately that Mr. Pinto was "nominated" by the Municipal Administration as the President of the Sector and he in turn had nominated Sr. Gomes as his Special Advisor. Mr. Gomes said that he tried to avoid the issue of who was the real representative and he publicly followed the official line but that he was the "people's person". But is was apparent that Mr. Gomes, by having the focus group in his yard, had achieved a certain degree of one-upmanship over the President and the participants were rather obviously in favor of Mr. Gomes. Mr. Gomes had not selected the participants. The research team had randomly selected them. In some cases those selected had sent other people in their place or brought other people along because they considered the topic important. Neither Mr. Gomes nor Mr. Pinto participated in the focus group but were consulted afterwards by the researcher. They informed the researcher that Sector 21 had a registered population of 23,000 people but that was an underestimation. The Comuna of Zona 18 had over 450,000 people registered as living in the area. The President said that he had been elected in 1995 and his position confirmed by the Municipal Administrator in 1998. He used the word "reconduzido" to define his re-appointment.

General Attitude:
There were more women than in other previous groups but the women were generally more skeptical about the possibility of the "government" ever actually following through with the project. (Note: this focus group was held on a Monday, the day that Roque Santeiro market is closed for cleaning). The men, as in other groups, were willing to maintain an open mind until they saw what would happen. The women said that they were always "listening to government people talk about what they would do but they never did anything". They did not indicate the feeling of marginalisation as in some other bairros e.g. Rocha Pinto. They just felt that the government was unlikely to improve the lot of the "people in general".

The people in their bairro often walked quite long distances to collect water, to places like

- Quartel dos Cubanos: 2-3 kilometers
- Sonefe: 3 kilometers
- Zamba 1: more than 3 kilometers.

Police harassed the drivers of the water lorries making the water shortage more acute in the bairro. The President of the Sector confirmed this information in a subsequent interview. They complained that since the women sold in the market place their children had to walk long distances to get water.

Locations for Standpipes
The area was very large with lots of space but most of the land belonged to somebody. The group felt that when the number of standposts was decided that the project team would suggest places in the bairro, which would then be confirmed by the Coordinator (Sr. Gomes). If standposts need to be built on private land, then the community of users would have to contribute to buy the land from the owner. The owner would also officially transfer the title of the land.
Standposts could not be in places where there was a lot of traffic – again the group mentioned their concern for the children who fetch water.

They unanimously discounted the possibility of knocking houses down to build the water network. The said that the project team would have to find thoroughfares where there are no houses. People who have invested their own money cannot be expected to leave their house and they could not trust the "state" (estado) to properly compensate them.

Illegal Connections

The group was not able to develop a clear system for prevention of illegal connections. They suggested

a) organizing a commission

and some of the men said that the Commission could even be organised from the group of participants, because they already understood what the project was designed to do.

b) the same people then said that the Commission would have to include strong people who could command respect.
c) They all agreed that anybody who made an illegal connection should be punished but they did not suggest any particular authority, which should be responsible for applying the sanctions.

One woman said that people cannot always be selfish and they must act sometimes in the greater good. The rest of the group did not seem to think that that was a likely to be a prevalent attitude. When questioned about an existing Commission of Moradores, they said that they had heard that there had been new appointments. They used the words "appointed" and "elected" interchangeably. The participants had never voted in an election for local representatives nor did they know anybody who had voted in such an election. They did say that they had no knowledge of anything that had ever been achieved by the Residents Commission but seemed to feel that the discussion group was a step in the right direction and were giving Sr. Gomes the credit for "bringing" the discussion group to them. Throughout this discussion, the President of the Sector was never mentioned.

Distance and Hours of Service

The distance between standposts will depend on the number of standposts to be built in the bairro. The group did not mention pressure as an issue but they did say that if the supply were sufficient to meet demand there would be no delays at the standpipes.

The group unanimously felt that a water collection time of thirty minutes was acceptable. They also spontaneously indicated that organizing the queue would be very important. The issues they underlined in relation to queuing were

- The number of buckets (10L) or jerrycans (20 or 25L) that one person could fetch in one place at one time in the queue should be specified. They said that women taking every single recipient they owned in the house and filling it caused major delays. This means that nobody else gets access until that one person has satisfied her needs. They suggested that people be allowed to fetch only one recipient of 20L at one time, joining the queue again for more water. They did feel that this might be somewhat difficult to introduce and suggested that the Coordinator (Sr. Gomes) call a meeting with everybody and explain the new system. They felt that this kind of public education meeting would be very important and that the Commission from the bairro would need to have the support of a higher authority.
- They also mentioned that children often get pushed aside for adults and they suggested that there be two queues, one for adults and one for children

Water tanks and storage

The group felt that the standpost should be opened from 06.00 to 12.00 and from 14.00 to 17.30. They needed a daily water supply because most people kept water in recipients of 20 liters and needed to fetch water every day. If there cannot be a daily water supply, the group suggested that there be connections made to water tanks rather than building standposts. They also felt that consideration should be given to allowing some connections to water tanks so that when there were interruptions in supply they would have water in their bairro. One woman wanted to know if residents could apply for domestic connections.

Organization – Commission and Monitor

The men said that they could organize a Commission; the women did not agree or disagree. There was no clarity about what a Commission would do. The men then said that each standpost could have a group of women controlling it, each with their appointed day. One man said that "we could not have a man in front of the tap trying to control women". The women said,

That there were no women available to do that work, even one day a week. It was the women who earned the income for most of the households and they did it on a daily basis. They could not afford to stop selling for whole days on a regular basis. They all needed to be out of their homes at the same time. One never saw women wandering around the bairro doing nothing in the middle of the day but there were lots of men doing nothing. *(E dificil encontrar uma signora toda a dia em casa mais ha signores a girarem na rua).*

At this point in the discussion the women insisted that the men had to find a solution to looking after the standpost. When the project is working and the standposts are being built, the Coordinator (Sr. Gomes) will meet with the men in the bairro and a schedule can be worked out (escala). When asked whether the monitor should be paid or not, they said it depended whether the water was free or not. If the water were free, then they would also look after the standpost on a voluntary basis.

It was explained that EPAL had costs of production and would charge for the water. They unanimously felt that this was reasonable. They then suggested that if EPAL charged 50,000Kw for 20liters, they would then charge 55,000Kw for the same amount, to pay the monitor. They did not consider it a salary, rather a stimulus (uma gaseosa no fim do dia para ele não ficar desanimado). When asked if people would agree to spend their entire day at the standpost for that amount of money, they said that they would have to discuss it with the individual selected first. The tasks suggested for the monitor were:

a) Open and close the standpost
b) Keep the standpost clean
c) Organize the queues

Organization - Money

They currently pay 50,000Kw for 10 liters when there is no shortage of water in the bairro. The prices they suggested in an improved water project varied from two buckets of 20liters at 50,000Kw to five buckets of 10 liters for 50,000Kw. They agreed after some discussion that payment would have to be daily. Only one person wanted a monthly payment system like payment for electricity. The others said that water and electricity were not the same kind of services. If an individual did not pay his electricity, his connection was cut. If too many people did not pay at the standpost, the community would suffer. They also said that an individual could fetch water throughout the month, not pay and then go and use a private tank or another standpost. They said that there would be no difficulty controlling the price of water once the price was public knowledge. If the monitor tried to raise the price, they would simply sack him.

They had great problems deciding how to manage the money of the standpost. They said that, “poor people have need of money and are greedy”. (Os pobres tenham muito olho no dinheiro e sao ambitiosos). They felt that only rich people should be trusted with dinheiro; if the rich person dipped into the fund they could always pay it back. Poor men are more likely to drink the money. (O dinheiro vai no Kisangwe). They said they would not even trust each other to take the money to pay EPAL. It would have to be some other trustworthy person. They suggested Mr. Gomes or somebody else like him. They felt that there were trustworthy people in their bairro but that they did not number among them, because they were poor.

One participant, a woman, had clear ideas about how a community could organize themselves to manage money. She suggested that they form a Water Association, with a President, Secretary and Treasurer. The monitor would use tickets, deposit money with the treasurer. The treasurer would hold a cashbook and control all transactions. These officials of the Association would report to the community. She explained her idea in Kikongo. The others did not disagree with the idea but it was novel. They emphasized that whatever the system it would have to be functional at the level of one standpost and its respective users. They seem to suggest that if the organization were too big and anonymous, it would cease to respond to their specific needs.

At different points in the discussion, they suggested that money for repairs could come from the fund created by daily payments or from consumer contributions at the time of the breakdown. They did explain that the community themselves could repair minor breakdowns like broken taps.

Model

Like some other groups, they said they would prefer the more sophisticated imported taps but given that there was no provision to import spare parts, they would then opt for the taps that were available in the market place. The approved of the design features of the standposts shown. They thought that the standposts could offer the two types of filling facility, on and off the carrier's head because some women and children would not have the strength to hold the bucket on their heads while it was being filled.

Private Operator

When the issue of a private operator was raised there was an absolute consensus, without discussion that it was an unacceptable method of giving them a water service. The reasons they gave were

a) They already had a private system, which was poorly supplied. So if the project wished to provide public water through private operators then they should make connections to the existing tanks in the neighborhood. That would cost less and they could have more connections with storage capacity.
b) An external private operator would exploit them and there would be no mechanism to control this exploitation. They would end up buying water from private tanks that had to transport the water into the bairro in preference to paying money to an outsider over whom they had no influence.
c) The profit would end up in the pocket of somebody who did not even live in the bairro

But the main concern was regulation of the quality of service. They felt that the private operator would end up paying EPAL a fraction of what he earned, not providing them with the service required and not accounting for his actions to anyone.

Local Government

The group were negative towards a system which would be managed by the local administration, either Communal or Municipal. They said that if it depended on the Administration, they were likely to run into problems with payment of EPAL and money for repairs. The group said they preferred to assume the responsibility themselves of paying EPAL. In the subsequent interview with the President of the Sector, he stated that "the Municipal Administration had decreed that the they should and would manage any funds accruing from the water supply". When questioned about what they would do if there were problems with the water supply, they said that the person responsible for the standpipe (monitor) would deal directly with EPAL at the provincial level (EPAL central) and report to the Commission. At this point, they emphasized the importance of the community support for the standpost monitor. The considered that one of the roles of the Residents Commission was to provide of moral and concrete support.

