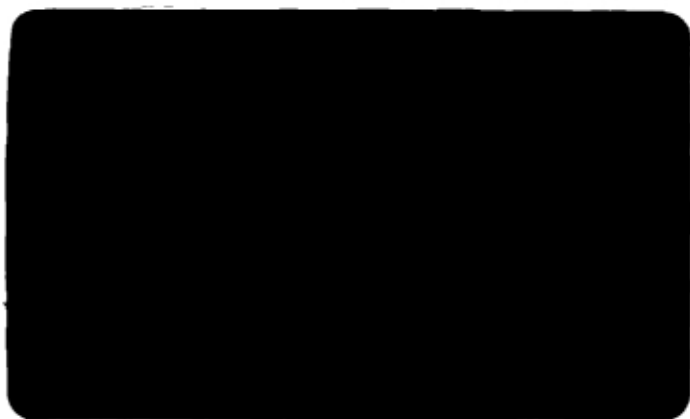


WATER SUPPLY AND SANITATION PROJECT IN OHANGWENA REGION



DISCUSSION PAPERS AND REPORTS SERIES

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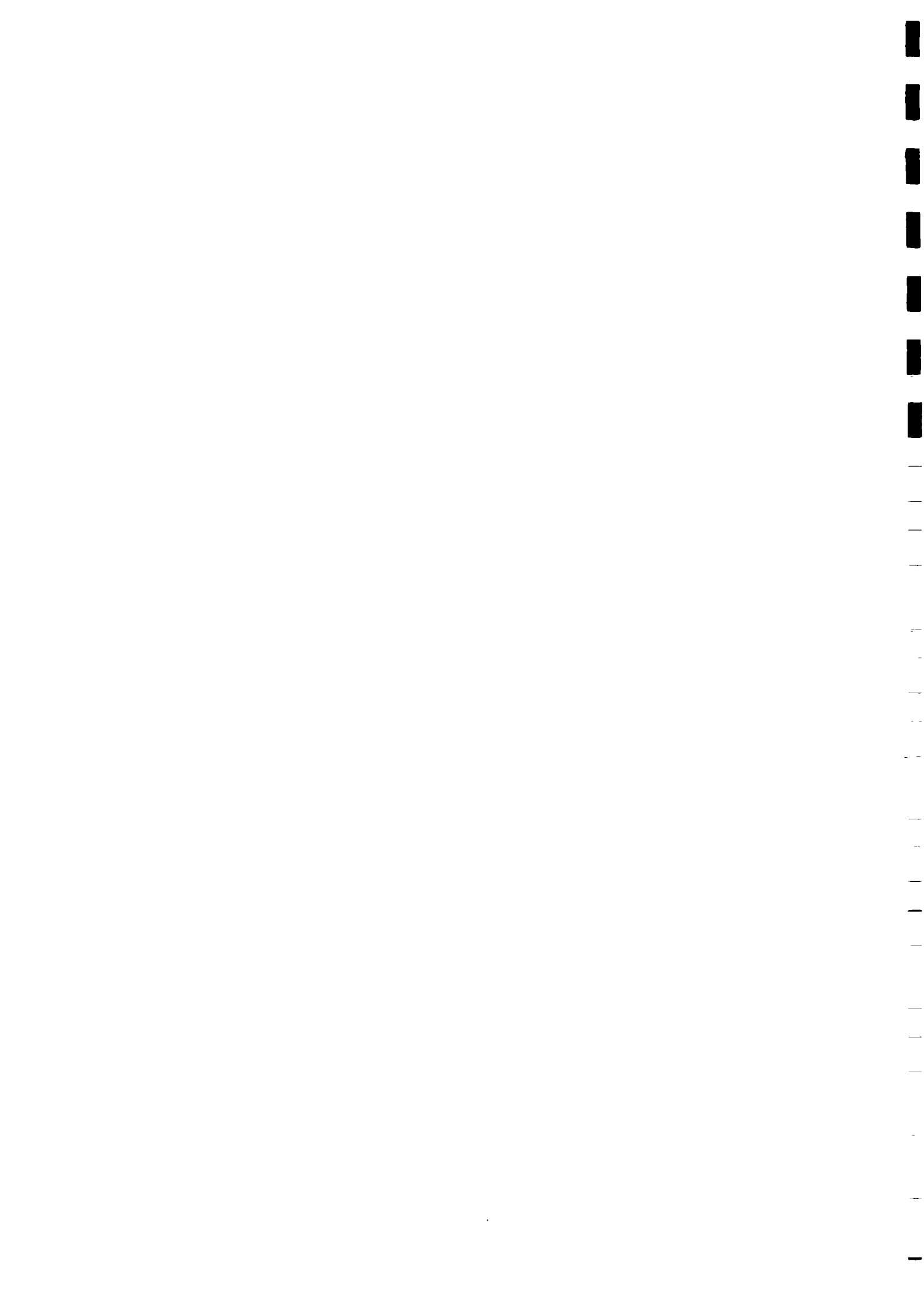


**A SANITATION SURVEY IN THREE VILLAGES IN
OHANGWENA REGION: OSHIKANGO, OUTWILO
AND ETOPE**

Anu Eskonheimo with Petrus Hamukwaya, Hilma Kapweya,
Helena Martin, Toivo Shilumbu, Elizabeth Terry
and Arja Vainio-Mattila

December 1994 DPR 1/95

ISBN 13206
824 NAOM 94



"These days you cannot
have any shame,
you must go even behind
the smallest bush "



**A SANITATION SURVEY IN
THREE VILLAGES IN OHANGWENA
REGION: OSHIKANGO, OUTWILO
AND ETOPE**



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FOREWORD

This report launches the new Discussion Papers and Reports series of the Water Supply and Sanitation project in Ohangwena Region. This is our attempt to share some of the experiences gained over the last three years in developing the project activities. The series will contain reports of commissioned consultancies as well as papers reflecting ideas and experiences of the project staff and those they work closely with. We welcome all comments on these report as we believe that such input and generation of discussion is vital to achieving our goal: women and men of the Ohangwena Region managing and maintaining their water supply and sanitation systems.

This first report covers a survey which was carried out to increase our understanding of what women and men of our project area already know and think about developments in the sanitation sector. The findings, as well as the process, of the survey challenged many of our assumptions about the priorities and skills of the communities we work with.

An important part of the process was also staff training on qualitative research methods. A report outlining and evaluating the training process is also available from WSSPOR.

Arja Vainio-Mattila
Senior Community Development Adviser
Ongwediva, 22nd December 1994

I. INTRODUCTION

I.1. WSSPOR AND ITS PROJECT AREA

The Ohangwena Region is located in northern Namibia on the Angolan border. In March 1992 the Namibian and Finnish governments jointly started the Water Supply and Sanitation Project (WSSPOR) in the western part of Ohangwena Region (See Figure 1. Location of the Project Area.) The WSSPOR Project is implemented by the Finnish International Development Agency (FINNIDA) through a Finnish consulting company, Finnconsult. The Namibian partner in the project is the Department of Water Affairs in the Ministry of Agriculture, Water and Rural Development. **The long term objective of WSSPOR is to support the Namibian Government's efforts to secure a safe and adequate water supply as well as proper sanitation for the rural population in the area. The immediate objectives of WSSPOR are:**

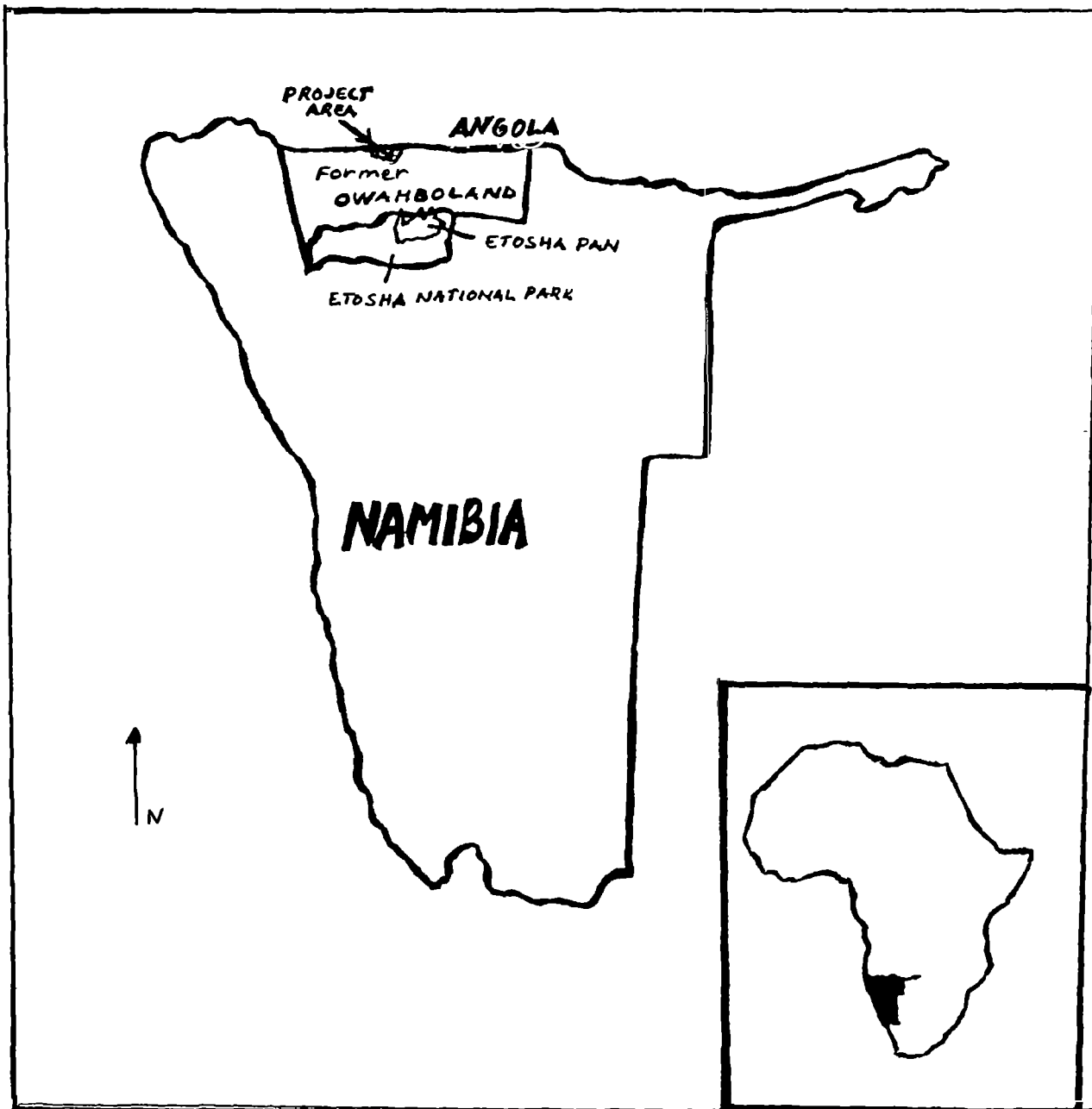
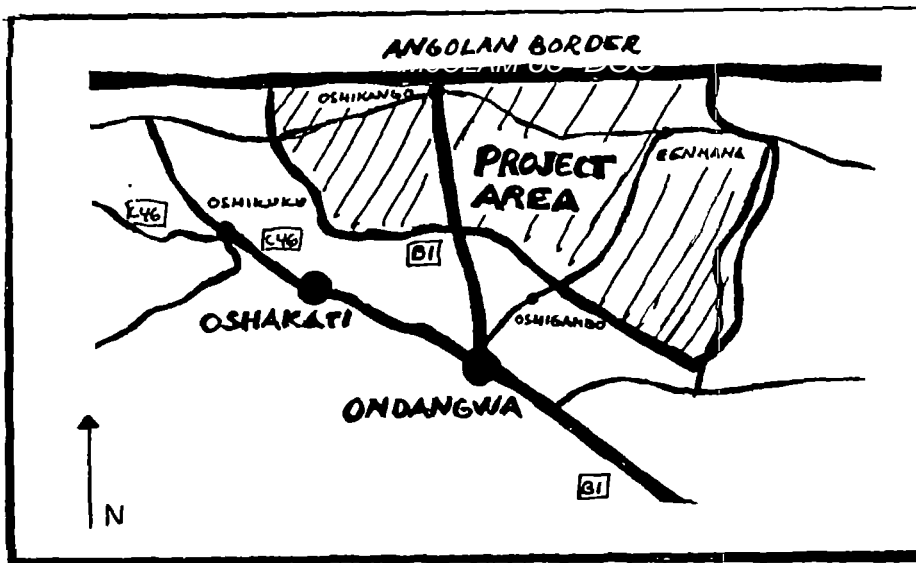
- * **to empower women and men to initiate, construct and manage their water supply and sanitation** by facilitating these activities through technical assistance and material supply,
- * **to develop local contracting capacity for water supply and sanitation** and to encourage local production and supply of construction materials,
- * **to prepare development plans for water supply and sanitation** for the project area, and
- * **to support skill development in communication and organizing, design and construction, and small business development through training for community based water supply and sanitation.**

So far the WSSPOR project has been involved in constructing covered communal and private wells, boreholes and latrines for schools and clinics, but no **large scale programme of sanitation involving rural homesteads has started yet.**

The estimated population in the WSSPOR area is 125 000 (Silverberg 1994.) People in the area speak *Oshiwambo* which is a combination of several local languages such as *Oshidonga* and *Oshikwanyama*. Most of the people live in rural areas in homesteads which are called *omagumbo* (singular: *egumbo*; See Appendix I for Oshiwambo words) in extended families. A traditional homestead consists of several huts which are surrounded by fences. Most structures in the homesteads are traditionally built with wooden poles, but also other materials from the surroundings (such as grass and clay) are used (See Figure 2. Traditional Homestead.) These days some people also use other, "modern" building materials (such as cement and iron sheets) for building. Outside each *egumbo* are often animal kraals and the *epya* (field). The most common crop cultivated in the fields is *omahangu* (pearl millet).