Municipal Area: Cazenga

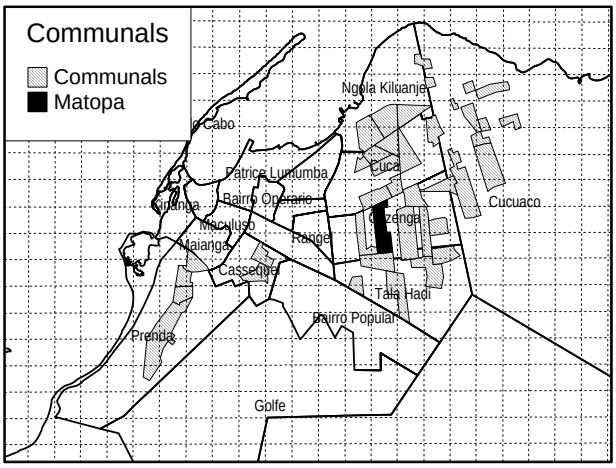
Commune: Zona 18

Bairro: Cazenga Popular, Rua de Quatro Avenida

Code: Matopa

Group Characteristics;

- Density, 500/ha
- Estim. Pop. 48,500
- Av. Residence, 14.5 years
- 40% piped connections
- 37% connections with flow
- Price of water is 5.65$US
- No standposts proposed



General Comments

Initially the group were somewhat aggressive and reluctant to waste time talking about government projects. They gave the example of the electricity project, which had been begun in 1996. A foreign company initiated the work; the company began to build the pylons but the government only paid the first installment so the bairro has been left with ghost pylons and no improvement in electricity supply.

The participants said initially that they were not willing to pay the "State" for water. They accept to pay Joe Blogs (Ze Ninguem) who sells from his tank, that is his job and he is making life easier for his neighbors but not the State. The group questioned the future of legitimate household connections. Would these householders be allowed to renew their connections? They felt that the people with water tanks sold water expensively and many of them had illegal connections. Those with illegal connections were getting water for themselves, not paying EPAL and making money on the basis of other people's needs.

The community had organised a meeting some time ago to solve the problem of a standpost which had been built but which had stopped working. The participants at the meeting had said that

a) that there were too few standposts in the bairro
b) that the residents were prepared to contribute to building standposts if there was water
c) that a just price was three jerrycans (20litres) for 50,000Kw

But others said that there was no point in contributing money because the standpost would only last a number of months after being built because of the low water pressure. They feared that they would waste their time building the standposts and end up buying expensive water as usual. Many more people have come to live in the bairro and they need bigger main pipes with better water pressure. Until that happens there will be no improvement in the water situation.

During the initial discussion the women said little. When asked what they thought, the women explained that the men could talk freely (a vontade); that, they the women, would offer their opinions when the men's opinions did not reflect reality. (quando os homens não sao bem dentro de assunto). During the discussion, the women intervened on a number of occasions to disagree with the men's opinions and the women's opinions were always the final group conclusions.

Location for Standposts

Every bairro or Sector has a Coordinator. This person knows where the old standposts used to be. There is

No need to ask the people (povo); the coordinator can do the work of indicating appropriate place for standposts. There was plenty of public space available; they did not feel that there was any need to discuss the placing of standposts on private land. They did describe instances where people had illegally built on public land, which had been for standposts. There was one person who had built his house where a standpost had been but he was afraid to put roofing on the house in case the population would remove the roofing – so the man ended up with no house and the community with no standpost. But they felt that all this was due to poor water supply. If the water pressure were better, this would not happen. One participant said that he had a house connection and he had water in his tap for three months in 1977. Many participants said that they had not had water for over twenty years. One participant said that with twenty-four people in his house, he paid more than 1,000,000Kw daily for water consumption. Many people also collected rainwater.

Destruction of houses

The men were of the opinion that the government who had allowed the illegal construction of houses had the responsibility to solve the problem. If houses were in the way of the project, the government would have to negotiate with the individuals. But overall, they felt that the government had allowed this anarchy to happen and they, the government should do something about it. The population could indicate the more appropriate places for standposts and if individuals had to be displaced, the government would have to assume the responsibility. The women did not agree. They said that people who had built houses illegally were still people and Angolans. If they the people began denouncing other people it would cause bad feeling and jealousy in the bairro. The women felt that the government should retrospectively legalize the situation of these people who had invested in the construction of their houses. They added that the project teams could confine themselves to locating standposts on available land.

Illegal Connections

Initially, the men said that when people detected illegal connections they should inform the Coordinator and he would do something about it. Then they launched into case by case descriptions of the existing illegal connections, which had interrupted the water supply. They eventually concluded that the only solution for illegal connections was to increase the water pressure and provide a satisfactory uninterrupted water service. If there were enough water in the bairro, people would not be bothered making illegal water connections. The women then added that they also thought that the problem was not the illegal connections; but rather the poor water supply. They said that the delay in fetching water and queues at the standposts were due to poor water pressure. Women had to go to work every day; they could not afford to waste hours collecting water. They therefore preferred to buy water from the tanks because there was no delay. The solution to the problem was straightforward; more standposts should be built with sufficient water pressure. One woman said,

“the State does not think about the suffering of the people. It is also us women who suffer more. Men talk about solving problems but we women have to find ways to solve the problems. We cook, we fetch water and we sell to make money for food”. (O homen so trata para resolver – e a mulher que tem que reforcar e resolver.)

The women stated clearly that if the State had any interest in their well being they would bring water to the bairros.

Distance and Waiting Periods

In this discussion, the women’s opinions carried the day. The men had initially suggested 500m. The women asked for an example of what 500m was and then said that such a distance was impossible. One woman said that if she carried a bucket of 20litres for 500metre that her neck would collapse (o meu pescoco vai para dentro). One woman said that walking 500metres was like living in a rural area and going to the river. The women said that the maximum distance they were prepared to walk was 300metres. The discussion on distance also provoked a discussion about coverage of standposts. The group indicated that a project, which only rehabilitated the primary pipelines and not the secondary ones, was not a solution.

The women also indicated that they considered a ten-minute wait at the standpost as acceptable. But they also added that waiting times were directly related to water pressure. If the water pressure was sufficient, there should not be any problems with waiting times. Currently, women often left home early in the morning to come home at 16.00 with water. One woman commented, “We find our babies with swollen eyes because they spend all day crying”. The women said that they would be prepared to find two or three people in line at the standpost and wait their turn. The group all agreed that organizing a queue only arose if there was a shortage of water. If water pressure was sufficient people came and went in order of arrival.

Tanks

The group were reluctant to give information about tanks. They agreed that the cost of water in the tanks was expensive but they underlined that this was their primary source of water. It was not clear whether most tanks had connections to the network or were supplied by water cisterns. Few of the participants had tanks and their information on the cost of buying water from the water lorries seemed unusual.

Price and Service Hours

The group said that they currently paid

- 100,000Kw for 20 liters from a tank when there was water running in the bairro
- 50,000Kw from a yard tap
- 150,000Kw when there was a shortage of water.

The cost of water is directly related to the supply of water. They said that when there was a water shortage people in the bairro with tanks did a *dikomba,* best translated as “ripping people off”. (varrer para revarrer no sentido de roubar).
When they were asked what they considered a fair price for water, they referred to the current system run by the Local Administration, which sold water at 80 liters for 50,000Kw. The Coordinator said that there continued to be a discussion at the level of the Local Administration, where some people considered this price too high.

The group said that a yard tap should have water 24 hours a day but that a standpost should have opening hours. They suggested that the standpost be open from 05.30 until 10.00 in the morning and 15.00 until 18.00 in the afternoon. The entire group agreed that water should run every day and during the two periods.

Models of Standposts

Each standpost must have two taps. In the current system, the pipe to the taps is high and when pressure is low, it compromises the flow. The group said that they would obviously prefer the nicer, more sophisticated taps but if it meant waiting for imported spare parts, they would then opt for locally made taps. Some people wanted taps that could be removed at nighttime. This group said that,
“If even dead bodies are robbed, what can we expect for removable taps” (Se ate os cadaveres roubam, o que podemos esperar com as torneiras). They also offered the example of the Health Center in which the discussion was held. That Center had been ransacked in 1993, removing the equipment, contents, doors and windows.
Other people said that the taps could be welded to the standpost. They also added that the standpost should have a guard, like in the colonial times.

The women had reservations about adapting the standpost to fill the buckets on their heads. The older women said that they would not be strong enough to do that; the group agreed that the standpost could have both systems. But they did add that the filling system would have to be a bit more sophisticated than an extension of hosepipe. They also added that such a modification was only possible if the pressure was adequate. And again they said that what they wanted was water. Sophistications and modifications could be discussed afterwards. They would like to see water first before they wasted time designing their system.

Organization – Monitor

When asked who would look after the standpost, the group all said the Local Administration should appoint people and the Coordinator and the local people would accompany their work. They suggested that the Coordinator should indicate the person. They thought that the system operating in the standpipes run by the Local Administration was acceptable; the standpost operator worked Monday to Friday for the Government and Saturday and Sunday was considered payment for the two operators. The participants assumed that the money made on Monday to Friday was paid to EPAL. They agreed that the Local Administration could have a percentage of the money but on the basis that the Local Administration

- would collect the money
- manage the money
- pay EPAL
- ensure that repairs were done promptly

In fact, they said that they really did not mind what kind of system operated as long as the supply was guaranteed.

Organization – Money

The majority of the group felt that monthly payments would be difficult. One man said that monthly payments were like voluntary payments and would make life impossible for the monitor. Most of the participants supported the idea of daily payments on the basis of a specified number of buckets for a specified amount of money. They insisted that people should pay as they fetch water. The group said that the monitor could not raise the price without consulting them and without the authorization of the Local Administration. If the monitor tried to do this, they the consumers would complain to the Coordinator, who in turn would bring it to the notice of the Local Administration. The participants' felt that since the Local Administration would appoint the monitor, the same Administration would be obliged to discipline the person if they misbehaved.

The group were asked to consider what should be done with the profit accruing from the system. They insisted that all they wanted was running water at an affordable price. If there was any profit, the Local Administration was welcome to it. On further discussion they did agree that there were other needs in the bairro, such as electricity and the need for filling in holes in the road.

When asked what they would do if the payments were not made to EPAL and their water was cut off, they answered that they would indicate people to go with the Coordinator to the Local Administration to find out what had happened to the payment.

Private Operator

The participants all agreed that this was a possible option. They said that the service would have to be better than that offered by the Local Administration and the prices compare favorably with the prices they considered as fair prices. They were not prepared to pay more for a private management option. They also said that the private operator would have to guarantee a regular water supply with prompt repairs. The Local Government should regulate the private operator – again, they said that if the Government puts a private operator in place, then the Government must guarantee the service of this operator. The group said that the only advantage of a private operator would be fewer headaches for them the consumers. If that outcome could not be guaranteed, then they would prefer a non-private option. One person also suggested that private operators should be from the bairro.

Local Government

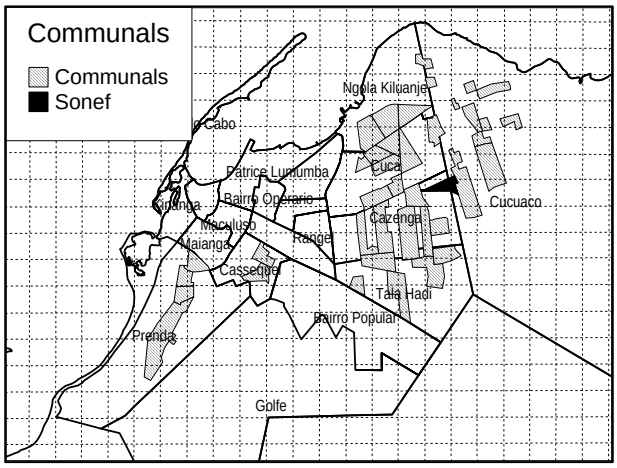
Sector 10 has a Residents Commission, which was elected in 1997. The Commission has fourteen members, ten men and four women. The people who turned up at a public meeting elected these people. The participants felt that they were acceptably represented. They said that people were not generally active in local organizations because life was so difficult. They also said that the people who talked and complained most were those who did the least for the community.

Municipal Area: Cazenga

Commune: Cazenga Zona 18
Sector: 19
Bairro: Mabor-Malhas
Code: Sonefe

Zone Characteristics:

- Density, 400/ha
- Estim. Pop. 22,000
- Av. Residence, 7 years
- No piped connections
- Price of water is 19.89$US/m3
- Proposed number of standposts, 30



General Opinions

The participants politely said they approved of the Provincial Government's interest in supplying their area with water but they would be more willing to believe in the good intentions of the government if they saw some concrete action. (Ver para creer). They said they had little reason to believe that central government would resolve any problem on behalf of their community. The emphatically agreed that it was the government's job to bring water to their bairro – but experience taught them that it was unlikely that the government would fulfill their promise. They seemed to feel that it was unlikely that a Provincial Government, who could not manage to supply the urbanized part of the city with water, would suddenly remember that it had responsibilities in the peri-urban areas. They also added that many of them had been exiled in countries where residents had yard taps. They felt very strongly that provisions should be made to provide them with the possibility of having their own yard taps. Public standposts were a nuisance to organize; people had to queue up, it caused problems between neighbors and here in Luanda, people were likely to allow rubbish accumulate around the standpost. If the Government could bring the main pipes to the bairro, they suggested that the residents could pay for house connections. Their bairro was well organised with large streets. If the pipelines were big enough with sufficient pressure, they could extend the secondary network along the streets within the bairro. They insisted that the project should be well thought out – they did not want the project technicians doing half the work and then saying they would come back another time to finish it. They also said that in their experience in Angola, a public project was more likely to benefit those areas that already had a service. They fully expected Hoji Ya Henda to get more water and they would continue to be left with any public supply.

Decentralization

They also felt that part of the reason that there was prevailing anarchy in public service delivery was because the services were too centralized. There should be local representations of EPAL and EDEL. It was unacceptable that residents of their bairro should be forced to go to down town Luanda to solve their service problems. They also felt that the companies themselves were probably losing money by being so removed from their consumers.

Locations

They all agreed that the locations should be selected in consultation with the Residents Commission. They emphasized that the government was not only the government in the "baixo" but that their Residents Commission represented local government. They suggested that the standpipes should be organised by blocks (quarterao). The specific location would depend on the number of standposts planned for their bairro. When asked about the possibility of using private land for standposts, they said that that would not be necessary in their bairro. When questioned about what their attitude would be if houses had to be removed to build the main pipeline, they also said that it was unlikely to arise in their bairro. They said that situation could arise in bairros, which had grown without any organization, and where people had built their houses anywhere and everywhere. They explained that their bairro was organised and the roads were in straight lines. But in those places where people had built on top of waterlines, it was the government's fault also because they had provided no urbanization service. If the government decides to destroy somebody's house – which they can do, because they are the government – then they must accept the responsibility of compensating that person for the real cost of building another house. Each individual built his own house with no help from the government; hence, the government cannot destroy citizen's houses without providing adequate compensation. In relation to their area, they insisted that if the project technicians did their work properly, there would be no need to

destroy houses; the roads were large and wide. But they said that in the event the question arose of destroying a resident's house, the government would have to define their policy with respect to compensation before the population could give an opinion.

Illegal Connections

There were existing pipelines in the bairro from colonial times but those pipes had already many illegal connections. In a future project, illegal connections could not be tolerated. If people are detected making illegal connections they should be punished without doubt. Again the group underlined the importance of company representations at the municipal level; that central power was too distant from them. When a resident discovers that his neighbor made an illegal connection, that resident should inform the Residents Commission who should inform EPAL. The connection should be cut and the culprit punished. One participant said that children could be educated to be vigilant – that children often knew more about what was going on in the bairro than their parents. A number of participants suggested that the Residents Commission should indicate "inspectors" for blocks. They also added that illegal connections arose when one resident saw that his neighbor had water in his yard and he himself had no water. That resident feels himself a victim and he solves the problem himself by making an illegal connection. Then a third decides to do what the first and the second did and the practice continues to replicate itself.

Distance and Hours of Service

People were not prepared to walk distances to the standposts. Currently, they could fetch water in five minutes. But the group were reluctant to specify the distance they were prepared to walk because they realized that the number of standposts proposed was insufficient for their needs. They were afraid that if they stipulated a distance less than that projected by the project, the project might opt not to place standposts in their bairro. They agreed that each block should have at least two standposts.

The insisted that if the project was supposed to improve their water supply, there would have to be water twenty fours hours a day. People with a yard tap should have constant water and the standposts would be opened at fixed hours in the bairro. People should be able to fetch water in the morning and in the afternoon. The issue of how long they would wait at the standpost was related to water pressure and availability. If the water supply was good they would not have to wait. The question of waiting would only arise if the supply was poor. Again they commented that they doubted if any project was going to provide them with a proper water supply, when people in the city did not have water. ("Se na cidade não saia agua, ca vai sair toda hora".)
They underlined that they were not prepared to waste time in queues, they had other things to do. They did not queue at the tanks. They demonstrated a collective horror of "confusion" at the standposts but they associated that possibility with poor water supply. They insisted that they must have water, morning and evening, every day. They said, "we can manage without bread but not without water". (Mais vale faltar pao que de faltar agua).

Water tanks in the bairro and Price

A significant number of people owned tanks in the bairro. Most sold water but some kept it for their own consumption. The prices quoted for buying water from the cisterns were:
a) 5000litre @ 15,000,000Kw
b) 8000litre @ 12-15,000,000Kw
c) 7000litre @ 8-16,000,000Kw depending whom sells the water.
The price of a bucket of 10litres is 100,000Kw and a large basin (20litres) is 200,000Kw.

The group disputed the issue of a "just price". They said it would all depend on what EPAL charged for water. Figures suggested were
a) 10 liters for 10,000 to 20,000Kw
b) five buckets of 10litres for 50,000Kw

Models

They suggested that the standpost should have four taps. Less than four would cause delays and confusion. They agreed that the taps should be protected; they suggested that the technicians study the best way to protect or fix the taps in order to prevent their illegal removal. They also felt that it was better have taps, which were produced locally. The system of protection was necessary because the standposts would not be controlled at nighttime. They also suggested that the standpost have a meter.

Organization – Monitor

There was heated discussion about selecting a person to look after the standpost. Some of the younger men were unhappy with the idea that an older man could be left with the keys, saying that that person might refuse to open the standpost if he did not feel like serving them. Some participants suggested rotating a number of people. The discussion went around in circles and they said that it was very difficult to decide before the fact and if the "users" behaved with responsibility they would be no need for a standpost monitor. They agreed that whatever system they adopted to select the standpost monitor , that the Residents Commission would have to be involved in the appointment.

They agreed that monitors should receive some monetary stimulus but were reluctant to define it as a full time job. They described his job as

- permanent controller at the standpost
- collecting the monthly payments
- Protect the standpost from abuse.

They said that a number of people could have collective responsibilities. People who did not perform their duties correctly would be removed from their post.

Payment for Water

Initially, there was some resistance to the idea of paying for water. People seemed to feel that it was reasonable to pay a yard tap but that standposts were another matter. After some discussion, they agreed that EPAL did have costs of production and should be paid correspondingly. They then discussed the respective merits of paying daily or paying monthly. They again felt that they needed more information on what EPAL might charge to be able to specify how they might run their system. Overall, they preferred the idea of registering all the consumers and organizing monthly payments, which should be paid at the beginning of the month, before people got the water. The amount paid would depend on the estimated cost of paying EPAL at the end of the month. They suggested that the Coordinator should collect all the bills for the sector and distribute them to the monitors. The monitors would in turn collect the money and give it to the Coordinator who would ensure that EPAL got paid. The monitors in turn would be accompanied by the local community inspectors who would ensure that they did not raise prices or charge more than they should. The argued that if the everybody's role in the system was clear, they would have no problem following up on problems and identifying where the fault had been if payments were not made. But again they said that this discussion was all a bit uncertain because it was really very difficult for them to believe that they would get water. They also said that the Residents Commission would represent the people; that as long as the consumers had water they would not worry about the details of how the money was managed. They said that representatives selected by the community would act responsibly and if somebody stole their money they would know what to do. The participants seemed to consider the idea that the community would appoint people who would subsequently steal money was a bit strange. They said that it was normal in their churches and associations that they elected leaders to perform as leaders and they did. It was not the people's job to check on their leaders unless these leaders were not defending the interests of the people. One man said, "Why would somebody steal 5,000,000 or 10,000,000, knowing that it was going to cause him problems afterwards?' They said that if somebody did steal the money they would be sent to prison – that stealing was stealing and the only appropriate punishment was prison.

Repairs

One of the participants said that it was incomprehensible that EPAL would build the standposts and not have a maintenance and repair team. Others felt that if there were going to be delays in repairing the standposts, since the priority was to have water, then they, the community, could accept responsibility for minor repairs. Most of them agreed that they would contribute money at the time of the breakdown. Some of the younger people seemed to think that maintaining a small repair fund, held by the Coordinator was a better idea. Again, they said the details were not important for the moment. They preferred to wait until they saw some progress on the project before they wasted too much time discussing the management details.

Private Operator

This group showed a clearly defined attitude in relation to the proposal of a private operator. They said that
In principle that it was not necessarily a bad idea but in this case the private operator would not invest in the project. Hence, they considered it inappropriate to allow a private operator exploit an activity they had not invested in. They therefore suggested that in the first phase, the project remain under the control of the Residents Commission. If, with experience, the Residents Commission thought there was need or an opportunity to introduce private management, then they could. The private operator would be controlled directly by the Residents Commission and Department of Community Services would be responsible for price control and inspection of the correct maintenance of the standposts.

The group also agreed that domestic connections should either be available on demand or not at all.