According to the old people in the area, people used to move their *omagumbo* to another location within their *epya* once every two to three years. These days many homesteads are still moved, but less often, about once in four to eight years (LeBeau and Pendleton 1992). When *omagumbo* are moved, fields will be established in the place where people have lived and the kraal has been. This is because the household waste and animal manure create more fertile land. Also huts and other structures in *omagumbo* get soon worn out in local conditions and when *omagumbo* are moved they can be replaced with new ones. Although many people still move their homesteads, there are also other people who have built permanent buildings in their homesteads and they do not move their homesteads any more. Unlike traditional buildings which are built with materials from surroundings, permanent buildings are often made from modern building materials such as cement.

Figure 1. Location of the Project Area



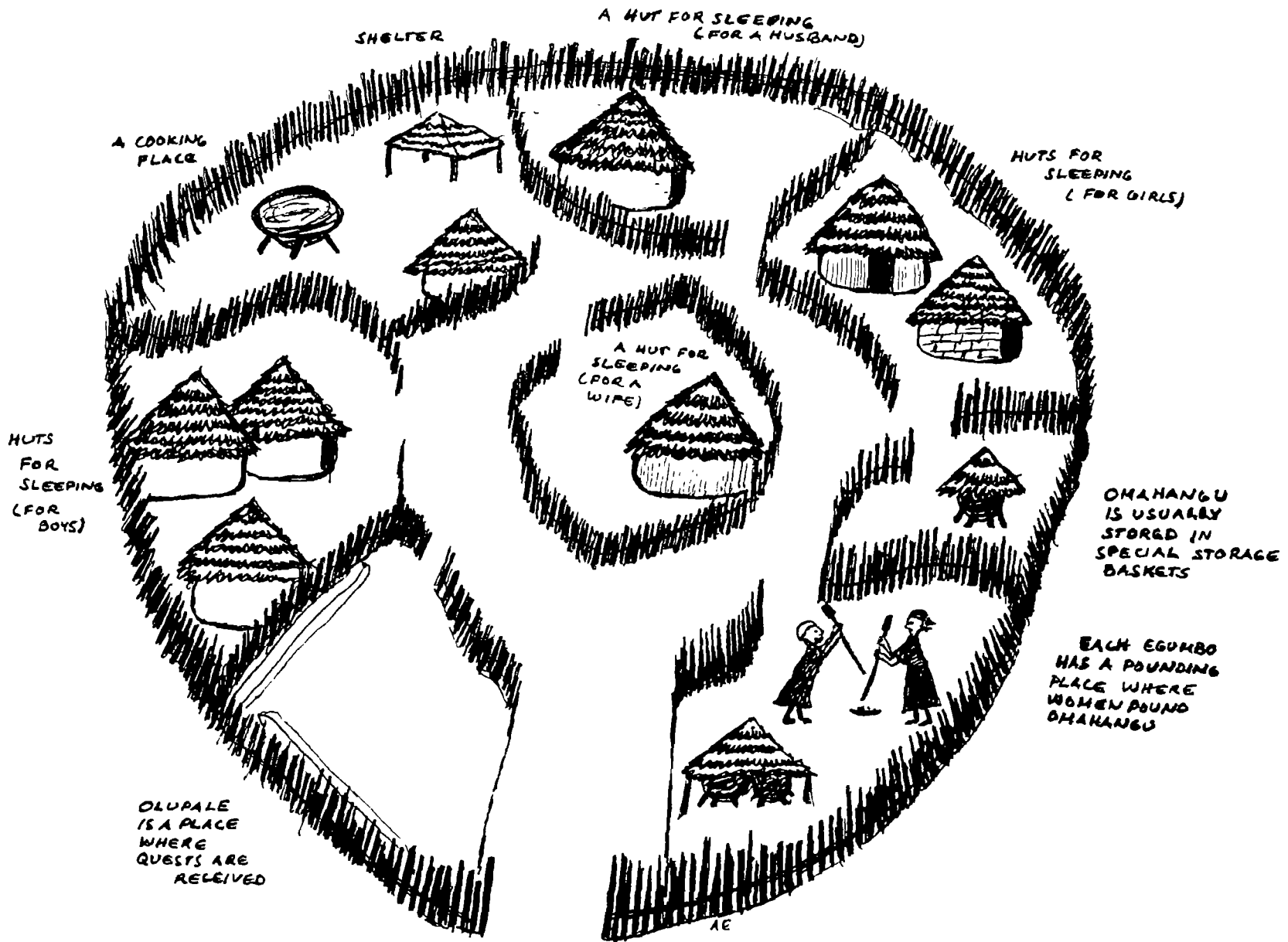


Figure 2. Traditional Homestead (Egumbo)

Omagumbo are located fairly far from each others. Since village areas can be large (although sparsely populated) the headmen usually have assistants (junior headman, sub-headman). Each junior headman is responsible for certain area and homesteads in the village which is called *omukunda*.

The living conditions in the WSSPOR area are difficult for many people. The rainfall is relatively low, the dry season is long and the soils are generally poor for agricultural use. Deforestation is a serious problem in the area and will worsen with increase in the population. Also large numbers of cattle, goats, and especially, donkeys graze around freely, eating everything they can find (Silfverberg 1994).

There are no permanent rivers or lakes in the area, but during the rainy season the flowing surface water can accumulate in small seasonal rivers or channels and collect in natural pans. When people talk about *oshana* they refer to a certain kind of a channel or a pan in which water accumulates during the rainy season. The level of water varies at different times during the year in the *iishana*. If good rains occur the *iishana* start to flood. The local word *efundja* refers to large *iishana* floods which originate from Angola. The water flow in *iishana* and seasonal rivers varies each year. If southern Angola receives a lot of rain, the central, big *iishana* may flow strongly for several months and *efundja* can reach Namibia. Since the rains vary a lot, seasonal floods can some years reach Etosha pan, and in some years *efundja* does not affect Namibia at all (Silfverberg 1994.)

In addition to natural water sources such as *iishana*, people in the area get water from a pipeline (communal taps), wells and boreholes. The water in the pipeline in the area is pumped all the way from the Kunene River in Angola. This pipeline system is the largest water supply system in the country having nearly 1000 kilometres of pipeline. The location of this pipeline has strongly influenced where people have settled in the area (Silfverberg 1994.)

1.2. SURVEY REQUEST

The WSSPOR's sanitation programme has so far involved building pit latrines for institutions (schools, churches etc.) and some private people who have made applications for toilets in the project's field office. WSSPOR has not yet started a large toilet programme in rural areas, although improved sanitation is one of the objectives of the project. Since very few people have toilets in the area and they are not used to them, it is a significant challenge for WSSPOR to implement such a programme successfully. In order to do so, the project needed information on people's knowledge, ideas and practices regarding sanitation. In early 1994 consultant Ms. Elizabeth Terry in Windhoek was contacted and it was agreed that she would conduct a sanitation survey in the area.

After the WSSPOR steering committee met in August 1994, a decision was made to turn the survey into a training exercise for the WSSPOR staff. **The main goal of the survey thus became to train and prepare the WSSPOR staff to be able to undertake qualitative research.** Four members of the WSSPOR staff participated in the training programme -- in the classroom and in the field. The following people conducted the research:

- * Ms. Anu Eskonheimo (short-term consultant, supporting the research)
- * Mr. Petrus Hamukwaya (sanitation supervisor with WSSPOR)
- * Ms. Hilma Kapweya (Junior Community Development Adviser with WSSPOR)
- * Ms. Helena Martin (Junior Small Business Development Adviser with WSSPOR)
- * Mr. Toivo Shilumbu (Rural Water Extension Officer with DWA)
- * Ms. Elizabeth Terry (consultant, responsible for the training)
- * Ms. Arja Vainio-Mattila (Senior Community Development Adviser with WSSPOR)

1.3. METHODOLOGY

The aim of the research was to find out what people think about hygiene and sanitation issues and what kind of practices and resources they have regarding sanitation and toilet construction. Since diverse and detailed information on rather a delicate subject (such as sanitation practices) was needed, we decided to conduct the

research by utilising qualitative research methodology. Qualitative research methodology is more suitable for the collection of the type of information needed in the sanitation survey than quantitative research methodology, because with this method it is possible to probe deeper for more sensitive information.

People who conduct research with qualitative methodology, usually collect the information in few place, because they want to get more in-depth information and this takes more time. In qualitative research the information is not collected with the help of a structured questionnaires like in quantitative surveys, but usually **various qualitative research methods** are used in each research. The variety of methods do not only produce more information, but also helps to double-check (triangulate) the verity of information.

The qualitative research methods used in this study were Focus Group Discussions (FGDs), Key Informant Interviews (KII) and observation. In addition to these methods, some Participatory Rural Appraisal (PRA) techniques or tools were used. The aim of these methods was to get information by getting people to participate actively in the information collecting sessions. **The PRA tools used in the conducted research were: Mapping, Ranking and Venn Diagram (See Appendix 2 for more detailed information on the utilised research instruments).**

It should be noted that qualitative research does have some limitations. The information obtained from qualitative methodology is usually not summarised into table format which can be then easily compared with information collected in other areas. The data are not collected by using statistical methods, and therefore, cannot be generalized regionally or nationally. Because of these limitations, the conclusions and recommendations from this research apply only to the three villages studied. Having said this, the information from these villages should prove to be very useful base when surveying other villages in Ohangwena Region.

I.4. SELECTION OF SURVEY VILLAGES

The villages chosen in the sanitation survey were **Oshikango, Outwilo and Etope** (See Figure 3. Location of the Survey Villages.) They were chosen as the study villages for several reasons. Oshikango represents a community which was thought to be in a fairly good position when compared to Outwilo and Etope. Oshikango has the best transport connections of the three villages, because it is divided in two parts by the main road which goes from the Angolan border to Ondangwa. It has a fairly lively centre with open market, shops, cuca-shops and a water tap by the main road. There is also a combined school in Oshikango and a water tap at the school. WSSPOR has built toilets at the school as well as held a toilet demonstration there.

Outwilo and Etope were chosen to represent villages with a more problematic situation. Although there is not enough clean water in Oshikango either, the water problem was known to be more serious in the two other study villages as there is no shallow ground water and the deep ground water has been found to be saline. Both Outwilo and Etope are situated in the more sparsely populated eastern end of the project area. There are no schools in Etope and Outwilo and the children from the communities have to go to school in Ondobe and Onangwe.

I.5. ACKNOWLEDGMENTS

We would like to thank warmly all the Key Informants who gave their time to discuss various issues with us (See Appendix 3 for a list of the Key Informants.) Especially we would like to thank all the community members of Oshikango, Outwilo and Etope who participated in this research.

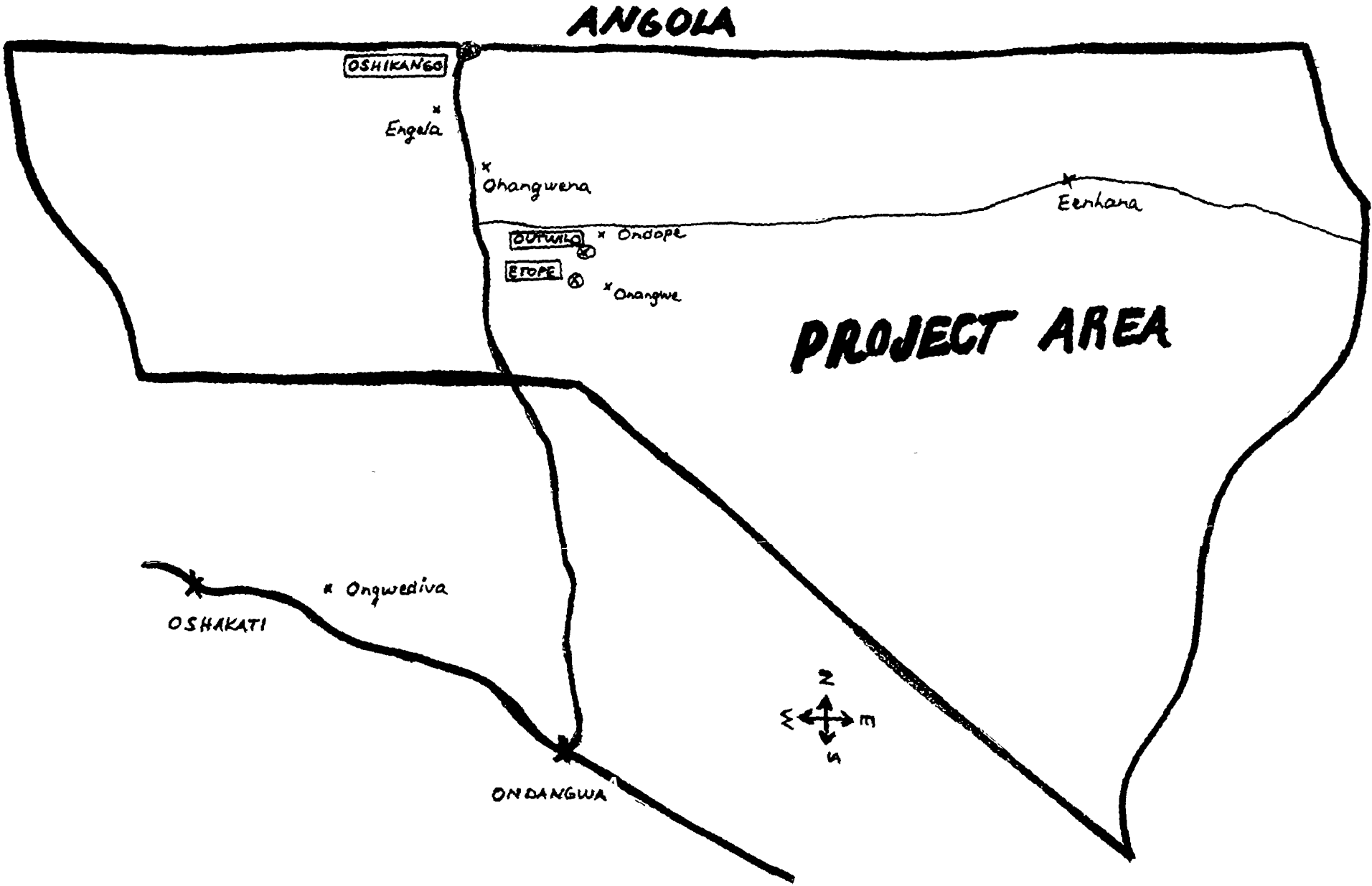


Figure 3. Location of the Study Villages in WSSPOR Area

2. SURVEY VILLAGES

2.1. OSHIKANGO

Oshikango Village is situated on the Angolan border in the Oshikango Constituency, about ten kilometres north of Ohangwena where WSSPOR's field office is situated. There are four seasonal lakes (*omatale*) and two *iishana* in Oshikango. Oshikango is divided into two parts by the main road from Ondangwa to the Angolan border (See Figure 4. The Map of Oshikango.) Most of the people, mainly women and children, collect their drinking water from a tap by the road. Children wake up early in the morning to fetch water before school or they collect it on their way back home from school. It takes two hours to walk through the Oshikango village north to south, so an average two-way trip to the tap was estimated to take an hour by the community members.