Local Government

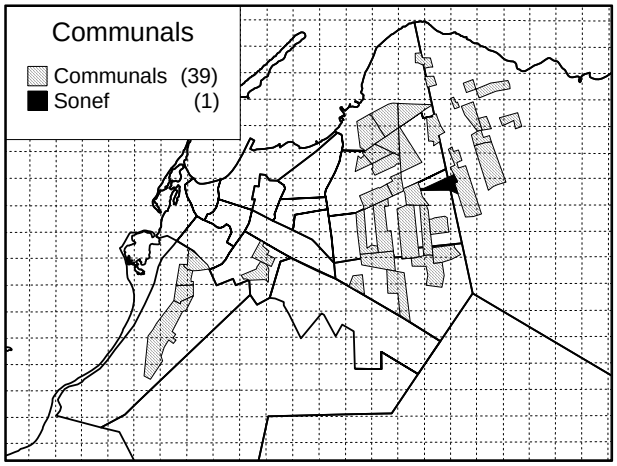
Sector 19 elected a Residents Commission in 1995 and the same Commission was re-appointed in 1997. There were 20 members of the Commission, all men. When asked why there were no women on the Commission, they said the women did not have time to participate in community activities and sent their men instead. (Eles mandam nos para fazer o trabalho). The President of their Sector was the President of all the Residents Commissions in the Commune. There was no apparent negative murmuring about the Commission and they informed the team that Sector 19 had an Action Plan formulated for 1998. When asked what resources were they planning for the implementation of the plan, they said that the local government had no resources so they had made their action plan on the basis of possible community contributions and contributions form churches and associations.

Municipal Area: Cazenga

Comuna: Cazenga Zona 18
Bairro: Mabor – Malha
Code: Sonefe

Zone Characteristics:

- Density, 400/ha
- Estim. Pop. 22,000
- Av. Residence, 7 years
- No piped connections
- Price of water is 19.89$US/m3
- Proposed number of standposts, 30



General Issues

The group participated actively; the questions were discussed among the group in Lingala. If there was agreement, the translator presented the conclusions. If the group did not agree, the translator presented the differing opinions. The women had clear ideas about what would and would not work.
The group all agreed that the idea was good but they would like to see something in practice. They doubted the government would provide them with water, as the men doubted on the previous day.
On a number of issues, the women's' opinions contradicted the opinions of the men on the previous days. When the facilitator pointed out the differences, the women laughed and said that water was a woman's issue. They currently bought it with their money and were prepared to contribute further money for improvements. They said that their husbands had spoken without knowing what they were speaking about. (Falarem para falar). The women said that in the future, if the project went forward, they would see that their husbands were suitably informed on the issues.

Locations

The women discussed among themselves and proposed the following locations:

- Escola Americo Boavida
- Quarterel dos Cubanos
- Escola 701, Mata Gato
- Fatoria
- Sonefe
- Mama Ana
- Pracinha Masulu

The women said that there was public land available, but that a standpost could be located in somebody's yard. The group said that there was no question that this person could consider himself owner of the standpost – it would be clear from the beginning that the standposts were part of a public project. They said that there could be no question of destroying existing houses to build the pipelines. Residents had built their own houses on their own with no help from the government. The project planners would just have to locate alternative routes for the water lines.

Illegal Connections

Again, they agreed without discussion, that it was a totally unacceptable for individual residents to make illegal connections. They, the women, considered a water supply as important and if any resident made an illegal connection, they would denounce him and have his connection cut immediately. They seemed to feel that the collective good would prevail.

Distance

They said that the distance would have to be small because some people were old and sick. The group explained that the time they would spend fetching water would be related to the supply of water. If there was sufficient standposts in the bairro, there would be no delay. If there were queues at the standposts, they would use the private tanks rather than wait. When asked how they would organize the queues, they also said that queues were a feature of poor water supply; if the project provided water continuously and with pressure, there would be no queues.

Tanks, Price and Hours

Many residents had tanks and three of the participants had tanks. The prices they quoted for filling their tanks were:

a) 7000L @ 25,000,000Kw
b) 6000L @ 20,000,000Kw

The retail price is two buckets of 10L for 150,000Kw. Some people have tanks for their own consumption only. Others sell water to help cover the costs of buying water the next time. They insisted that anything less than water every day in the morning and the evening was not an improvement.

Models

They suggested that there be four taps, using taps made in Angola. They said they were not prepared to wait for imported taps when the taps broke. If the tap broke, they could contribute money, buy a tap in the market and replace it. They agreed that protection was necessary for the standpost but disagreed on who should pay for the extra costs. In the end the majority felt that if the standposts were built and water available, the users would be prepared to contribute to building a protection around the standpost.

Organization – Monitor

The women said that many men were looking for jobs. They said that the question of whether the person should be paid or not depended on whether they took the job because they had nothing to do or because they needed a job. The monitor would clean the standpost, control the use of the standpost, and protect it from abuse.

Organization - payments

The women were absolutely emphatic that the payment would have to be daily. They discounted monthly payments as unworkable and refused to even consider them. They suggested 80litres @ 50,000Kw.

They suggested that the monitor collect the daily payments and deposit it with the Residents Commission. At the end of the month, the Residents Commission would receive the bill from EPAL and indicate somebody to pay the bill. The person paying the bill would be accompanied by one of the women. If agreed by the community, the monitor would be paid and any repairs would be done. If there was a profit, the EPAL bill could be paid for three months at a time, to avoid wasting time every month. They would continue to pay at the standpost to cover the cost of the monitor and any repairs that needed to be done.

I f there was an unauthorized rise in water price, the person involved would be removed immediately.

Private Operators

They agreed that in theory it seemed a good idea but in practice, the kind of private operators who would work at this level would be likely to exploit the people. They commented, “They (private operators) will consider the consumer a nobody”. Among ourselves we can compensate for the people who have little or no money. Private operators will look down on us and we will loose control of the service. We will get the service that the operator wants to give not the service we want. It is better that the people who are using it control a public water project. They added, “The people who pay should be the people to look after it”.

Local Administration/Residents Commission

They said that their connection with the Local Administration was through the Residents Commission. The Local Administration should be informed of activities in the bairro but they are not necessarily actively involved. They knew they had a Residents Commission and they could name the President. They knew when it had been elected but seemed to imply that local politics was a man’s business.

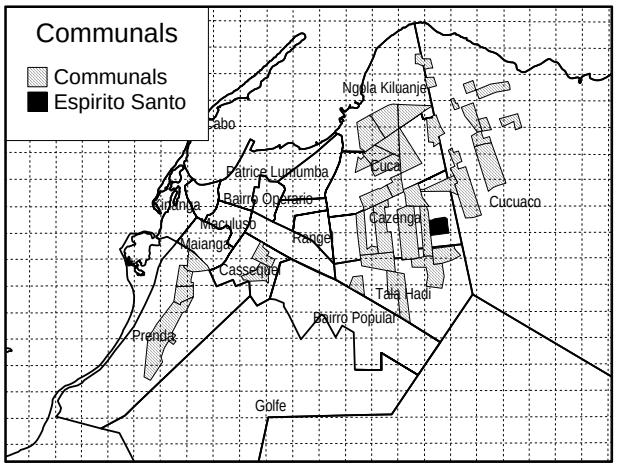
Municipal Area: Cazenga

Bairro: 11 de Novembro

Code: Espirito Santo

Zone Characteristics

- Density, 300/ha
- Estim. Pop. 6,300
- No piped connections
- Price of water is 10.11$US
- Proposed number of standposts, 9



Background

Focus group participants did not present themselves. The focus group was planned in a private school in the bairro. Other neighbors contacted by the team refused to participate in the discussion on the basis that they had other work to do. (outros afazeres).

The team held a semi-structured interview with two employees of the private school, who also lived in the bairro.

General Issues

Most of the people in the area buy water from the owner of a large piece of land who has a tank and sells water to the other residents. The area did have water until 1977. There are private houses, which had water connections, but these houses no longer have water.

Locations and Illegal Connections

There is sufficient public land. The Residents Commission functions and could collaborate with the project technicians to select appropriate places.

The informants felt that illegal connections are very prevalent in the bairro. They suggested introducing sanctions for the residents who attempt to make illegal connections and controlling the illegal activity of the technicians of EPAL.

Distance, Price and Consumption

The informants suggested that people would be prepared to walk a maximum of 100 meters. The queues can be organised if there are a sufficient number of standpipes with adequate water pressure. Twenty liters of water costs 100 to 150,000Kw. Five thousand liters of water to fill one's tank can cost 19,000,000Kw. People buy the amount of water they can afford.

Model

They approved of the model shown. They thought that the nationally produced taps should be used and the taps should be protected.

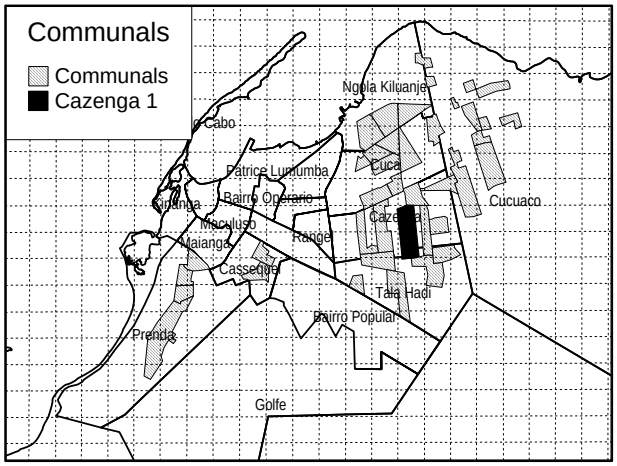
Organization

The community could look after the standposts but there would have to be some state control. Each standpost must have one person who is exclusively responsible for that standpost. The informants thought that the community would accept to pay a slightly higher price in order to cover a salary for their monitor. The Residents Commission should do the supervision of the standpost. The people interviewed thought that daily payments would be more acceptable for the majority of the population. They thought that the management of the money could be difficult and they felt that the system, which was least likely to provoke conflict, was that of depositing money with the Local Administration.

Local Authorities

There is a Residents Commission, which functions, and the residents know the members.

Municipal Area: Cazenga



Commune: Cazenga, Sector: 16
Code: Cazenga 1

Zone Characteristics

- Density, 500/ha
- Estim. Pop. 57,000
- Av. residence, 15,5
- 6% piped connections
- 1% connections with flow
- Price of water is 12.72$US.
- Proposed number of standposts, 76

General Ideas

The group demonstrated a certain reluctance to believe that the government would actually go through with the project. They said they were, “tired of things being promised and then never moving beyond the paper stage”. They also pointed to the negative experience they had with the “Tecnocarro” filled water tanks. They group asked the research team on what grounds they thought that this project should be any different from their previous negative experiences with public projects; and why they, the community, should expect this project to be run properly.