The combined school in Oshikango is on the main road by the pipeline and there is another, recently installed tap at the school. Although all the people in Oshikango are allowed to use the school tap, it is currently used mainly by the community members who live near the school.

Oshikango is the largest of the study villages and has 1020 households with about 8000 people (according to the headman). The headman of the village is assisted by four junior headmen. The village is divided into four equal parts and each junior headman acts as the representative of an area, solving minor problems in his area. In addition to traditional homesteads there is also a squatter settlement in Oshikango centre.

Oshikango centre has an open market, a supermarket and *cuca* shops. There is a police station by the Angolan border. Shops in the centre have pit latrines and several community members have built their own toilets, although most of the people do not have private toilets. Oshikango has no clinic and people go to Engela and Odibo Hospital for treatment. There is no church in Oshikango.

2.2. OUTWILO

Outwilo is situated in Ondobe Constituency less than twenty kilometres south-east from Ohangwena. It is a more remote area than Oshikango and the major Ondangwa-Oshikango road lies about twenty kilometres west of the community.

The community gets water from three shallow wells which are situated in private yards, but anyone in Outwilo can use them. However, these wells do not have enough water and the community is facing a serious water problem, which is compounded by the fact that the existing water is saline. People in Outwilo also get water from a tap behind the school in Ondobe, but the tap is quite far and some people have to walk up to three to four kilometres to get to the tap (See Figure 5. The Map of Outwilo.) When people reach the tap they usually have to stand in line and wait for their turn.

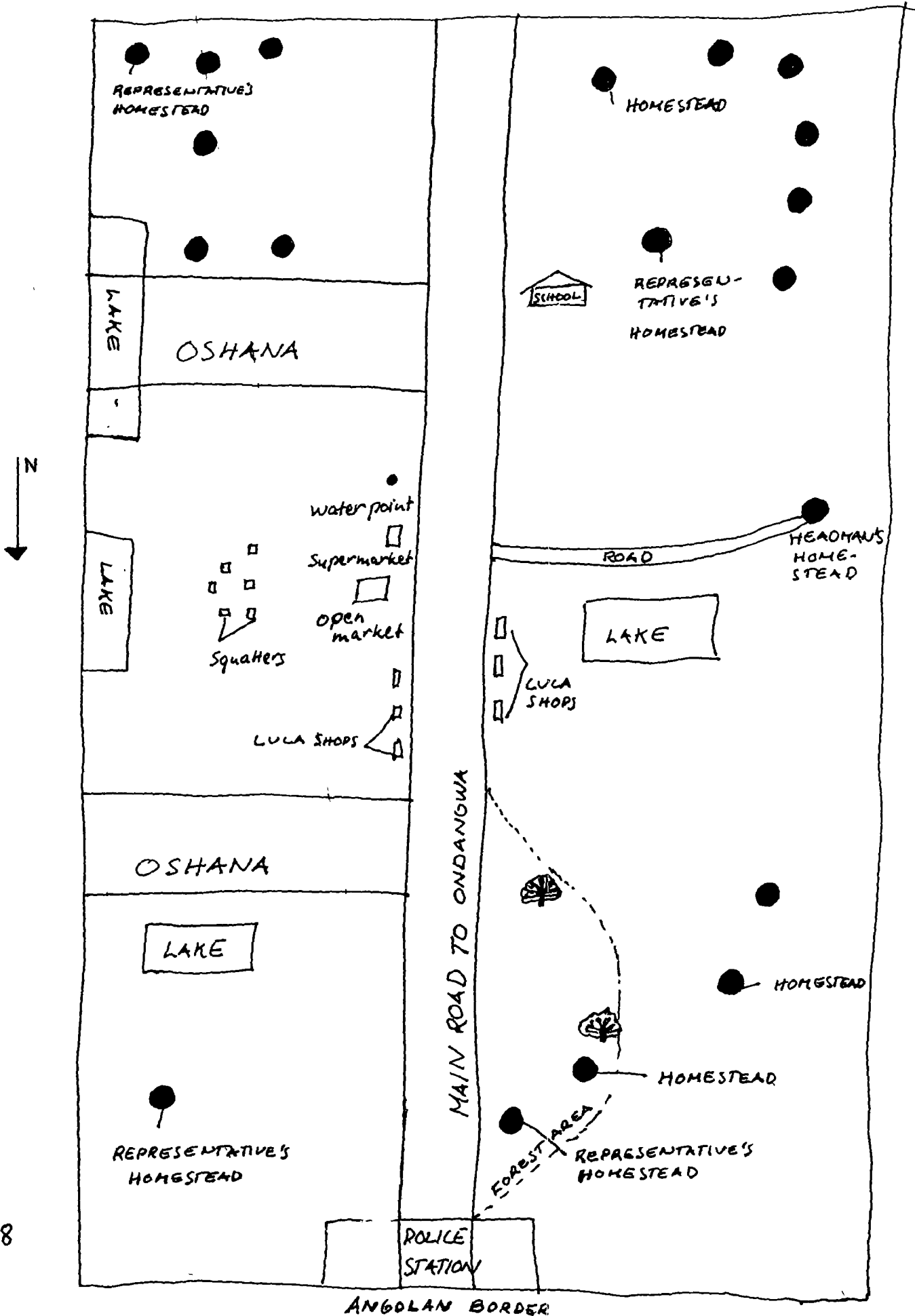
There are no schools, clinics, churches or supermarkets in Outwilo. Children in Outwilo have to go to school in Ondobe and Onangwe. Young children of six to seven years cannot go to school, because the distance is too far. In case of illness, people go to Ondobe for treatment. There are at least three private toilets in Outwilo and there are pit latrines at the Ondobe school and clinic, and at the Onangwe school.

There are about 65 households in Outwilo and it is headed by the headman and his two assistants. According to the community members no development activities such as building of protected wells or meetings on hygiene issues have been carried out there. Some midwives have, however, been accepted into a training programme which is currently run in Onangwe and arranged by the staff from Engela Hospital.

Figure 4.

MAP OF OSHIKANGO

drawn by a Group of Community Members in the Sand 19/11/94



Map of Outwilo as Drawn by 17 Community Members
in the sand on 24 October 1994

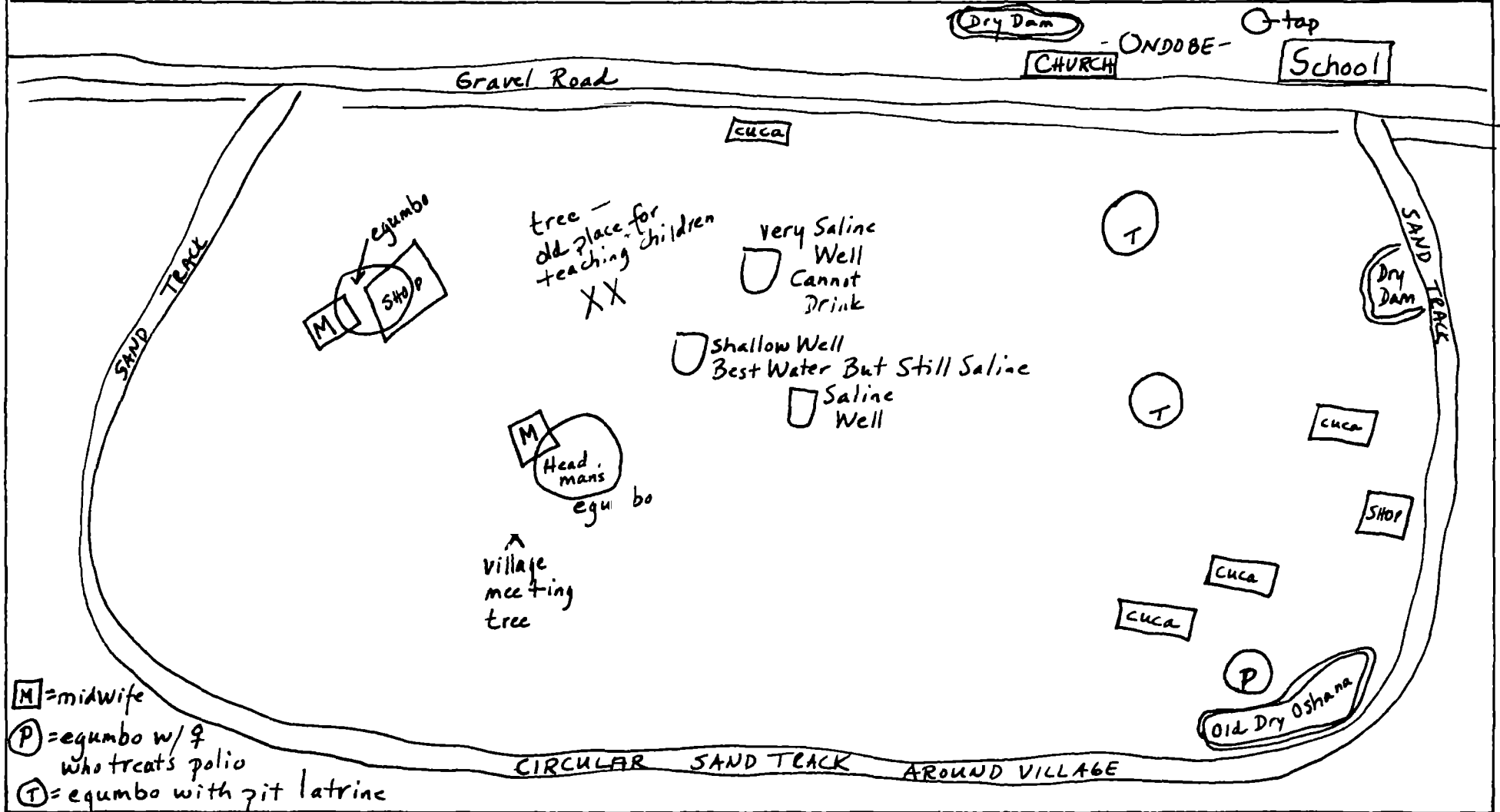


Figure 5.



2.3. ETOPE

Etope is also situated in Ondobe Constituency about twenty kilometres southeast of Ohangwena and three kilometres south of Outwilo. There is a serious water problem in Etope as well, since most of the waterpoints cannot be used as the water is too saline. Currently the community has about ten unprotected traditional wells, two protected wells and a borehole, but people are only able to use the water from one traditional well in the area and the tap in Ondobe. The traditional well is about two kilometres from the headman's house and the tap in Ondobe about three to four kilometres from Etope.

There are no schools in the community and children from Etope have to go to school in Onangwe or Ondope. Etope has no clinic, church or supermarket, but there are two midwives, a nurse, a teacher and a pastor living in the area.

There are less than 100 (approximately 70) households in Etope. The headman of Etope is assisted by eight junior headmen and a secretary. Each of the junior headmen are responsible for passing information from the headman to certain households in the community. The community meetings are held by the "meeting tree" close to the headman's house. There is also another special tree in the area, called *omumakani*, which is used by community members for herbal purposes (See Figure 6. Map of Etope).

There has been one meeting on hygiene issues in the community conducted by the people from the Engela Hospital. The two covered wells and a borehole have been constructed by WSSPOR and there are two water committees in the village. The community members have made inquiries about a pipeline to the village, but so far they have received no reply. They will make an official application to get a pipeline branch and a tap in the area in the near future.