The group discussed the merit of rehabilitating the existing pipelines and the majority felt that the existing pipelines should be replaced because they were in poor condition and they were riddled with illegal connections.

Locations

The group suggested that the places where standposts had existed in the past should be reviewed and new positions considered, since the population has grown considerably. They felt that there were appropriate public places but in the event that it was necessary to use private land, that could be negotiated, in colaboration with the government. When the technical team is selecting the locations, they can contact the residents.

It is likely that there will be houses where the pipelines are planned. If the government proposes to destroy houses they will have to compensate the people involved and provide them with a new house. One participant commented that if the water came with pressure, that lots of houses would collapse anyway. (Se a agua vier com pressao, ha muita casa que vai cair por si mesmo). They also believed that the existing pipelines were “so damaged that they should be replaced”. Even with the current low water pressure, there were frequent ruptures with resulting significant water losses.

Illegal Connections

The group also felt that the population was so familiar with the old lines that people would continue to break into them. The group also raised the issue that EPAL would have to find some form of controling their field workers (homens de terreno), to ensure that they would no longer facilitate illegal connections. They should also have a team available to cut illegal connections when they are informed.

Distance and Time

The group thought that 100meters was an acceptable distance to walk and 200meters was the maximum they were prepared to walk. The women said that effectively they had to wait the time necessary to get water but that they were prepared to wait behind five people at each tap.
The queues should be organised in order of arrival; the first person arrived is served first. Normally, the women put their buckets in the queue when they arrive at the standpost. Then, they stand aside and wait their turn to avoid pushing and confusion. Each person should be entitled to a maximum amount of water per place in the queue; the suggested amount was 100litres.

Water Tanks

The participants felt that few residents in their neighborhood had tanks and this contributed to the high cost of water. Some of the existing tank owners cannot afford to fill their tanks and they rent the tanks to other families. The group agreed that it is unusual for people to give water away for nothing. Some participants added that it was part of a general pattern where people have less capacity to show concern for others. (O amor ao proximo acabou).

Price of Water and Consumption

There is no fixed price of water. The prices they quoted for recent payments for water tanks were:

a) 9000liters @ 30,000,000Kw
b) 20 liters cost 100 to 150,000kw
c) 40 liters can cost 250,000Kw.

When there is a real water shortage, we have paid 500,000Kw for 25litres and 3,000,000Kw for 200litres.

Household water consumption is more related to affordability rather than need. The group said, the water they consumed daily depended on the money available. (depende da bolsa de cada um).

How people collect water depends on the money they have available on any specific day and on the number of recipients they have in their homes. People generally collect water daily and many people do it twice daily. The group suggested that the opening hours for the standposts between 06.00 and 18.00. They emphasized the importance of daily water distribution.

Models

The model shown was accepted by the group with the recommendation that there be at least four taps to reduce the queues. They emphasized that their priority concern at this point was the quantity of water, not the quality. They agreed that the taps should be locally produced. The group agreed that the taps needed some kind of protection because of vandalism. Some suggested that the taps be removed at the end of each day but the majority opted for a cage over the taps with a lock. The participant who suggested the cage lock demonstrated his idea to the other participants and he suggested that the space between the bars not exceed two fingers. They thought that the system of filling the buckets on the consumer's head was a needless sophistication; they emphasized that they needed water first. They could modify the design according to their requirements at a later date.

Organization

Initially, the facilitator asked the group how they would manage their standpipe. The group had difficulty dealing with this open question and the facilitators explained the concept of cost recovery and how EPAL would be obliged to recover the costs of producing and distributing water through billing the users for the water consumed. The participants said that if the water supply was reliable and regular, there would be no problem convincing users to pay water. They referred to the standposts in Vila de Mata, where users paid 50,000Kw for 80liters of water.

The group were inclined to opt for a system of management which was controlled locally. They did not mention the Residents Commission but suggested that their church structures could manage the standposts locally. They were reluctant to involve the Local Administration, because they considered that the Administration had too many responsibilities and too few resources. They were convinced their standposts would end up being at the end of their list of priorities. They felt that when there were problems it would take them too long to be solved if they had to do it via the Local Administration. On the other hand, they doubted their own ability to maintain the standpost without some external support. One participant added that "our population is not accustomed to maintaining what collectively belongs to them". (A nossa populacao não esta habituado a conservar o que e do estado).

Organization – Monitor

They suggested that the Standpost Committee, which could be formed by the church, select the standpost monitor. This Committee would consult with residents and people would be selected/indicated (both words were used interchangeably) who lived near the standposts. The work involved would be full-time. The person would look after the standpost, open and close it, do any maintenance work necessary, collect the user payments and pay EPAL. They would be expected to hand the money to the

Commission on a daily basis. But overall, the group felt that this discussion was happening too early. They said that when they saw standpipes with water, they would be prepared to worry about how would look after the standposts.

Organization – Payment

The group initially discussed the merit of a daily payment for water at the rate of 50,000Kw. When they debated the issue, they concluded that 50,000Kw daily, with no consumption limit might leave them with insufficient money at the end of the month to pay EPAL. They finally agreed that the 50,000Kw payment should be linked to a specific number of recipients e.g. Four 20L recipients for 50,000Kw. The Church Commission would manage the money and report to the community during monthly meetings. They suggested that the same commission deal with EPAL, dealing with payments and complaints.

Private Operator

The participants did not negate the option of a private operator. They agreed that the private operator would be likely to maintain the standposts but they had reservations in relation to the quality of service and the price. They feared that they would have access to the standpost at hours that did not suit them and that the price would only be regulated on paper. They also felt that if the private operator charged exaggerated prices and they complained , the operator would bribe the inspectors and they would continue to pay exploitative prices for water. They also said that the system they worked in at the moment was one of a private operator. The tank owners bought water and sold it to them, the residents.

Local Authorities

The Residents Commission functioned in their sector. They did not function in some of the surrounding sectors.

Private Operator

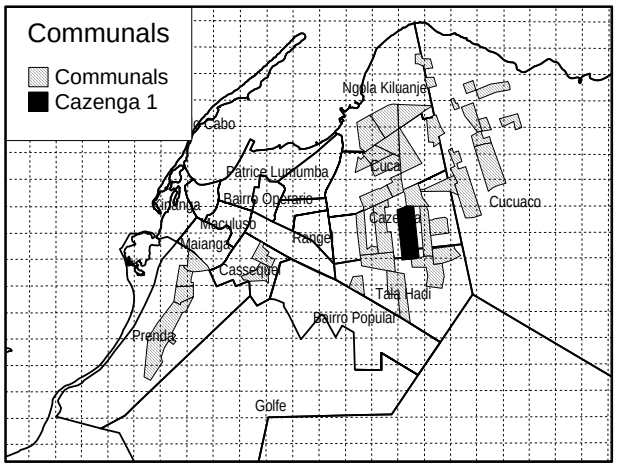
The participants said they could only consider a private operator if the operator lived in the bairro. If he lived in the bairro, they could influence him and he would be sensitive to their problems. People who came from outside had only one objective, “get our money” (comer o nosso dinheiro). They also felt that if the Government authorized licenses at the level of the Provincial Government, the consumers would have no influence whatsoever over the quality of service provided by the operator.

Municipal Area: Cazenga

Comuna : Cazenga
Sector 15. Qtr. 15, Rua 7 Avenida
Code: Cazenga 1

Zone Characteristics

- Density, 500/ha
- Estim. Pop. 57,000
- Av. Residence, 14 years
- No piped connections
- Price of water is 12.72$US
- Proposed number of standposts, 76



General Issues

The group confirmed that water was a major necessity for the population in their bairro. They were exclusively dependent on water from the lorries. When there was a water shortage, people walked long distances to get water, frequently to Vila de Mata and sometimes eve to Viana. Some of the group said that standposts were so important that they would be prepared to help build them. They said that they recognized that the area had a poor record in conservation of standposts but if the project solved the water problem then it would be worth organizing a major education and awareness raising campaign (sensibilisacao).
They described an initiative some three years back, when the community contacted EPAL. They contributed money and local builders built three standposts. The standposts lasted for a short time because there was no management or control and people made illegal connections to the pipe.
They also described the standposts built by Tecnocarro two years ago, in the name of the Provincial Government. Those standposts did not have a regular water supply.

Locations

There were old sites from previous standposts. Where possible they suggested rehabilitating old standposts. Not all of them would still be available because residents have built houses on top of them. They felt that the technical team should avoid knocking people's houses and as far as possible place the waterlines along the main streets. Overall, the felt that the discontent engendered by knocking people's houses was not worth it. They felt that it was possible to negotiate part of a resident's yard without creating problems. Even when public sites are identified they should be confirmed with the Local Administration because many times when building has begun on what was considered available land the owners suddenly appear. In these cases, where there was no family residence in discussion, they thought that it was possible to make the person understand that it was a public project in the interest of the majority. They said that if the older people spoke to them, they were likely to understand. They also pointed out that the population had increased significantly in the recent years so that more standposts were needed. They suggested at least two standposts in each block. (quarterao)

Illegal Connections

They thought that the first step to control illegal connections was to prohibit house connections. The Residents Commission should not authorize documents for any house connections. What normally what happens is that one person applies for a legal connection and then everybody wants one. The end result is a number of residents with piped connections and the standpost has no water.
The residents should be vigilant and if they note an illegal connection they should inform the Residents Commission. The regulations should be clear and the sanctions applied. The explained how the waterline on the Seventh Avenue had no pressure whatsoever; the same line was quite near the source in Mabor but water only flowed in the irrigated gardens (quintas). They also thought that some people who were digging latrine pits came across the pipelines and decided on the spot to make an illegal connection.

Distance and Time

They felt that people were prepared to walk 400 meters as long as they were sure of getting water. Currently, they sometimes walked two miles to collect water. Participants pointed out that the time spent

in waiting would depend on the number of standposts. They thought that thirty minutes was an acceptable time to spend collecting water. Some participants suggested regulating the number of recipients to be filled at one time. Sometimes the delays were compounded by the fact that some people insisted on staying at the tap until they had filled all their recipients. The queues would be organised by selling tickets and people would be served on a first come first served basis (ordem de chegada). People needed to buy water every day. The standpost should be opened from 06.00 until 18.00hrs. The busiest times are from 06.00 until 10.00 and 16.00 until 18.00.