3. MAIN FINDINGS FROM OSHIKANGO

The research material from Oshikango is based on the following activities:

- * One mapping exercise with community members (11 females/17 males)
- * 1 Focus Group Discussion with old men with mapping (7 males)
- * 1 Focus Group Discussion with parents whose children are studying at Oshikango Combined School and who are members of the school board (3 females/1 male)
- * 1 Focus Group Discussion with parents whose children are at Oshikango Combined School with ranking exercise
- * 1 Focus Group Discussion with old women (4 females)
- * 2 Key Informant Interviews with two midwives from Oshikango
- * 1 Key Informant Interview with a business woman in Ohangwena
- * 1 Key Informant Interview with the headman of Oshikango with ranking

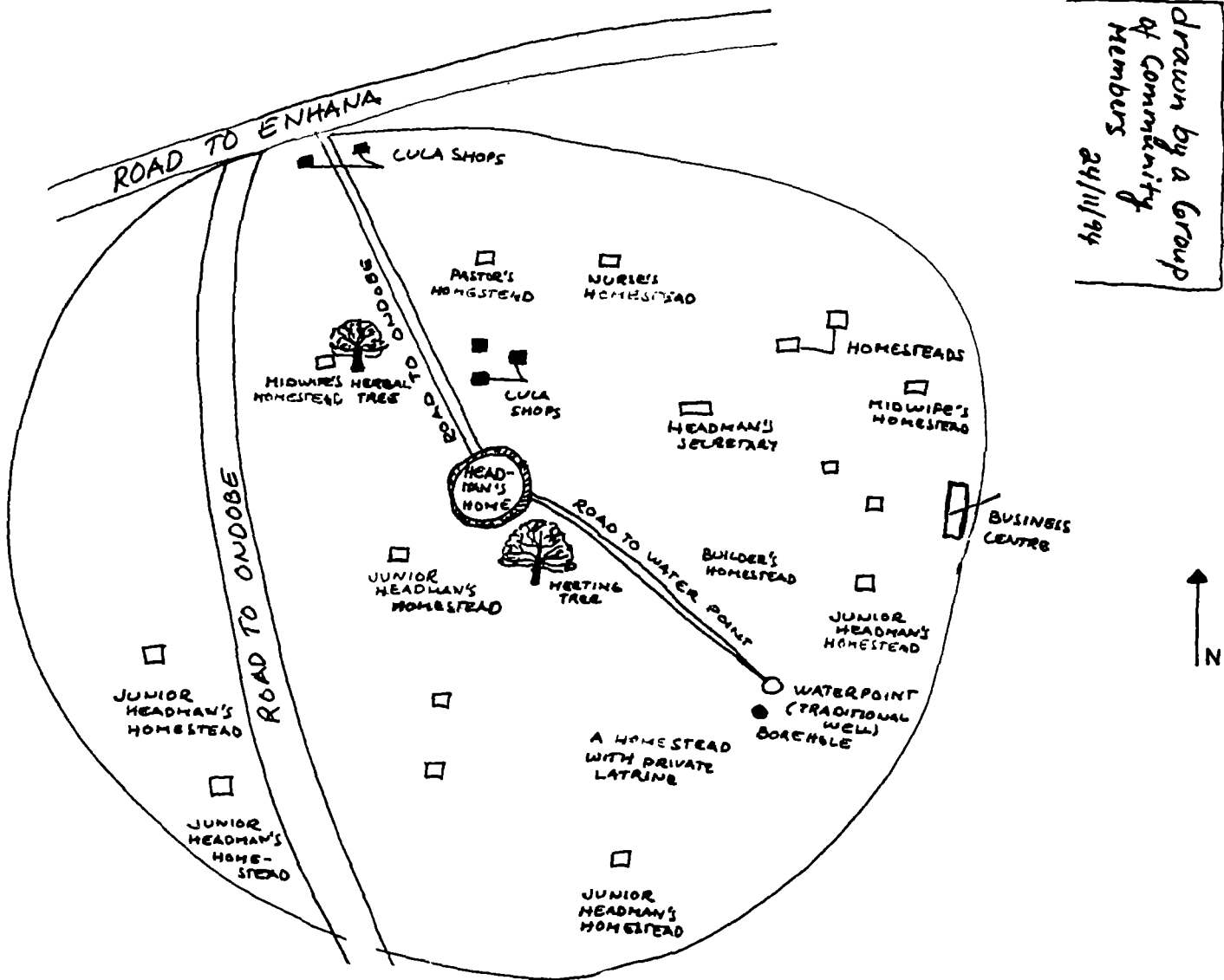
The research material from Oshikango Combined School includes:

- * 1 Venn Diagram exercise with teachers (15 persons)
- * 1 Focus Group Discussion with teachers with ranking exercise (7 females/4 males)
- * 1 mapping exercise with Grade 6 students (10 persons)
- * 2 Focus Group Discussion with Grade 6 students with ranking exercise (11 females/5 males and 11 females/6 males)

Other research material was obtained from:

- * 1 Key Informant Interview with the Pastor of Evangelical Church, Oshikango
- * 1 Key Informant Interview with the Diocesan Water Project Manager (with ranking), Odibo
- * 1 Key Informant Interview with the Health Inspector, Engela

Figure 6. Map of Etape



3.1. HEALTH AND HYGIENE EDUCATION

The Oshikango community has received health education from Engela Hospital whose staff sometimes talks about health and hygiene issues at the open market and in the villages. According to the parents on the school board, hospital staff sometimes even go from house to house and give information about hygiene including advising the community to have toilets at their houses. They said that visits were done twice this year, but only one community meeting was arranged by Engela hospital staff this year. Also the headman confirmed that people from Engela sometimes come to the community, have a meeting there and talk about health and hygiene. He said that since Christmas 1993 there has only been one of these meetings, though.

According to the Health Inspector from Engela Hospital, they also organise a monthly cleaning campaign at Ohangwena, Omafo, Engela and Oshikango which starts early in the morning and ends about ten am. He said that they have established a health committee for squatter areas (e.g. in Oshikango), but he has not yet done a follow-up on the committee's activities.

Children learn about health and hygiene in Grades 4, 5, and 6 at Oshikango Combined School. There was a toilet demonstration, "Toilet Day", which was arranged by WSSPOR this year. One group of students said that also Engela hospital had a health and hygiene meeting at the school in 1993, where they talked about family planning and told them not to throw sticks into the toilets.

Teachers and some students had difficulties in remembering what they have learned in health and hygiene lessons and during the WSSPOR's toilet demonstration. For instance, the students in the mapping exercise (See Figure 7. Area Near the Oshikango Combined School) could not at first mention a single thing that they have learned in health and hygiene lessons, but finally one of them said that the lessons have been "about being clean".

In one group of students, six children out of fifteen said they have toilets in their homes which were built by their parents after the WSSPOR toilet demonstration at the school. Some of the children who did not have a toilet in their homes said that they have told their parents to build toilets, but do not know if they are going to. "We are not decision makers", they said. In general it was difficult for this group to remember anything that they have learned about hygiene at the school. Finally they managed to mention that they have learned that hands should be washed after using the toilet and human waste should be covered in toilets. Children liked the "FINNIDA demonstration", because "it was about personal hygiene".

Another group of students remembered, however, that the toilet demonstration was conducted by FINNIDA and posters were used to explain "something" about toilets. They were also told to wash their hands and brush their teeth and were told how to clean their homesteads. They saw a video on the importance of keeping everything clean, and a demonstration on how to use a hand pump. They were also shown the new toilet, and to see how it should be used and cleaned.

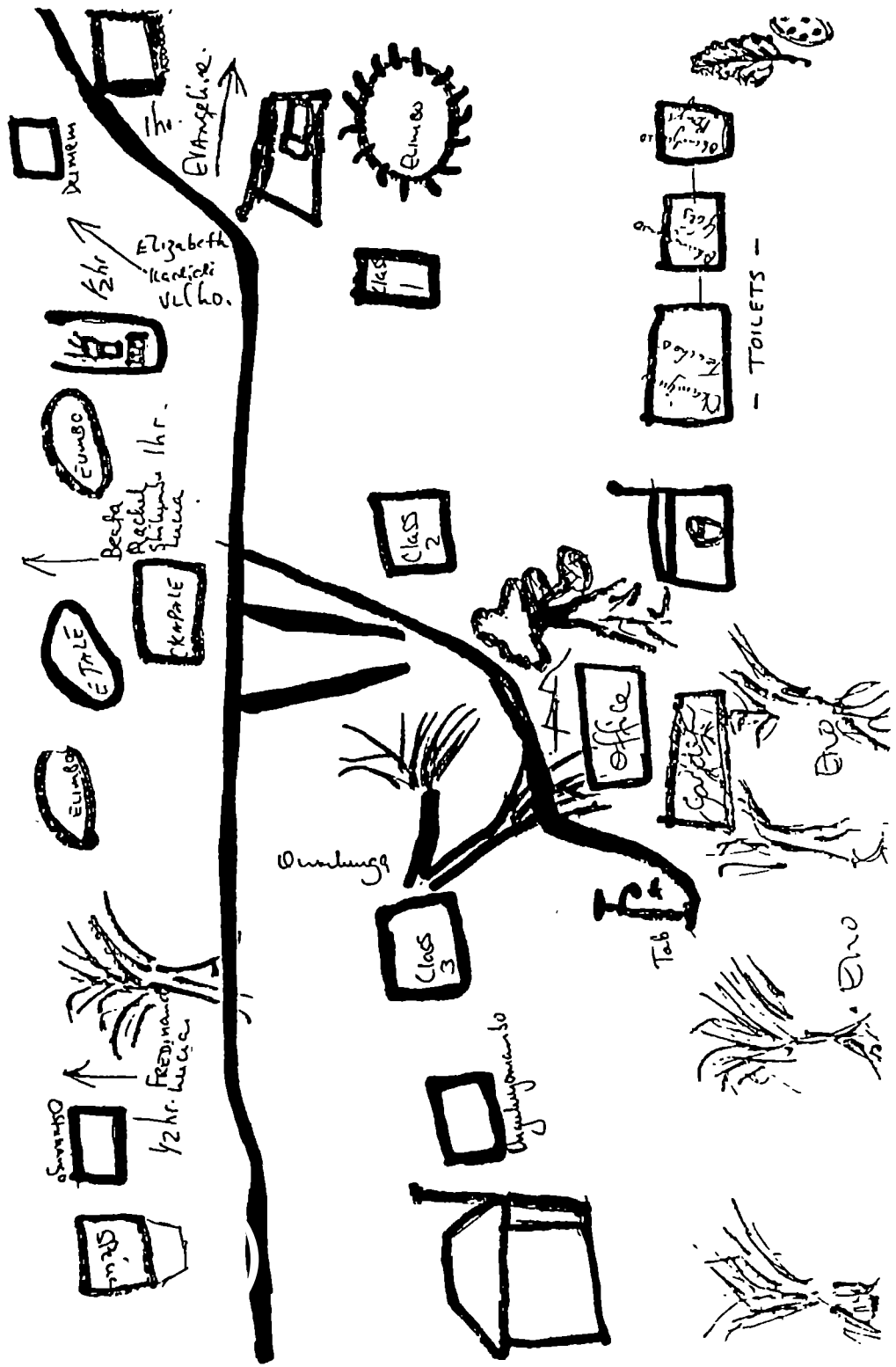
There were ten children in this group who attended the toilet demonstration and six of them said that they have shared the information with their parents. One boy said, for example, that he told his parents about the new toilets, hand pump demonstration and about the importance of cleaning the house. The children said their parents were interested these ideas and some are practising the ideas. The children felt it is important to have health and hygiene lessons, since "many people do not know how to stay in a clean environment and clean themselves" and "this information helps us to prevent diseases".

The principal of the school (who also teaches health and hygiene) does not think the children are undertaking any hygiene or sanitation practices at home. She thinks they view it as a "school subject" and not a practical part of everyday life. She thinks that most of the parents are not educated and do not want to listen to their children. There are, however, some parents who listen to their children and practise some of the activities themselves "because they see some development around the area and they want development too".

According to the headman and some community members, children are taught health and hygiene practices at the school, but they "do not even clean their hands" (from the mapping exercise with community members). They are, however, telling their parents to build toilets, but "if they were asked to dig a pit, they would run away".

Figure 7.

Area Near the Oshikango Combined School, Oshikango
 Drawn by Grade 6 Students 19 October 1994



It was difficult for the teachers at the school to mention important topics which were covered in health and hygiene lessons at school. One of the health education teachers mentioned brushing teeth and using toilets as important topics. Teachers also said that there was a health education demonstration at their school, but could not remember who conducted it. They remembered that they were told in this demonstration to wash hands after using the toilet, brush teeth, wash before coming to school and that a film was shown about how it is not a good idea to have children near pigs, since this will help diseases to spread.

A group of teachers participated in the Venn Diagram exercise (See Figure 8. The Venn Diagram from Teachers in Oshikango School) where they were asked to name sources of health and hygiene information. For them the most important source of health and hygiene information is Engela Hospital, since it sends health motivators to the community. FINNIDA was mentioned as a source of information to the community and to the school because of the "toilet day" they organized. Also parents were seen as an informative source of health and hygiene to their children in the community. Health education classes were considered as a source of information for school children who could then pass the information to their parents. The Ministry of Education was only seen as a supplier of the health education books. While the school board was mentioned to be fairly active, the teachers suggested that it could become more involved with health issues and giving information to people.

It seems that people in general are willing to learn more about health and hygiene issues in Oshikango. For instance, the vice principal of Oshikango Combined School thought that people like himself (i.e., teachers), FINNIDA and students could give advice to people in the community on health and hygiene issues. He belongs to a health committee with members from three different schools in the area. He also has received information from the Engela Hospital on how to train people to use toilets. The committee has not arranged anything yet, since they have no time. They would need some teaching materials, but they "do not know where to go to ask for them". Also the teachers' groups said that they would need more training material and that there should be health and hygiene demonstrations more often in the community and at the school.

The headman of Oshikango said that people need more health and hygiene education, but that the community is too big in relation to the small number of people who could provide the information. He thinks that organising a latrine programme within the community would not be difficult. Based on his own experience he thinks, that it is difficult to start a programme, but as it proceeds the community will become more interested. He said, "It is hard to explain, but it is like building a house, the toughest job is to clear the land first".

The Pastor of the Evangelical Church in Oshikango thinks that people have learned some things from the meetings which the Engela Hospital has arranged in the community. For instance, they avoid drinking from unprotected water sources now. Although quite a few people already have private toilets near the church, he thinks there is a need for a toilet programme where people could get building materials and instructions. The community also needs to have more access to information sources on hygiene and sanitation.

3.2. HEALTH AND HYGIENE PRACTICES

3.2.1. PRACTICES IN THE PAST

According to the group of old men, the water table in Oshikango used to be so high that each family was able to dig their own shallow wells (*omifima*) in the soft sand. These wells were within or near the *epyä*. The old women also said that people had no problem with water, since they got water from shallow wells in the past, but the parents' group said people collected their water from a traditional well behind the headman's house.

The group of old men said that people used to throw their rubbish into a rubbish pile, excluding bones which were given to dogs. The rubbish pile was within the *epyä*, but well away from *egumbo*. The pile would be burnt and in the end the remaining ash used as fertilizer in the *epyä*.

VENN DIAGRAM: TEACHERS' IDEAS ON INSTITUTIONS
 CONNECTED WITH HEALTH EDUCATION

17/11/1994

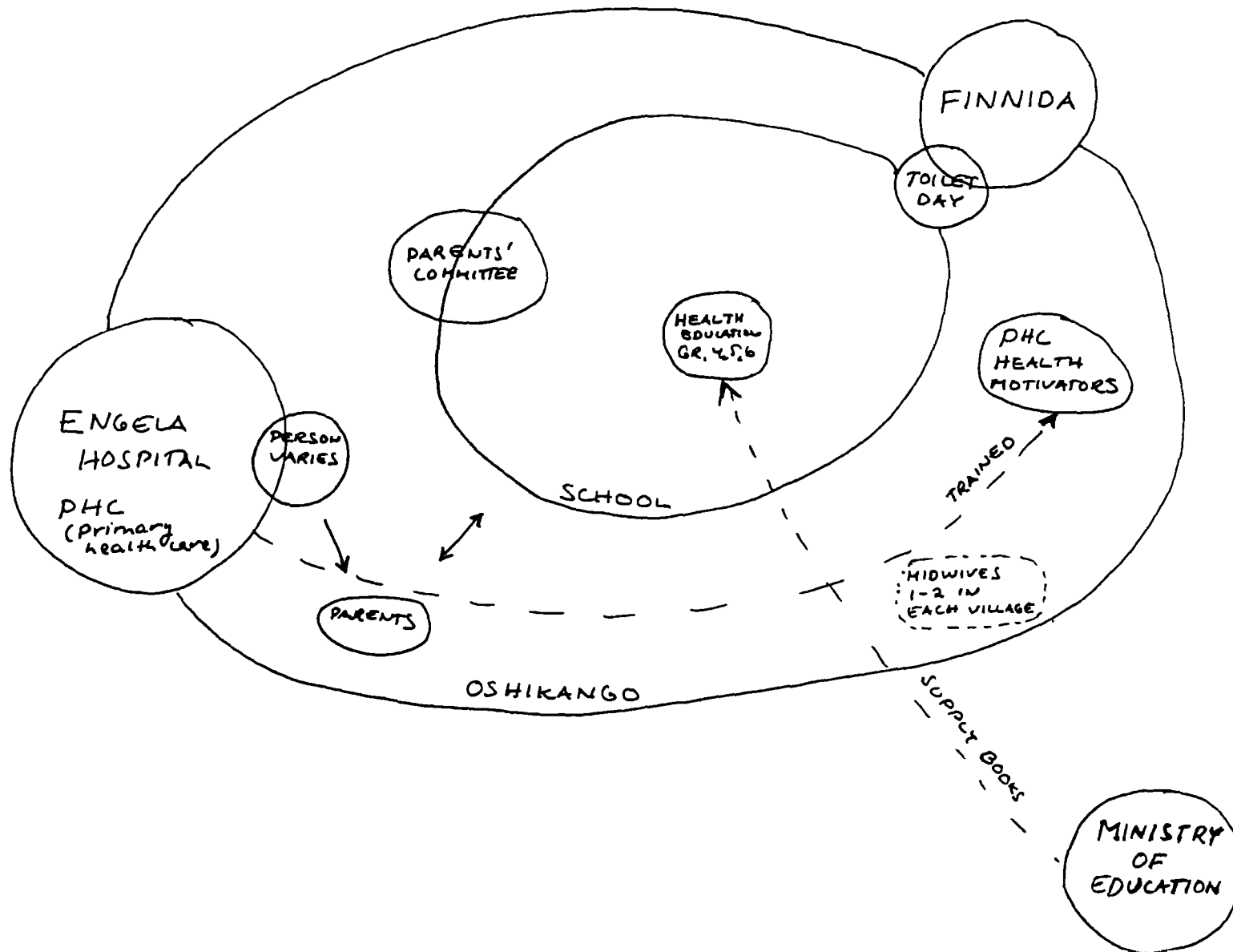


Figure 8.

Leftovers from food were left in the cooking pot, covered with a lid and given to the children the next day. Sometimes the grain meal was stored in a special basket and mixed with milk and then given to the boys who herded cattle, so they could eat it before or while herding the cattle. Milk was stored in *oxupa* calabashes.

According to the group of old men the *egumbo* was moved every two or three years in the past. The main reason was that the kraals and *egumbo* contained composting manure and other fertilizing materials which could be used in the *epya*. The cattle has always been kept separate from the goats in the kraal, because ticks from goats could spread to calves. The goat kraal can, however, be near the boys' sleeping room, because the ticks are not as big of a problem for people who can see them and take them off.

The parents' group said that people did not clean themselves with water in the past, but with oil made from *olukula* tree or porridge mixed with oil. The group of old women also said that people did not bath, but they used to clean themselves with lotion made from *eembeke* (the word refers to seeds of *oshibeke* bush which grows in the wild) and *eenhanga* (seeds from *onhangwa* plant which is cultivated).

The group of old men said, that there were several urination places within the *egumbo* which were, for example, for a wife, a husband and guests (See Figure 9. *Epya* with an *Egumbo* by Old Men at Oshikango.) Urination areas were fenced, but not completely enclosed. According to the group of old women there were three urination places in *omagumbo*: one for the husband, one for the wife (children were allowed to use the latter) and a urination place near the place in which visitors were received (*olupale*).

Defecation was, however, done anywhere in the bush. The old man said the bush was very thick and private, "just like being in a toilet today". People were not expected to bury their faeces in the bush, because it was considered "the place for rubbish anyway, because animals are also moving in the bush and relieving themselves there". One could also defecate in the *omahangu* field, but not when *omahangu* was still short. When defecating in the *omahangu* field one was expected to bury the faeces. This was because when *omahangu* are tall, the heads become heavy and the stalks can bend and fall onto ground and people do not want them to fall on faeces. Old men mentioned that buried faeces functioned as fertilizer as well. After relieving themselves adults used to clean themselves with sticks.

The old men said that the small children relieved themselves anywhere in the *egumbo*. Their faeces were cleaned up by a wife or girls who took them outside past the rubbish place to another place to be buried. Children's bottoms were cleaned with sticks or by rubbing their bottoms against the sandy ground. The old women said that children were wiped with a piece of cloth or stick. They said that mothers used to have pieces of animal skins in small clay pots in which they put the lotion made from *eembeke* and *eenhanga* seeds. These pieces of skins were then used to clean babies' bottoms.

The old women said adults never washed their hands in the past. Also the old men said that hands were not washed with soap and water in the old days, but "you took a bit of dry pounded grain meal and added a bit of water and used this for washing". The same method was even used for bathing. They said that a husband often had several wives and every evening one of the wives used the leftover meal and water to wash the husband's body. According to the old men there were many cultural beliefs and taboos in the past, but none existed for urination and defecation.

3.2.2. CURRENT PRACTICES

Today Oshikango community cannot rely on "natural" water points any more, since the water in shallow wells and earth dams is dirty. They are mainly using a tap by the main road and there is another, newly established tap by the school, which is not widely used.

According to the old men and old women, big changes have occurred since the old days. There is not enough wood left to build a proper *egumbo*. Also children are more often sick these days and they need to be taken to the hospital, before they were treated with traditional medicines. People wash themselves with water these days. The old women said they wash their hands before they eat and after doing dirty work.

The old men said that some people still have urination places in *omagumbo* ("even I, who am a Christian".) Some people use a "night pot" and have a pit outside the *egumbo* and empty the pot there. Most of the people use the bush as open air toilets. There is no special time for defecation (e.g., before sunrise or after sunset). The old women said that faeces are not usually buried, but left by the bushes. They are buried if one defecates in the field during *omahangu* time (when the *omahangu* is high enough the field can be used for toilet purposes, because then there is privacy).

The headman of Oshikango knew that people are using cattle and goat dung in their fields as fertilizer, but the idea of human waste as a fertilizer sounded strange to him: "How could it be removed?" Also the teachers in Oshikango school did not like the idea and they thought human waste would only spread diseases and germs.

The manager of the Diocesan Water Project in Odibo was more optimistic about developing the idea of human compost in the area. He said that people cover the full latrine pits with soil and plant maize or pumpkins on top. He also said that people at sewage ponds have taken out the human compost and are using it as fertilizer. He thinks that people will not object to using human waste as manure if they know how to do it.

3.2.3. CURRENT AND PAST PRACTICES OF TWO TRADITIONAL MIDWIVES IN THE COMMUNITY

There are two midwives in the Oshikango community. Neither of them has a toilet, although they would like to have one. They get the water they need for their own consumption and their work, but even the water from the pipeline can be dirty, because "children play with the taps".

These midwives have not taken part in the midwife training arranged by the Engela Hospital. Their profession was taught to them by their mother and older sister, and they are still using the same methods they learned. One of them is also a herbalist. They help everyone who comes to them, but usually send very young mothers straight to a hospital if they are not urgent. After they have helped to deliver the baby, they always send the mothers to a hospital.

The midwives wash their hands with soap and water before and after delivery but do not use gloves. They know that the time to deliver is when the woman starts to breath heavily and the colour of her eyes changes. They can also feel that it is the time by touching the mother's stomach.

After delivering they used to pour boiling water into a pit in the ground and a woman had to sit in that water and some boiled water was poured on her as well. Today they collect sandy soil, boil it with water, pour it into the ground and a mother has to sit in top of it (her bottom does not have to touch the ground) so that she sweats. After the umbilical cord is cut, they treat the navel with the ash of certain fruits. One midwife said that these days she sometimes uses baby powder from the shop and white Vaseline as well, instead of the ash from fruits.

There are some cultural beliefs and practices connected with pregnancy and child delivery. If a woman delivers twins or if a child is born so that the feet come first, the mother and the father will be washed with herbs. If a husband has gone out and been with another woman and comes home and sees his wife in the bedroom, she will have problems when delivering. There is also a disease which they call *oshiwatu* which a woman can get if she sleeps with another man while pregnant. If a woman has *oshiwatu* she can faint or even die when giving birth. Midwives can, however, cure this disease with herbs. One of them can prepare herself the special liquid from *omumakani* tree to cure this disease.

Midwives said they have not had big problems when helping mothers. One of them said, that there is a strange problem at the moment, though, since many babies are born "in a sack". She said that water does not come out normally and that is why children are born that way. When babies are born "in a sack", the cover has to be removed quickly, otherwise they can die.

3.3. TOILETS

3.3.1. EXPERIENCE WITH AND ATTITUDES TOWARDS TOILET USE

Private toilets are still not common in Oshikango and most of the people relieve themselves behind bushes. People do, however, like the idea of having private toilets and none of them objected to the idea as such. Since the vegetation of Oshikango has become scarce, the group of old men stressed that privacy is the main reason for constructing toilets:

"You must go as your body tells you. What else can you do? These days with no bush you cannot have any shame. You must go behind even the smallest bush, even in your pants if there is no choice."

"...very little bush is left, people can see you and we are old men who have no strength to dig holes."

According to the headman, people know that toilets prevent diseases from spreading. This advantage was mentioned by students in Oshikango school as well. Teachers said it is good to construct toilets for hygiene and development reasons.

3.3.2. HOW MUCH CAN PEOPLE AFFORD TO PAY?

The biggest problem in toilet construction is money. For example, the headman said:

"...The problem will be cash. I have heard your toilets are very expensive. Most people here do not have jobs, so they do not have cash. After the drought, very few people have cattle to sell to gain cash. The cattle are few."

There were different estimates on how much money people could spend on toilets. The group of community members in the mapping exercise said that they could not afford toilets at all, since they "cannot even afford to buy a sack of cement". The group of old men thought, however, that people could afford a toilet for N\$200-400. They said:

"...some could pay that, but the main problem is during the drought years when there is no crop and you must spend all your money on food".

The parents on the school board thought that the cost of toilet could even be N\$300-600. The headman of the community was, however, convinced that most of the people do not have the money for a toilet:

"People are not on the same level. The ones you talked to might have that kind of cash, others do not. Maybe some are willing to sell animals, but most cannot, I know."