Water Tanks

Many people have tanks but some can not afford to fill their tanks. A small number fill their tanks from the water lines. They quoted the cost of 18,000litres of water in September '97 as 35,000,000Kw. The same amount now cost 45,000,000kw and in times of shortage it can cost more. They said it was unusual for people to give water away; they might give to their family but not to neighbors. They commented that, "Even those who had piped connections say they had to pay EPAL, but we know that EPAL has not billed in this area since 1995, because we have no water. And in 1995, it was when all the illegal connections began as well". The retail cost of water was

a) 150,000kw for 20liters from a tank which bought from the lorries
b) 50,000Kw for 40liters from those who have household connections

Organization – Monitor

The Residents Commission should appoint the monitors for the standposts (they used the word elect). It must be somebody who lives here. It can be an old person or a young person as long as they are considered serious. The monitors must be paid and the money will be included in the payments made by the consumers. The job of the monitors will be to

- collect money from the consumers
- maintain the standpost
- clean the standpost
- protect and remove the taps
- account to the Residents Commission.

Organization – Payments

The group suggested payments for specific volumes of water. They proposed 50,000Kw for 60 - 80liters (three or four buckets of 20litres) of water. They pointed out that those with piped water charged 50,000kw for 40litres. The baseline price must be decided by EPAL. The Residents Commission must monitor the standpost monitors and if they are abusing their position or raising the price, they will be replaced and sanctioned. The monitors will deposit the money with the Residents Commission. The monitor will be responsible for actually going to pay EPAL. If for some reason EPAL is not paid, the community will make a rapid contribution to maintain the water supply but the person responsible will be punished. The person who is ultimately responsible for maintaining the system is the Coordinator of the Bairro.

If there were profits and the standposts did not need repair, they would invest the money in organizing an electricity supply for their neighborhood.

Models

They preferred fixed taps but thought the important issues was that the taps could be found on the local market. "All we want is water, nothing fancy". (So queremos agua e não luxo)

Local Authorities

There was a functioning Residents Commission. Each block has a Coordinator. The Municipal Administration called a public meeting and the population elected a Coordinator of the Residents Commission. Some of the participants commented that this person was more interested in sectors like the market where he could make some money rather than in water or sanitation. On reflection, they wondered whether he had the motivation to manage the water project.

Private Operator

The major issue was the legal framework for such management. Unless there was some way of controling the private operator and ensuring that they provided a good quality service, they felt they were better opt for the community management in consultation with the Local Authorities.

Municipal Area: Cazenga

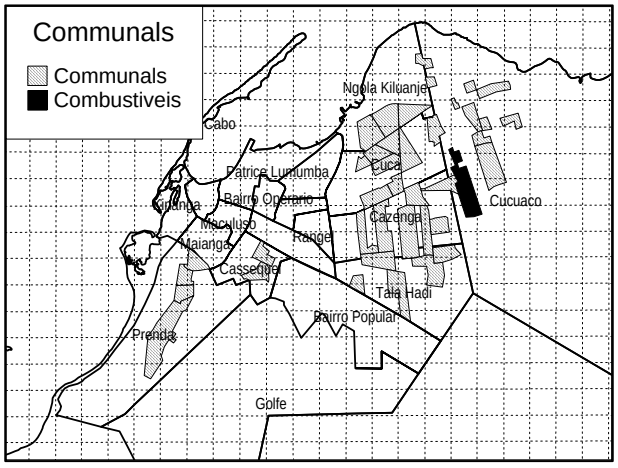
Comuna: Cazenga, Zona 18

Bairro: Mabor

Code: Combustiveis

Zone Characteristics

- Density, 300/ha
- Estim. Pop. 33,000
- Av. Residence, 6 years
- No piped connections
- Price of water is 13.80$US/m3
- Proposed number of standposts, 43



General Issues

We certainly want water. Even if the project only offers standposts in this first phase , we will be happy. We currently spend a minimum of 1,000,000Kw per day on a small amount of water. This is too much money and to buy water, we need to sacrifice other things.

Locations

There will be no problem locating places for the standpost. We have lots of available land in our bairro. The area left by the Cubans, which now belongs to the church, is suitable. The priest would be happy to allow us build a standpost there. There is the land belonging to Mr. Balaivi, an Arab who has a number of business activities in the area. He would also be happy to allow us use his land. He would probably like a connection for his businesses also. Standposts could also be built at the small neighborhood markets. When the project comes to pass, the Coordinator, the Local Administration and the residents will hold a meeting. Then we can indicate specifically the areas where the standposts can be built.

The entire group agreed that standposts could not be placed in an individual yard. They said it would cause enormous problems. But they added there was no need to consider it in their bairro. They had plenty of available space.

They were not happy with the idea of destroying a person's house. They felt that people suffered too much building their houses to have them destroyed lightly. They suggested that the engineers investigate all the possible options to avoid that first. If it was necessary, the person would have to be compensated and given other land in the bairro.

Illegal Connections

The participants suggested that a community inspection team be authorized to inspect for illegal connections. These teams would report to the Coordinator, who in turn would report to the Local Administration. Residents who make illegal connections should be punished. The inspection team should also be responsible for community education. The residents should be informed about he project and warned about the sanctions in place if they make illegal connections.

Distance and Time

The group felt that a guaranteed distance of 200 meters would be an improvement in their lives. They pointed out that they would have to walk that distance many times in one day to satisfy their water needs. They also thought that people would be content if they could collect the water they needed in a total period of three hours. They would organize the queue on the basis of first come, first served. They would also need water all day, every day. They explained that many people had few recipients and could not store water.

Water Tanks

Many people do have water tanks in the bairro. Some can not afford to fill the tank and others only buy the amount they can afford to buy at one time. Most people who fill their tanks sell the water. Twenty liters of water costs 200,000Kw and the price quoted for buying 6000liters was 22,000,000Kwanzas. They commented that this was much too much money and few of them could afford it.

Models

They suggested that the taps be robust and available on the market place. The group agreed that the taps needed protection. They suggested a box grid over the tap with a lock. The taps would be exposed only when opened by the guard. They approved of the system where they could fill the buckets on their heads.

Organization – Monitor

The group said that there were many older people (velhinos) in the bairro who, "would be happy to look after the standpost rather than stay in their houses sweeping the yards over and over again". They must be paid because none of us would accept to do the work for nothing. If they do the work, then they deserve to be remunerated. After the standposts are built, we can have a big community meeting, where the monitors are presented to the people. The residents will be encouraged to help and respect their work and they will presented as "important and official". This kind of public presentation will make give the monitors more confidence and motivation. The salary for the guard will come from the user contributions and the guard himself can decide whether he wishes to receive the money on a daily, weekly or monthly basis.

The tasks described for the monitor were

- Open and close the standposts
- Cleaning the standpost
- Collecting the money from the users
- Reporting to the local Coordinator

Organization – Payment

The group opted for a payment system, which was a fixed payment for a fixed volume of water. (pagar por balde). They said that any other type of system would be too difficult to control. They suggested that the water be bought with tickets and when the ticket was used the monitor would tear it. They did not think it likely that the monitor would raise the price illegally. Firstly, the population would be informed in regular meetings and if there was an official rise in price, the Coordinator would have to post an official information on the standpost.

The money collected would be given to the Residents Commission. The group discussed two separate teams, the Inspection Team and the Water Team. The Water Team was conceived to supervise, support the monitors but it was not clear how they differed from the Residents Commission. When questioned the group said that the monitor reported to the Water Commission who reported in turn to the Residents Commission. The Residents Commission would report to the Coordinator who in turn advises the Local Administration. The money collected would be managed by the Water Commission, who would be responsible for making payments to EPAL, releasing money for maintenance and seeing that the guards were paid.

The group felt that the risks of stealing the community money would be reduced by the fact that everything would be dealt with at the level of the community. The community would know all of the people involved and they would know of whom to ask questions if they had doubts.

The agreed that a fair price to pay would be 100,000Kw for 80 liters of water. If they had profits they would like to invest them in

- Building a market place
- Building schools
- Building a health post.

Local Authorities

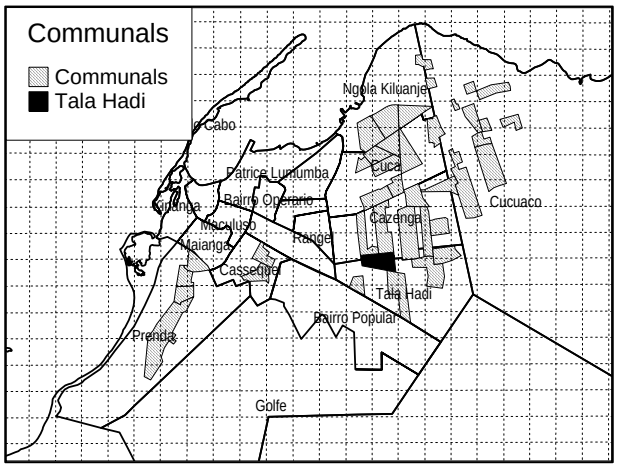
The participants said there was a Residents Commission but they did not know how many members were involved. They named the Coordinator and said that if they had problems they called him and did his best to deal with the problems. They had not had a community meeting for a very long time. The group did not know of any experience where their community had dealt directly with the Comunal Administration but they agreed that they should inform them about this meeting and the proposed project.

Municipal Area: Cazenga

Commune: Cazenga
Sector 5, Zona 19
Bairro: Tala Hadi
Code: Tala Hadi

Zone Characteristics:

- Density, 500/ha
- Estim. Pop. 31,500
- Av. residence, 12,5 years
- 92% piped connections
- 73% connections with flow
- Price of water is 8.80$US/m3
- No standposts proposed



General Issues

All of the participants bought water. It is likely that the group self selected for people who were most interested in the issue of public water supplies. A number of people participated who were not invited and the participants included a member of the Residents Commission.

The area has not had water for ten years. The participants thought that this was probably a direct result of people making illegal connections. The existing main water line is completely adulterated and destroyed. In 1997, the Coordinator of the Residents Commission called the population to a meeting and asked for a contribution of 1,000,000Kw towards a solution for the water problem. People contributed but there is no indication of an improvement in the situation.
Some of the participants commented that the site chosen for the focus group was inappropriate. They thought that the discussion should have been held in the middle of the bairro where people had greater need for an improved water supply. (The siting of the focus group were chosen to correspond with areas within 300 meters from the proposed main water lines).

Location

The group agreed that it was the job of EPAL and the government to select appropriate sites for the standposts. They suggested that they assess the locations of the previous standpipes first and then locate new places. The group said that, “the population needs water. It is the job of the government to place the standposts”. The group was also not prepared to discuss the control of illegal connections. Again, they insisted that this was an “official” responsibility and the Residents Commission should ensure inspection to prevent illegal connections. The Residents Commission should report illegal connections to “the Authorities”. The group did not specify which authority.

Distance and Time

The women explained that the shortest distance possible was the ideal. They mentioned between 50 and 150 meters. They explained that frequently it was their children who fetched water and the children needed to be able to carry thirty-liter jerrycans (bidao) on their heads. The group thought that the issue of how long they would wait at a standpost was related to the number of standposts built and the water pressure. If the water supply was reasonable, then they thought they should not have to wait more than five minutes. The organization of the queues would also depend on the number of standposts built in the neighborhood but one woman commented, “we are accustomed to queues. We always organize them in function of the order of arrival”.

The group agreed that water should be supplied every day and they suggested that appropriate opening hours would be from 06.00 until 18.00. They felt that these hours would facilitate people working in the public service or women who sold in the market. The day the women used most water was the day they washed clothes, when they would use more than one barrel (200l) in washing clothes alone.

Water Tanks

Only one of the participants had an underground water tank; one other had a water cistern. Residents who had tanks filled them from water lorries. Those who did not have tanks bought water in barrels or buckets. The cost of water depended on whether water was flowing in the bairro on that day. They quoted 17,000,000Kw for 5000 liters of water.

Models

They all agreed that it was better have taps, which could be found, on the local market. During the discussion on whether taps should be protected or not some of the participants suggested that the first step was to organize a good public education campaign at the beginning of the project. The Residents Commission should be responsible for this. They also suggested removing the taps at the end of the day when the standpost was closed.

They disapproved of the system of filling buckets on their heads. They also doubted whether it was possible. Some commented, “the water does not even flow in the showers in our houses. Why would it flow in this system?”

Organization – Monitor

The group agreed that the responsibility of organizing the standposts lay with the Local Administration and the Residents Commission. They proposed that they select two monitors for each standpost, one man and one woman. This would mean that in the absence of one, the other could take over. The monitors would be paid through consumer contributions.

The tasks suggested for the monitor were

- Educating the community to respect the standpost and use it properly
- Organize the cleaning of the standpost
- Collect the payments and deposit them in the Local Administration

Organization – Payment

Payments would be daily; the group suggested 50,000kw for 200litres. They considered the 50,000Kw as a minimum price. Even if one collected less than 200litres of water, one still paid 50,000Kw. The use of numbered tickets would control payments. The supply of the tickets should be the responsibility of the Local Administration. The group agreed without discussion that the money collected should be deposited in the Local Administration. They further added that such a service was part of their job. The area of Community Services was created to fulfill this function. They also agreed that it was the job of the Residents Commission and the Community Services to monitor the price of the water and to ensure that illegal connections were not made. They suggested that the Residents Commission should have specific responsibilities attributed to specific people such as

a) Inspectors of the water lines
b) Treasurer who would control the money and deposit it in the Local Administration

There was some discussion about how best to manage the money. The issue centered on whether the handling of the money should be confined to one person or allocated to a number of people. There was also some discussion about whether money was better (more safe) managed by a woman or by a man. The monthly payment to EPAL could be the responsibility of the Treasurer. The Municipal Administration should have an EPAL delegation and the payment could be effected locally. Each payment would correspond to a receipt.

The money deposited in the Local Administration should function as a fund for the community. If there are maintenance requirements, money can be withdrawn by the Treasurer to pay for the repair. If the fund is insufficient, the users will make a further contribution.

The group said that a fair price was a symbolic price such as 500Kw, which they recognized did not exist. But they pointed out that many people officially earned 3,000,000Kw per month. Some people felt if the government paid those salaries, then the public services should take that into consideration. Most of the participants opted for the pragmatic position of having a service, which worked, and for which they would pay but they agreed that the position of the government was not “just”.

If there were profits, they could be reserved for investment in the standposts. If the profits were considerable they would invest them in street lighting.

Private Operator

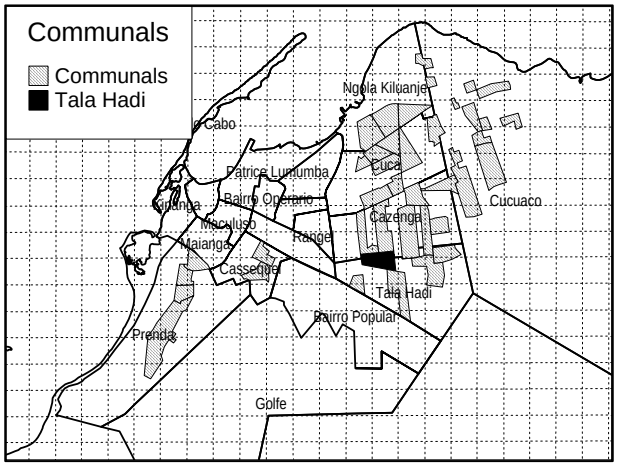
In theory, the group saw advantages in management by the private sector. But in practice there was no regulatory framework and these operators would quickly become “owners” and raise the price at will. They group felt that it was a situation, which was likely to cause discontent and conflict. They all agreed that community management in collaboration with the Local Administration was the most viable option in the current context.

Municipal Area: Cazenga

Comuna : Cazenga, Zona 18
Bairro: 4 MC
Code: Tala Hadi

Zone Characteristics:

- Density, 500/ha
- Estim. Pop. 31,500
- Av. residence, 17 years
- 92% piped connections
- 73% connections with flow
- Price of water is 8.80$US/m3
- No standposts proposed



General issues

All of the participants had piped connections. Only two of the people invited turned up at the discussion. The participants were not interested in discussing standposts and they felt that the meeting was not in their interest because they had running water. They also felt that they had other more important things to do. They indicated that there were other bairros such as Madeira, Cartume and Commissao where the population needed such a water project. One of the women said that she knows that in Cartume, residents pay 100,000Kw for 20litres. She added, "if you have small children, you will never be able to afford to buy enough water at that price". The only problem they had was the growing number of illegal connections, which meant that the water pressure in their houses was dropping.
The group commented that standposts should be built in areas where there were no domestic connections. Building standposts in areas with existing piped water was akin to "breast feeding a five year old child". Hence, the participants agreed that this area was not suitable for a standpost project. They did think that the main water line should be replaced and the illegal connections disconnected. They also expected to be able to renew their own house connections.

Water Tanks and Selling Water

Some residents have water tanks because the water pressure is so low. But residents of this area only buy water when there is citywide shortage of water. People in the area sold water to earn some extra money and to help the people in the surrounding areas. The price for 20 liters was 50,000Kw. The people who bought water came from Madeira and Commissao.
The group said that people do sometimes give water away. "Sometimes the water is flowing with a lot of pressure and you really feel sorry for the people who come looking for water". The women commented that some women do not want to know about other peoples suffering.

Illegal Connections

The group described the problem of illegal connections as a major problem for them.
"Neighbors do not want to know about each other. One comes, digs at nighttime and even makes the illegal connection in your pipeline. He does not care whether your water flows or not, he just wants to solve his problem at all costs. Then the person who pays is the one with the documents with EPAL".
The group also agreed that one of the major problems was the staff of EPAL, "who were only interested in gaseosa". (gaseosa is the popular term for a small to medium sized bribe). The participants felt that in colonial times, the law was recognized and respected. People were afraid to make illegal connections because they knew they would pay a significant fine if they did. To day, people do exactly what they want and have no fear of sanctions. The participants commented that their society was disorganized because the government allowed it to happen. They felt that in other countries, even countries where there had been a war, their governments had not stopped governing the country.

The participants also said that part of the problem was due to the influx of people from the provinces, who built their houses "and now wanted to live better than we do, who have lived here for years". The people who have come in from the provinces see a water line and they do not even bother to ask where it is going to, they just make their connection. One woman described how the house next door to her did not have water and then suddenly one day, her children told her that there was water in a tap in the neighbor's house next door.

The group suggested that when the new water pipes are in place that EPAL do as EDEL is doing at the moment. They should check all the houses with connections and check for legal and illegal connections. The participants said they were prepared to collaborate and indicate the houses with illegal connections.

EPAL – Payment

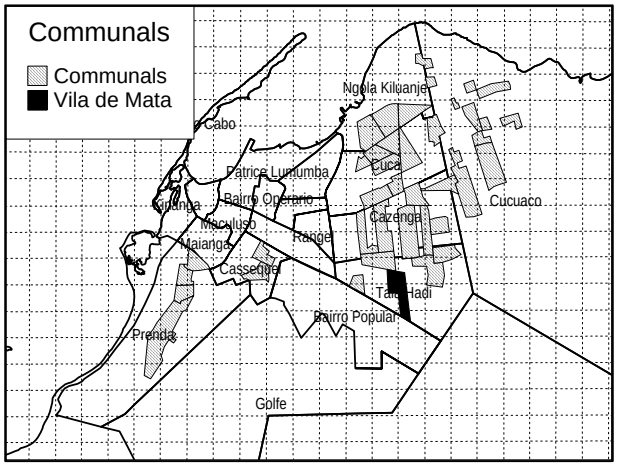
Those who have legal connections have meters and pay EPAL. Many have illegal connections, do not pay EPAL and they sell water. It was clear that the participants felt doubly victimized and betrayed by the lack of control. They agreed that all house connections should have meters and people should pay in function of their consumption. They commented that different families consumed different amounts of water. But they insisted that the initiative to re-organize and regulate the water services would have to come from EPAL. When the connections are re-established within a regulated framework, those of the residents with legal connections can facilitate the other neighbors. These people would have to a make a contribution to the EPAL bill but in relation to the real price of water. The participants indicated that residents would not want to sell water but they would not want to subsidize other residents' consumption of water.

Local Authorities

There was a Residents Commission but the participants thought that if there were going to be new responsibilities, it would be better elect a new commission. They had little experience of dealing with the Local Administration and had doubts whether they Local Administration had the capacity to solve community problems.

Municipal Area of Cazenga

Comuna : Cazenga
Sector 3, Zona 18
Bairro: Vila da Mata
Code: Vila da Mata



Zone Characteristics

- Density, 250/ha
- Estim. Pop. 19,250
- Av. Residence, 5.3 years
- 3% piped connections
- 3% connections with flow
- Price is 4.02$US/m3
- No proposed standpipes

General issues

The discussion was held in a café owned by somebody who was not a resident of the bairro. The owner recognized, after one hour, that holding the discussion on his premises held no advantages for him. He then asked the team to leave and the discussion continued with a smaller number of participants under a tree. It was held on a Saturday morning and none of the invited participants turned up. Some of the participants were drunk and bordering on the disorderly. It was only possible to hold a modified focus group because one of the participants was a policewoman who obviously commanded some respect.

Participants agreed that water was a major issue for them. They said that they would need a number of standposts in each street. They added that street lighting as another priority. They felt that it was the government's job to provide a water supply for them.

Location

Some of the participants said that when they saw the main water lines running by the bairro, they would be prepared to discuss the issue of identifying places for standposts. Others felt that it was the job of the technicians to propose where the standposts could be placed and then they, the residents, could comment on those proposals. They did not feel that there would be need to discuss the placing of standposts in a resident's yard. They felt that there was sufficient public space available for building standposts. The participants also felt that if the technicians on the project were doing their job properly there would be no need to knock houses down. The streets were sufficiently wide to allow for the placement of major water pipes.