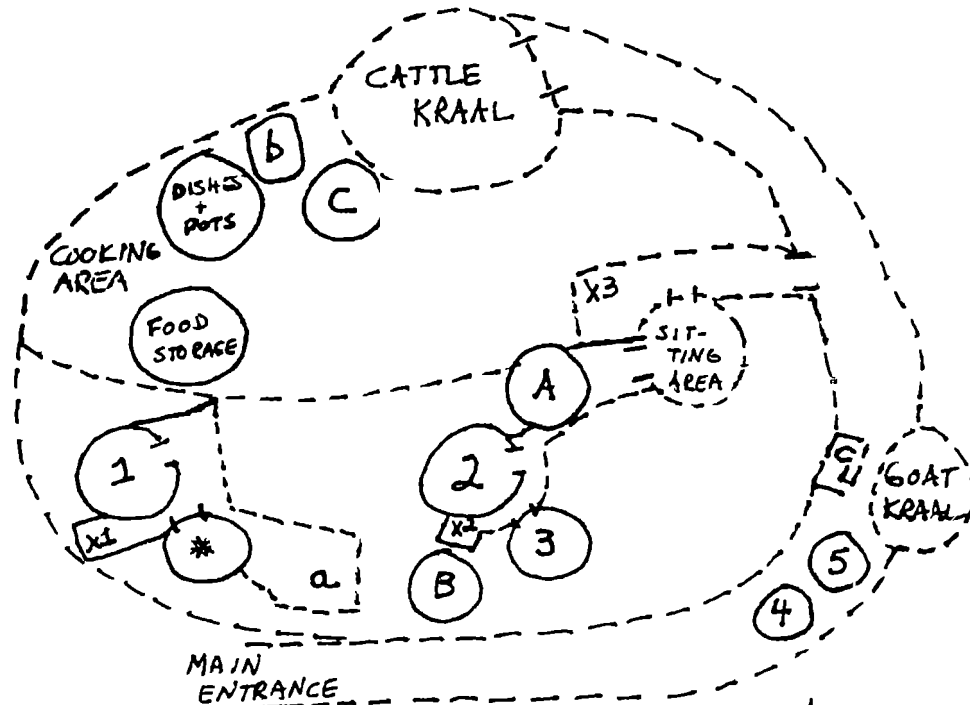
Parents on the school board thought that the payment arrangements could be done through a discussion with the contractor. The main point is that the person who is buying a toilet should have enough money. They feel toilets should be bought on a cash basis, not for credit. For example one could save up to N\$500 and then go to a contractor and say, "this is the money I have, what type of toilet can I get for this amount?". The group said that since the cost of toilet gets higher with more features (e.g. seat, door, lock), it would be a good idea to get the basic structures first and buy, for example, seats and locks later. Also the headman thought that a credit program could not work: "How can you get credit if you do not have a job?"

3.3.3. BUILDING SKILLS IN THE COMMUNITY

According to the old men, they used to do all the building themselves. Now they are old and there are not enough sticks left for building a proper *egumbo*. The cutting of wood is forbidden and some of them now use clay bricks and buy zinc sheets, cement and poles. In the

Epya with an Egumbo (Field and a Homestead) Oshikango Village
 7 Old Men During Focus Group Discussion 19 October 1994

Figure 9.



URINATION AREAS

- X1 for Father
- X2 for Wife
- X3 for Guests

SLEEPING HUTS

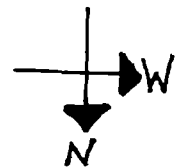
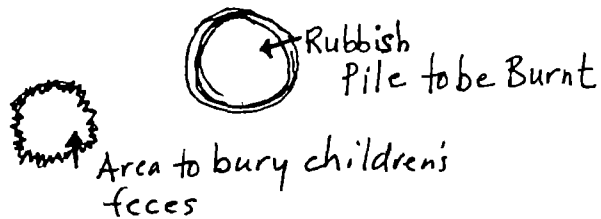
- 1 for Father
- 2 for Wife
- 3 for Girls
- 4 for Boys
- 5 for Boys

BATHING AREAS

- a for father
- b for Females
- c for Boys
- * Hut for father's belongings

GRAINSTORES

- A Main (used last)
- B for Father
- C for Wife
- Fence
- | | Entrance



Border of Epya

Traditional Headman's Egumbo (homestead), Oshikango
 Drawn by a Group of Parents 19 October 1994

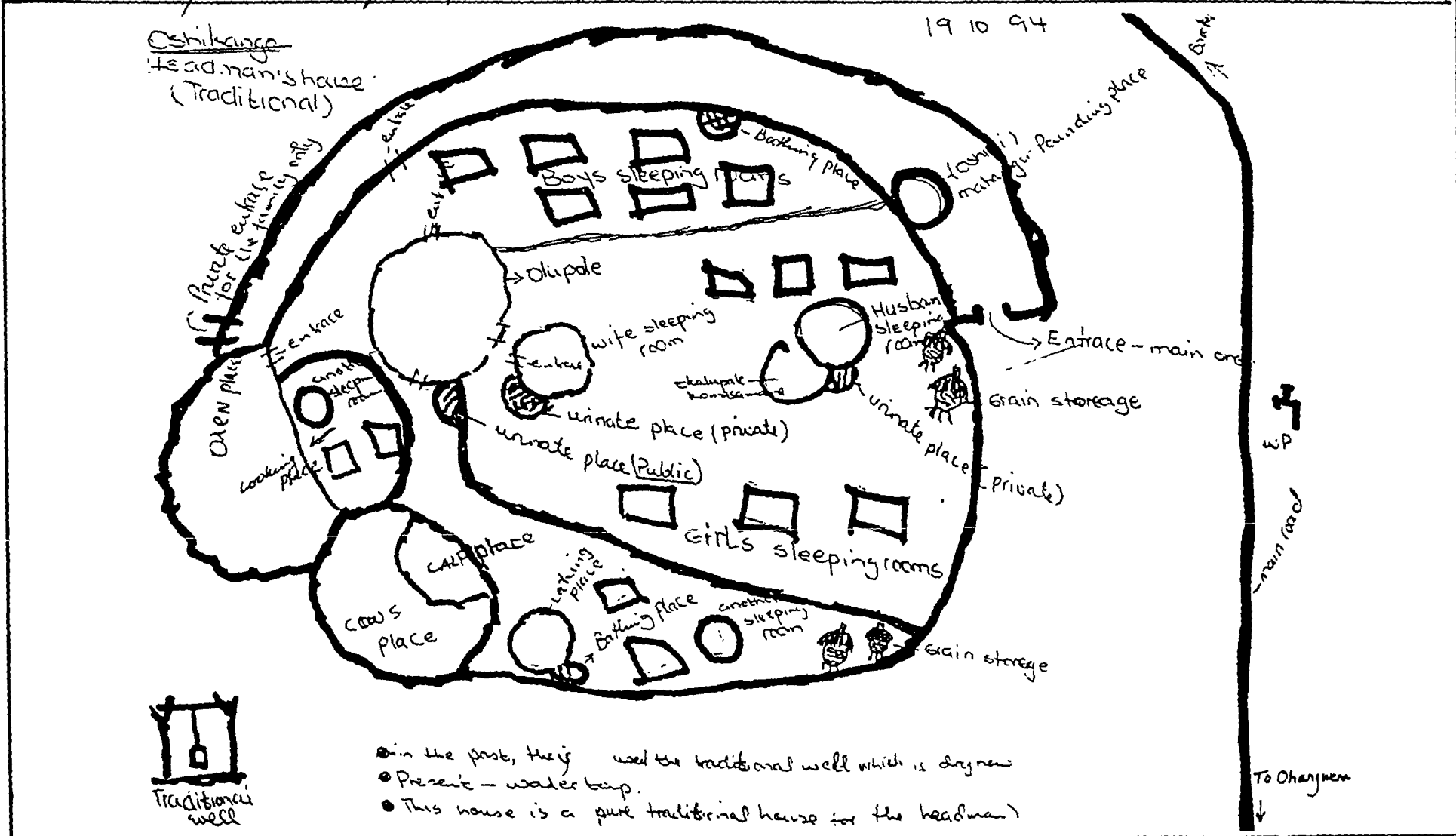


Figure 10.

past the whole family cooperated in building the home. Women and children helped to gather the materials and the men and boys built the houses. Now there is not as much cooperation any more. There used to be special diggers for digging graves, but not any more. Now "anyone who is fit and wants to get paid" can dig graves or holes for latrines, for example.

According to the parents on the school board and the old women, there are people in Oshikango who have obtained, through their own experience, good skills for traditional building. They know how to build traditional houses, huts and fences. They collect the traditional materials such as grass and wood and make clay bricks themselves. Grass and wood is also available for sale at the open market.

There are also people in the community who have learnt modern building skills themselves who can work for other people and earn money. According to the old women there are both men and women with these skills. The parents' group and the old women said that the modern building materials, such as cement and iron sheets, are usually organized by the owner of the building.

The old men said the main time for building is when labour is available from September to November. This is also the time of moving the *egumbo*. They said it is a bit difficult to obtain modern building materials. They did not know any places to buy modern building materials in Oshikango, nor about any of the three places in Ohangwena which sell modern materials either.

There is also a group of six women who can build glass bottle buildings. They were trained by the staff of the Rural Development Centre in Ongwediva. Two of these women are on the school board. They have recently built a school library with bottles. Parents said that people in Oshikango are getting the building materials from "Continental Number 4" which is in Oshikango near the border, and "the Punya" and "Gifts Shop" in Ohangwena. They say they try to compare prices before purchasing materials.

Parents on the school board said that there used to be a lot of people who were ready to dig holes, but today many people do not want to dig: "People here are lazy. It is better to find someone outside the community". On the other hand, a group of community members thought that if there was a toilet construction programme in the community, people would be ready to dig the pits themselves, but they would need advice and building materials for the superstructure. Also most of the people in the teachers' group said they would like to construct the toilets themselves.

3.3.4. THE TYPE OF TOILETS PREFERRED

According to a group of community members and a group of teachers, there are no cultural taboos preventing men and women from using the same toilet. They mentioned however, that it would be ideal to have one toilet for adults and one for children in each household.

The old men's and teachers' groups said that they would like to have a toilet with a seat, door and a lock. The teachers said that this is because of hygiene reasons and so that it would not be used by strangers. One of the old men said:

"Otherwise someone can come and make a mess. Most of our children are away drinking. I will keep the key myself."

The teachers thought the best choice for them would be a flush toilet. If no water is available, the next choice would be a pit latrine. Both the teachers and old men said that the toilet should be on the western side of *egumbo*. Because the wind blows in a westerly direction, there would be no smell. They said: "We are old men and we cannot walk far".

The headman said that he would prefer a toilet which would last a long time. The *egumbo* could be moved, but the toilet could stay standing in the *epya*. The group of parents on the school board liked the idea of public toilets as well. They said that there is only one private toilet at the open market, so not everyone can use it. They think it would be a good idea to have public toilets in the village or by the main road as long as people are taking care of them properly.

3.3.5. TOILETS IN OSHIKANGO COMBINED SCHOOL

Oshikango school has five double units of pit latrines which are all in the same building. Different sections of the toilet are used by teachers, boys and girls. There are no doors providing privacy in the section for the children. The toilet was built by WSSPOR.

According to teachers and students, these toilets are used by teachers and older students in the school, but not by younger children, since they are afraid of falling into the pit. Most of the concrete seats have been removed, because they were too high for the children and the toilet has big squat holes now. According to a group of teachers and a group of students young children are also afraid, because it is dark in the toilets. They also do not know how to use them in the first place and urinate on the floor. According to the vice-principal the toilets are not used by girls over sixteen years old, because they are too embarrassed.

The group of teachers said that the toilets are cleaned every Friday by a person who is hired to clean other parts of the school on other days of the week. It was a general complaint by teachers and students, however, that the toilets smell. One group of children wondered if it is ever cleaned, since they have not seen anyone cleaning them. They also said it would be better to have them further away from the school's classrooms. The vice-principal said that they would like to have some chemicals to put into the toilets. They are using ash now, but it is not enough to prevent the smell. He also said the toilets are not cleaned properly and was afraid that the walls might collapse soon.

The vice-principal would like to have flush toilets at school, "since the pipeline takes the waste away and it would never becomes full". Also one of the teachers' group said that they would like to have flush toilets instead of pit latrines in the school. One of the children's groups said that they would like to have toilets with seats, but they should be low enough for the small children. They would also prefer separate doors between seats for privacy.

The teachers did not think that it was a good idea to use human waste from the school toilet for a compost in the small garden next to the toilet. They thought it would be difficult to get the waste out of the pit and there is no water for the garden anyway. Using human waste as compost was also a strange idea for the vice-principal. He thinks it would be difficult to find a method to remove the human waste from the pit and "if it is taken to the nearby garden, all the flies will go there". If the waste could be processed, he could consider using it for some trees, but "never for fruit trees".

3.4. SOME HYGIENE PROBLEMS AT THE OPEN MARKET IN OHANGWENA

According to a business woman who was interviewed there seems to be big hygiene problems in the open market in Ohangwena and it can be assumed that at least some of these problems are similar in the open market in Oshikango as well. She stated the following problems:

- * The sellers do not have enough water, since the owners of the nearby taps do not allow them to use them. They have to collect their water from the water tower in the morning.
- * The market place is not cleaned and some people do not follow hygiene practices.
- * Some people even use the sewage water from the clinic in Ohangwena to wash the inner parts of goats
- * Some people do not cover their food containers,
- * Some people are selling and slaughtering pregnant goats
- * Sometimes the glasses for *tompo* (local beer) are not washed.

- * Some people are selling expired food from Engela hospital
- * There are people brewing *ombike* (a local drink) from cane and brown sugar (it is traditionally made from sugar and fruits) which has caused serious illnesses.

The owner of the market place has a pit latrine, but it is dirty. They need more toilets. The sellers would also like to have shelters, so that everyone could have their own place to keep clean. She thinks that people would need more training in health and hygiene, since they soon forget what they are told: "Some time ago some nurses came to talk to us and there were some small changes in people's behaviour, but now everyone has forgotten what they have been taught".

3.5. DEVELOPMENT PRIORITIES

The lack of clean water was most often mentioned as the biggest problem in Oshikango. Only the group of teachers and the group of students at Oshikango school did not mention it as the first development priority. Although toilets were often mentioned as one of the priorities, some people stressed that there are other, more important development priorities to be dealt with first. The tables below reflect the great variety of development needs mentioned such as jobs, housing, health care, education, hygiene, bibles to the school and power to draught (to get better crops and more food).