Illegal Connections

Again some participants referred to the importance of the quality of the technical work. The pipes must be laid properly and at least below 1,5 meters to make illegal connections more difficult. Some participants proposed that they organize a community inspection team in the bairro.

Distance and Time

They suggested standposts at a distance of 50meters along the pipeline. The women thought that if they had to wait longer than thirty minutes, they were more likely to walk to the pipeline and buy untreated water. (Vila da Mata water project). They would like their standposts open everyday from 06.00 to 18.00

Water Tanks

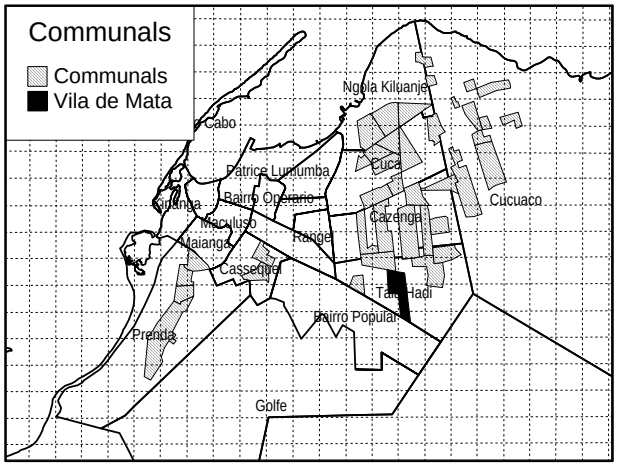
Only two of the participants had water tanks. But they said that they no longer sold water since the Vila da Mata water project opened. They only sell water now if there is a water shortage in the area. None of the participants thought it likely that people would give water away for nothing since anybody who had a tank, bought the water to fill the tank. The group quoted two prices for buying water in volume

a) 10,000litres @ 7,000,000Kw if the buyer knows the seller
b) 5,000litres @ 18,000,000Kw if they do not know each other

Organization

The discussion on the possible management of the standposts was very disorganized with people shouting and many participants talking at the same time. Finally, with the help of the policewoman, they agreed that the more viable method of management would be management by the Local Administration. They felt that they had no experience of organizing anything as a community and they were more likely to waste a lot of time fighting among each other.

Municipal Area: Cazenga
Comuna: Tala Hadi/Vila da Mata
Rua de Fiaco ou Filda
Perto de Praca do Imbondeiro e Praca
Code: Vila da Mata



BCR

Zone Characteristics

- Density, 250/ha
- Estim. Pop. 19,250
- Av. Residence, 5.3 years
- 3% piped connections
- 3% connections with flow
- Price is 4.02$US/m3
- No proposed standpipes

General Issues

The Coordinator had been informed about the discussion group and invited but could not come.
The participants said their current sources of water are lorries, which get water in Kikuxi and the giraffes in the city. There is one underground tank, which is feed by the network via the BCR (Military camp). This is considered the “salvation of the people”. When there is no water in the tank they walk one kilometer to the standpipes of Vila da Mata.
The initial reaction was that,
The program should benefit the population so we can only be happy but we would like to see something happen before we create hope or believe in any improvements. We walk long distances for water, crossing main roads and many of our children get knocked down on the road. If the government provides us with cheap affordable water – we will be happy. But that is job of the government but we will have to see it to believe it. Affordable water will solve many of our problems – the money we save we can buy food and other things we need. But we need to see something concrete in order to believe that anything is really going to change. One participant gave the example, “if a father says to his child, I will give you something to eat but gives him nothing that day. Then on the next day, the father says again, yes, I will get you something to eat. And then the father continuously repeats the promise without fulfilling it. Eventually the children will no longer either ask the father for something to eat or believe the father when he promises something.
So by the population and the government – the government has promised much and not delivered on anything. The group complained that there were no schools in the bairro and many children of primary school age do not study because they would have to walk too far. The bairro has electricity from EDEL supplied via Filda. The users pay a monthly rate of 1,000,000Kw. for a piped connection. The current is very weak and the supply is irregular.

Locations

The actual selection of the places for standposts will depend on the technicians who implement the project. If they leave it to the residents, everyone will want it near to his own house. We have lots of land and the selection of public land can be approved by the local administration. The group thought that many people would be prepared to cede a part of their yard for a standpost. The participants thought that the issue of public use of private land would not be a problem where water was involved but they said that they really could not answer for the majority. The group frequently referred to the fact that they could not speak on behalf of their neighbors and generally had no idea how their other neighbors might react to different situations. There was no indication that other people might be difficult but just that they had no idea how others might react.

The group felt that the issue of building the main pipe where houses exist should not arise. There was adequate space for the pipeline to be laid without affecting the position of existing dwellings.

Distance/Time

They said that they currently walked 300m to 500m and sometimes more. When there is a shortage they walk as far as Asa Branca, TCul and the Centro Professional de Cazenga. The participants wanted house connections but they considered the standposts better than no improvement. The important thing was to have water in the bairro. So they agreed that 50m was an acceptable distance to walk.

When asked about waiting times, they explained again that a real improvement would be water in their yard. They said that when there are water shortages, they often wait for one hour to one and half-hours. Hence those who can afford it build a tank and fill it. They felt that a standpost would always mean some wait; they suggested a maximum wait of 10 minutes. They thought that if they had sufficient number of standposts with good water pressure they should be able to arrive and find only one or two people in front of them. When they said this, they then added that that was probably an impossible situation in Angola and they wondered aloud whether the government would ever be able to organize a project, which would provide an acceptable water supply in the bairros.

Queue

They again said that disorganized queue was a feature of shortage of water; if there was enough water people would not be bothered shouting and pushing. People shouted and pushed because they had to fight for water. But users should be served in order of arrival with no exceptions. One of the men said that men should not expect to go in front of women and children. The others agreed.

Tanks

Only one person in the group had a water tank. Nearly everybody in the surrounding area bought water from a “privado” who had built a tank connected to the water pipe from the military camp. They all considered that this person was providing a valuable service to the population and were very concerned that we might denounce him to EPAL. They quoted a price of 20,000,000 for 5,000L from the water lorries. If you bought the water from the water lorries you could not afford to sell it at 50,000 for 20 Liters. Many people did not fill their tank because buying water in large volume was so expensive. But, if you left your tank empty for too long it deteriorated. 5000litres for one family would last one month. But even filling your tank took up a lot of time – one had to go to Kifangondo to contact the drivers of the lorries.

Price

They currently paid 50,000Kw for 20litres of piped water. Twenty liters could cost anything from 100,000 to 250,000Kw depending on the availability of water in the bairro. When it rains lorries, cannot come into the bairro and water is more expensive. Many people collect rainwater but some families did not own a barrel to collect the rainwater. They agreed without much discussion that a just price was 50,000Kw for three buckets of 20L. They quoted the examples of the standpost at the school Angola-Cuba where one could fetch as much water as one wanted in a day for 100,000Kw. They added that whatever the system or the price, it would have to be less than they were paying at the moment. They said that “the people were accustomed to all sorts of systems and abuses and the only thing they would insist on is that the price would be less than what they actually pay at the moment.

Hours of service

Participants confirmed that most people fetch water every day. The peak times are early in the morning and in the evening, but they would like the standpost open from 06.00 to 19.00. They reacted negatively to the idea of alternate days of supply – the group said “that talking about water on alternate days could only happen in Angola”.

Models

When asked about what kind of taps they would prefer, they answered, “you ask us about our preference in taps, all we want is water. As long as water comes out of the tap, we do not mind what kind of tap it is”. On further discussion they added that since the country had no money (não tem importancia), there was no point in importing anything. They also said that when the tap broke, they would prefer to know where to buy a new tap instead of being dependent on something that was imported. They also said that all taps would break frequently because of the children and because of vandalism. One participant also said that there were always drunken individuals who were determined to break something. Taps were an easy target. All in all, they felt that protected taps were better.

They approved of the model shown and also agreed that a modification which would allow them fill the buckets on their heads was a good idea.

Organization – Monitor

Spontaneously, the group said that the monitor would have to be paid; that it would be his job and he would have to stay there all day. One could not expect somebody "to stay at the standpost, hitting flies all day and bring nothing home to feed his children". But they as a group could not indicate the appropriate person or persons in this discussion. They felt that the group was too small and not representative of the population to give specific opinions on such an important subject. When discussing "organization" they referred frequently to the coordinator as somebody who was likely to know what to do. They suggested that the person could be nominated, it could be somebody already employed in the government or EPAL or it could be somebody who lived near the standpost. But whatever arrangement was made, the monitor must be an employee of somebody. The concern, though poorly articulated, was supervision and control and the sense of accountability i.e. the person would have to answer to somebody and his employment should depend on his performance. No participants mentioned an older person as in some other groups.

The suggested tasks for the monitor included

- Present at the standpost during the entire day
- Remove the taps if they are removable and replacing them every morning when the standpost is opened.
- They did not mention collecting money even though it was previously discussed.

Organization – Money

The group was not very clear on how the money could be managed. They clearly agreed that

a) EPAL would have to be paid and said that EPAL would have to charge the price it cost them to supply the water. They also felt that it was perfectly reasonable that EPAL should cut supply, as EDEL did, if payment was not made.
b) Payment should be made on a daily basis, whether with tickets (senhas) or cards (fichas). They also clearly felt that one needed a paper trail. They said that monthly payments would be much too difficult to organize.
c) They could see that money was going to accumulate and they suggested depositing in the bank, with the Local Administration (always referred to as the Commissariado). They also mentioned that EDEL had a local office for payments and EPAL could have the same. They had no ideas about potential control or accountability for the money.

They all agreed without discussion that the way to avoid abuses and unauthorized prices was to publish the prices. They felt that if there was public knowledge of prices that the population would simply not stand for local abuses. They also suggested that whatever the system it would have to be accompanied by the local coordinator.

Private Operator

Again, when presented with the option of a private operator, they said that the priority for them was water at an affordable price. They really did not mind who managed the system as long as there was water in the taps. In the case of a private operator, it would have to be somebody they knew who lived in the bairro. Participants commented, "He could not be distant from the bairro. Even for purely practical reasons like coming to work. If it rains, only people who live in the bairro could work in the bairro". The price of water should be publicly announced and the coordinator must supervise the operator. Any rises in prices would have to be discussed first with the consumers. The private operator would have to be clearly responsible for repairing the standpost when necessary.

The participants did not know if the area they lived in was controlled by any specific Communal Administration. A number of them remembered hearing about a Residents Commission but nobody remembered it functioning. They all knew their bairro Coordinator.