TABLE 1. OSHIKANGO: DEVELOPMENT PRIORITIES FROM KEY INFORMANT INTERVIEWS

KEY INFORM./ NEEDS	HEADMAN	PASTOR	DWP MANAGER
WATER	1	1	1
TOILETS	7	2	4
FOOD	4	-	2
HEALTH CARE	2	-	-
ADULT EDUC.	3	-	-
EDUCATION	5	-	-
JOBS	-	-	3
ENV. HYGIENE	6	-	-

TABLE 2. OSHIKANGO: DEVELOPMENT PRIORITIES FROM FOCUS GROUP DISCUSSIONS

GROUPS/ NEEDS	STUDENTS	STUDENTS	COMM. MEMBERS	TEACHERS	PARENTS	PARENTS
WATER	-	1	1	3	1	1
TOILETS	2	-	-	-	4	5
EDUCAT.	4	2	-	1	7	2
HOUSING	-	8	-	4	3	-
BIBLES TO SCHOOL	-	-	3	-	-	-
DRAUGHT POWER	-	5	-	-	-	-
COMM. MEETINGS	-	6	-	-	-	-
HYGIENE	-	-	-	-	2	4
PERSONAL HYGIENE	1	-	-	2	-	-
ENVIRON. HYGIENE	3	4	-	-	-	-
SKILL TRAINING	-	7	-	7	-	-
ADULT EDUCAT.	-	-	2	8	6	-
HEALTH CARE	6	3	-	4	5	3
SPORTS	5	-	-	-	-	-
FOOD	-	-	-	6	-	-
JOBS	-	-	-	5	-	-

4. MAIN FINDINGS FROM OUTWILO

The research material from Outwilo is based on following activities:

- * 1 group exercise with community members including mapping of village, Venn Diagram and two Focus group Discussion questions (4 females/6 males)
- * 1 Focus Group Discussion with parents with children at school with mapping and ranking exercises (4 females/3 males)
- * 1 Key Informant interview with the headman and his assistant (with ranking)
- * 1 Key Informant interview with a midwife
- * 1 Focus Group Discussion with old women including mapping and ranking exercises (5 females)
- * 1 Focus Group Discussion with old men including mapping and ranking exercises (5 males)
- * 1 Focus Group Discussion with female heads of household including mapping and ranking exercises (4 females)
- * 4 visits to homesteads to see private toilets and a well
- * 1 visit to see toilets at Ondobe school
- * 1 visit to see water tap near Ondobe school

4.1. HEALTH AND HYGIENE EDUCATION

There has been no public health and hygiene education programme for Outwilo community, although some midwives are currently under professional training which has been arranged by the Engela Hospital staff at Onangwe. Since there have not been any meetings or demonstrations on water, hygiene or sanitation in the community, people seemed not to know where to get the information, either. When a group of community members were asked where they could get information on health and hygiene, they could not name a single source of information. Figure 11 of the Venn Diagram exercise below reflects the situation.

Figure 11



Some community members did mention that children from Outwilo are taught something about health and hygiene at school. Some parents who had children in school thought, however, that health and hygiene education is not taught to their children at all. None of the people mentioned that children are advising their parents on health and hygiene issues.

According to the headman, health and hygiene extension could be organized in Outwilo in the future, but only if they would have enough clean water first. Without water it would be impossible for the people to follow the instructions. He suggested that someone from Outwilo could be sent out to be trained as a community worker to get the others interested in health and hygiene issues. He was also ready to receive training himself to become a health motivator. He stated:

"If we get water in this area I would like to act as a health motivator. I would try to contact the health motivators at Engela hospital so that they could teach me a lot and I could pass the information to the community".

4.2. SANITATION AND HYGIENE PRACTICES

4.2.1. PRACTICES IN THE PAST

People used to collect their water from shallow handmade wells. Some households shared the wells, but often households were able to have their own private wells, since there was more rains in the past. Unfortunately the water in shallow wells got easily contaminated, since the wells were not covered.

According to an old women's group, a group of female heads of household and a group of old men people saved the leftover food in a covered pot overnight and gave it to their children next day in the past. The parents' group said that the leftovers were given to the "boys who took the cattle into the forest". The household waste was thrown into the field as a fertilizer. Some of the waste was collected in a special disposal place called *oshara* outside the *egumbo* and some thrown straight to the field (See Figure 12. Map of *Egumbo* by Old Men in Outwilo). In addition to household waste, cattle and goat manure was used as a fertilizer. When an *egumbo* and a kraal were moved, people spread some manure in the fields. They also left some of the manure in the place where the kraal has been and planted crops there. Human faeces were never used as fertilizer.

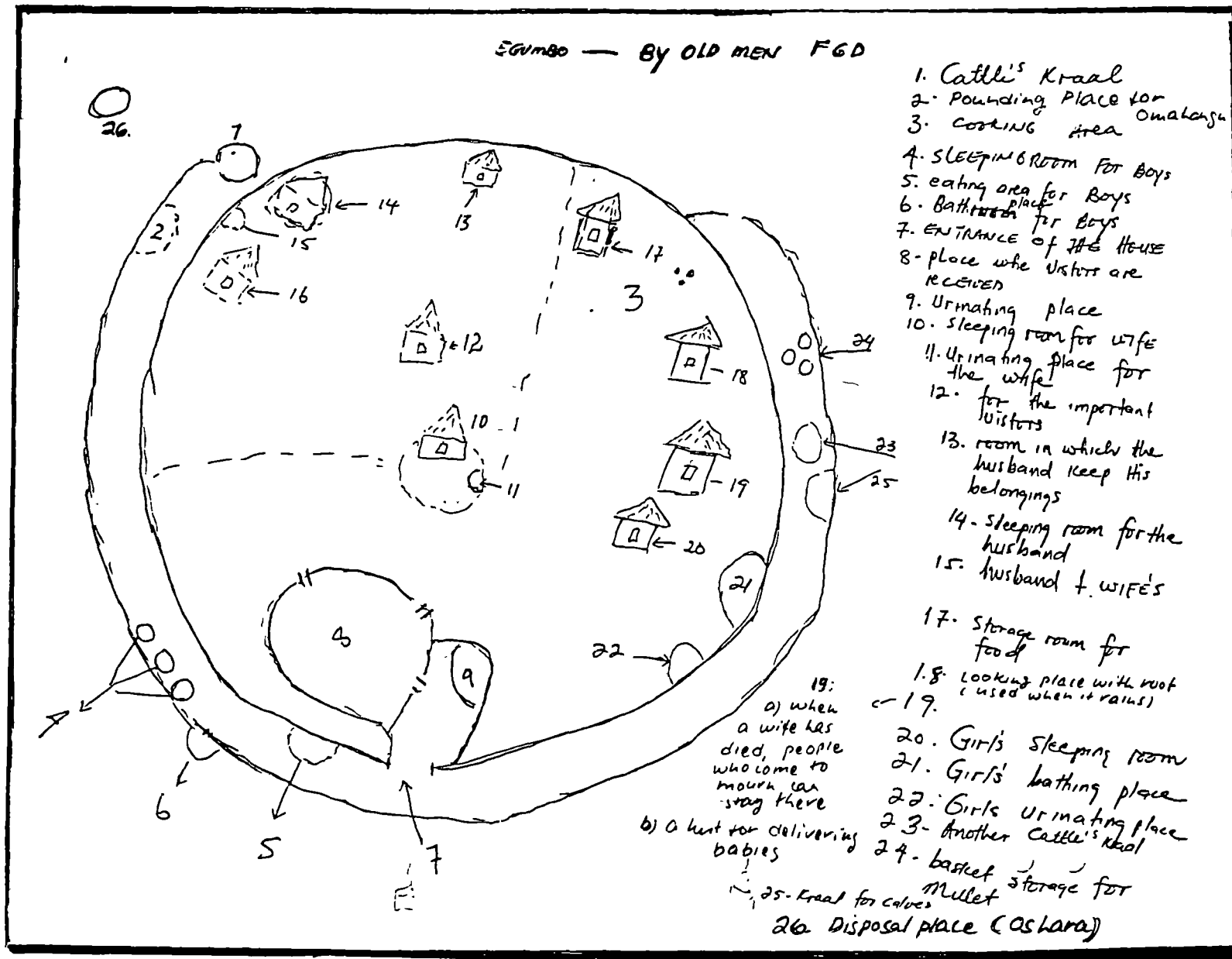
People had a urination place in their homestead which could be used by everyone. If visitors came to an *egumbo*, they would use the same urination place if the *egumbo* was familiar to them otherwise visitors would go out of the *egumbo* to the bush. According to the group of female heads of household the urination place was inside the homestead. It was called *osisithmene* and it was situated next to the *olupak*. According to the parents' group, the urination place was not cleaned. However, according to the groups of old women and old men, ash was thrown onto the place to prevent any bad smell. According to the old men, ash was also thrown around the place where chickens were kept to kill some parasitic insects which were attacking them.

For adults and older children, defecation took place in the bush outside the *egumbo*. The group of old men told that the area next to the *egumbo* could also be used when bushes were left in the *epya* for that purpose. During the day time people defecated in the field in a place where they could hide themselves behind bushes. At night time people could relieve themselves anywhere, since they could not be seen in the dark. According to the parents' group faeces were not buried at all. However, according to female heads of households they were buried during the growing season of *omahangu* and according to the old women's group some people buried faeces, some not. The old men said that faeces were never buried in the bush, but if defecation occurred in the *epya*, the faeces could be buried using a hoe.

Young children and babies tended to relieve themselves anywhere, even inside *omagumbo*. When this happened the area was cleaned up, so that the faeces were taken outside *omagumbo* and buried there. This clean up was expected to be done by the mother, but if she was not around any child (male or female) were supposed to do it. After small babies relieved themselves in *omagumbo* the faeces were not thrown away, but buried there, in a place people were walking. This was done, because it was believed that it helps the children to learn how to walk quickly.

People used sticks for wiping and adults did not wash their hands afterwards. According to the old men's group children's hands were washed with water or oil made from the local *eenhanga* and *eemheke* plants and sometimes even with porridge or butter made from cattle's milk. Children of three to five years old or so were usually wiped with anything which was handy such as sticks, while babies had their bottoms rubbed on the sandy ground. For very small babies an old soft cloth (e.g. from cotton) was set aside to wipe their bottoms with a special oil. This oil was made from either the seeds of the *eenhanga* plant (a type of melon which was cultivated in fields) or with the seeds of *eembeke* plants which grew wild or with the oil and pounded bark mixture. To make the oil, seeds were cooked, pounded and then cooked again and during the last stage the oil would separate. Old women's group told that after the baby was wiped, adults washed their hands with this oil or with *enema* (something like porridge).

EGUMBO — BY OLD MEN FGD



1. Cattle's Kraal
2. Pounding Place for Omakasa
3. cooking area
4. SLEEPING ROOM For Boys
5. eating area for Boys
6. Bathroom for Boys
7. ENTRANCE of the House
8. place where visitors are received
9. Urinating place
10. sleeping room for wife
11. Urinating place for the wife
12. for the important visitors
13. room in which the husband keep his belongings
14. sleeping room for the husband
15. husband & wife's
17. Storage room for food
18. looking place with roof (used when it rains)
19. a) when a wife has died, people who come to mourn can stay there
b) a hut for delivering babies
20. Girl's sleeping room
21. Girl's bathing place
22. Girl's urinating place
23. another Cattle's kraal
24. basket storage for Mullet
25. Kraal for calves
26. Disposal place (Oshara)

Figure 12.

According to the group of old men there were some cultural taboos connected with toilet practices in the past. It was believed, for instance, that if you leave your own *epya* area and relieve yourself at someone else's bush area, this can mean that you have something against that person or you want to do something negative towards him. It was also believed that if you are carrying a cock and then you put it down to relieve yourself, the cock can die.

4.2.2. CURRENT PRACTICES

People collect water from handmade shallow wells during the dry season, and from ponds and *iishana* during the rainy season. There is a tap in Ondobe which is also used by the community. The group of female heads of household said that wells in the area are uncovered and get contaminated - e.g. mice and lizards can be found there which "are now considered to be the main source of disease". The distance to different water points depend on where people live in the area, some people have to walk three to four kilometres to the water.

People only bath about once a week, since there is not much water around. The water can be so saline that skin itches and cracks after a bath. This is how the midwife described the water situation in Outwilo:

"You need water for everything. You can't live without water. We can't even wash our clothes with this water because it makes our clothes stiff. Your hair never comes clean. Your hair feels like it has vaseline in it all the time"

According to the old men rubbish is usually burned these days, rather than thrown in the fields as was done in the past. They are burnt, because these days rubbish contains a lot of plastic. People do not want to leave plastic into the fields because cattle might eat it.

People still have special urination places inside *omagumbo* today. The parents' group and the group of female heads of household said that there are two urination places inside the *egumbo* which are, according to the female heads of household, situated near *olupale* and next to the wife's sleeping room. The group of old men said that there are three urination places in the *egumbo*: one for females, one for males and one for anyone in the family who wants to use it. People also have special bathing places in their *omagumbo* today, before there were none, since people did not bath. According to the female heads of household there are two bathing places in each *egumbo* according to the parents' group, and according to the old men's groups there are three places for bathing.

For defecation most of the adults and older children go to the bush. However, younger children can relieve themselves inside *omagumbo*, but their faeces are thrown outside. People use ash to clean urination places and they have a special disposal place for household waste outside *omagumbo*. (See Figure 12. Map of *Egumbo* by Old Men at Outwilo and Figure 13. A Traditional *Egumbo* by Old Women at Outwilo). They would like to use toilet paper, but have no money for it, so they use sticks instead. According to the parents' group hands are not usually washed, because "our hands do not come in contact with faeces when we are wiping ourselves with sticks". The group of old men said that they wash their hands afterwards. They also said that people bury their faeces during the growing season of *omahangu*.

People do not use human waste as an fertilizer on their fields. According to the headman the whole idea was "totally objectional" and his assistant felt that "the use of human compost is not a part of our culture". Parents' group said "the human waste was never used as compost in the past and would never be used in the future".

On the other hand, the old women's group did not object to the idea. One of them knew that a man was hired to remove the waste from Engela Hospital and apparently he takes the waste home and uses it on his fields. Two of the women felt that the human waste might create very rich soil and *omahangu* would grow very well. They said "even if you were to plant in the areas in the bush where people help themselves your *omahangu* would grow very well." The women thought that the problem with private toilets is that so little human waste is produced that there would never be enough waste to spread around fields.

A Traditional Egumbo as Drawn by 5 Old Women in the Sand
at Outwilo on 26 October 1994

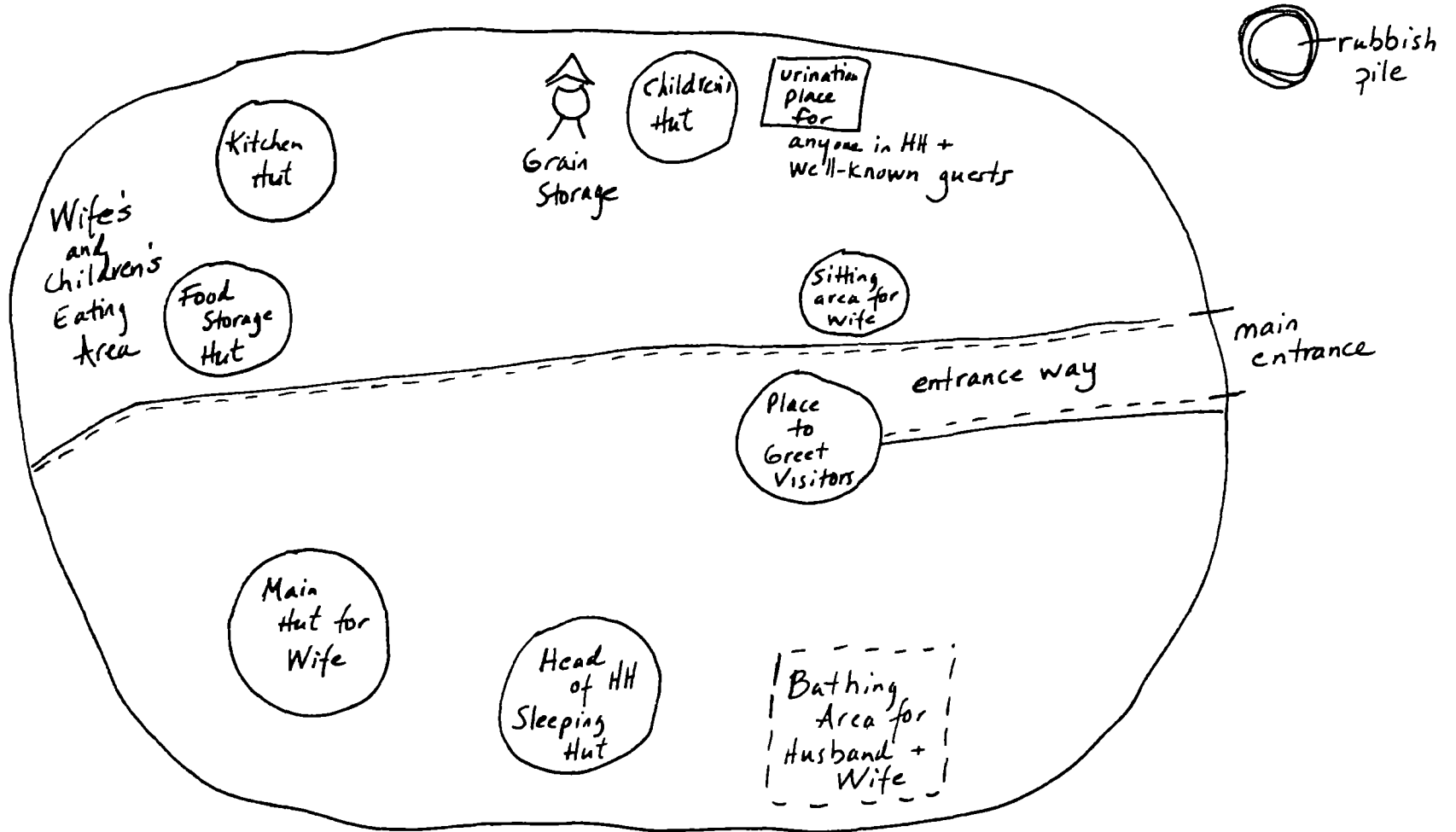


Figure 13.

The old men were at first very suspicious about the idea of using human waste as a fertilizer and said:

"If you take human waste out of the pit and throw it all around the field, that is just like defecating in the field in the first place"

"When the rain comes, it will smell terrible!"

"If you want to use human waste anyway, why put it into a hole? It would be easier to have everyone defecating into one pile, then anyone can come and take from the pile to use it as manure. That would be easier than taking it from a pit!"

In the end, the old men concluded that the idea of human compost is acceptable, but the idea of handling faeces is not. Therefore the problem which to be solved first is how to take the human waste out of the pit i.e. how to handle it. They thought that in order for people to handle it, it should not look like human waste and it should not smell. If possible they would like to use chemicals to kill any germs. In the end they decided that they could accept the idea of using human waste only if someone is hired to remove the waste with a machine and then to scatter it in the fields.

4.3. TOILETS

4.3.1. EXPERIENCE WITH AND ATTITUDES TOWARDS TOILET USE

People could mention only three houses with toilets in Outwilo. Some people had never been in a toilet, some have only used toilets in public places such as hospitals. The lack of experience did not make their attitudes towards toilets negative or even suspicious. Everybody liked the idea of having a private toilet.

People liked toilets for several reasons. Since the bush has become scarce in Outwilo, it has become more difficult to relieve oneself without being seen. The group of community members liked the toilets, because: "...you are in private without fear of others seeing you". The midwife said:

"... this going to the bush is very bad. The bush is too small now. Even your son-in-law can pass by. That is not good."

The midwife saw the defecation in the bushes as a problem for environmental and health reasons as well:

"This is not a good method, because even people who are sick use the bush, even people with TB. This can cause health problems, since somebody might step on faeces from a sick person and get affected by the illness. People defecate near the *ashana* and when the rain comes people use that water. In this way people get sick. Diseases are increasing because of this practice".

And so did the parents' group:

"It is better to have the faeces in one place and not to spread them around."

And also the group of old women:

"Toilets help to prevent diseases and they prevent contamination of the open water points, especially during the rainy season"

In general toilets were seen as a part of modern life - as one of the community members said: "people are helping themselves comfortably today".

4.3.2. HOW MUCH CAN PEOPLE AFFORD TO PAY?

The main problem with toilet construction is lack of money. Even if people built toilets themselves, they would need building materials brought from outside their community as trees are scarce in Outwilo. People, especially old people and female heads of household, do not have access to much money. They also have other needs they have to spend their money on. For example the junior headman said:

"I can't spend my money on toilets. I don't have a monthly income. I only get my pension which is too little. I spend my money on buying food for my family and paying school fees for my children. I have even borrowed money from someone to pay the school fees. Now I must sell a goat or something to try to pay this person back. How can I afford a toilet?"

Pit latrines constructed by WSSPOR are regarded as far too expensive. Although some of the people said they could not afford any toilet at all, there were others who thought they could afford a low-cost toilet. The group of female heads of household estimated that people could afford a toilet for about N\$60, the Headman said people could not pay more than N\$100 for a toilet, parents's group estimated that less than N\$120 would be affordable to people and a group of community members said N\$100-200 might be affordable. In the old mens' group, a man estimated first that N\$300-400 would be affordable to people, but there was another man in the same group who said the price should be kept under N\$200. The headman said:

"Truly the community needs toilets, but the cost is too high. If you could construct a lower cost model affordable by everyone it would be better. A toilet should not be more than N\$ 100, otherwise people will prefer the bush. The people are very poor here, some do not even have enough food."

People thought that some kind of payment or credit plan would be useful in helping some people to afford the toilets, but the plan should be negotiated between the buyer and the contractor. According to one of the community members all the payments should be finished before the toilet is ready. This person said:

"It is not good to only pay a part and then get the toilet. If that is done, people will just remain quiet and will not make the payments".

4.3.3. BUILDING SKILLS IN THE COMMUNITY

People are, however, ready to construct toilets themselves, or at least to help in the construction, because it was thought to be cheaper. One person said: "I will work with my children to see that the toilet is built properly."

People would, however, need to have assistance in transporting the modern building materials, since they have to be brought from far away (from Ondangwa and even from Oshakati). They also need guidance on how to build toilets well. In Outwilo, most of the people have some building skills. They know how to use available local materials such as mud bricks, wood sticks and grass for traditional building, but they are not experienced with modern building. At the moment it is difficult to get traditional building materials, since the grass is low and the government does not allow people to cut down trees.

All the people are not, however able to construct toilets themselves. The group of old women said that they are not able to do hard physical labour any more, so they usually either have their children do the building for them or they hire men to do it. A hut of about five metres in diameter may cost N\$10-30. A group of female heads of household said that they could dig the pit themselves and then buy the superstructure.

In the past there were people who were specialised in digging graves, but today there are none with special digging skills in the community. The old men said that there are currently two men with modern building skills in Outwilo. The old women's group mentioned one of them saying that he has no training or tools, but "he can make a building stand- up."

4.3.4. TYPE OF TOILETS PREFERRED

People would prefer toilets with seats and doors. However, the type of toilet will depend on the cost. One old man said:

"If you have the money, you can have everything (e.g. seat, locking door etc.). If not, you only get what you can pay for."

There are no cultural taboos preventing females and males from using the same toilet, so one toilet would be enough for a family. If people had more money they would like to have separate toilets for adults and children. One of them said that he might like to construct a toilet with two holes, one for adults and one for children. The toilet should always be on the western side of the *egumbo*, because then the bad smell will not bother people.

The headman liked the idea of a movable toilet, since the toilet could be moved to a new place with the *egumbo*. The old men said that some people would probably like movable toilets and some permanent ones:

"Some people prefer today to have large new buildings in their *egumbo*, made from modern materials. Now their *egumbo* cannot be moved. So maybe these people would prefer to have a good permanent toilet. Others might want a toilet which will move when the *egumbo* moves..."

The group of old men supported the idea of having toilets in all public places where there are a lot of people. "Especially when travelling and you don't know the bush, it is better to have toilets". One of them thought, however, that it would be very difficult to find someone to keep them clean: "...Who would pay someone to clean toilets? Nobody! Also you can get diseases from cleaning toilets. Who will pay for that person to go to hospital?"

The idea of having public toilets was also supported in parents' group ("they prevent diseases") and the group of female heads of household on the condition that there is a caretaker for public toilets. The headman understood the question so that there would be only one public toilet for the whole Outwilo community instead of private toilets and did not like the idea:

"This would be impossible. Outwilo is a big place. How can people move from one end of the village to the other end just to use a toilet? No. That is not a good idea, nobody would take care of such a toilet, it would become a major source of disease".

The headman and his assistant said, that if there is a toilet construction program in Outwilo, the community should first meet and discuss the issue. Before construction they would like to compile a list of people who want toilets and the type of latrines they prefer. The contractor could then come to Outwilo and go straight to those people to work with them.

4.3.5. SOME TOILETS IN THE COMMUNITY

Three people in the old women's group have toilets in their homesteads. The oldest of the toilets was built in 1981 by the woman's son. This pit latrine is located on the western side of the *egumbo*. Its pit has no lining, it has wooden logs as the "slab", a mud brick seat with a wooden box and lid on top, brick walls and a zinc roof. At the moment the toilet is collapsing, because the sand is very soft on one side. The woman is afraid of using it now, but most of the family still use it.

One of the women said, that she built her toilet herself (including digging the pit) two years ago. The pit latrine is located in the field. The latrine has crossed logs for the "slab", no lining, mud brick seat, wooden sticks for walls and a thatched roof. The structure is about three metres in diameter with quite a low roof, so one must stoop low to enter. She thinks, that it is in a good condition even after two years. She considers it to be a temporary toilet, because if it rains hard, it can collapse at any time.

The last of these toilets was built by the woman herself in October 1993. It has a pit with no lining, wooden logs for the "slab", a seat made from mud bricks topped with the cut-off top of a plastic jerry can, it is surrounded by sticks and thorn bushes and has no roof. The structure is about one and a half metres in diameter. Before this toilet, she had another toilet which collapsed after two years due to heavy rain. She is afraid that also the present toilet might collapse after hard rain, since the pit has no lining.

There is a fourth pit latrine under construction in Outwilo as well. An old man claimed he has been constructing it all by himself in his *epya*, even though the pit is about seven metres deep. The pit will have no lining, crossed logs will be used as the "slab", the superstructure will be made with wooden sticks and a circular flat sheet of tin will be used for the roof.

4.4. DEVELOPMENT PRIORITIES

Everybody agreed that Outwilo needs clean water as the first priority. People cannot survive without water, and without water they cannot have a better standard of hygiene. The headman said that female households are suffering from hunger. He and his assistant ranked food as a third priority after water and toilets. Food was ranked as a second priority in the old women's group and the toilets were mentioned as a third priority, since "without water or food you would never need a toilet". The old women and the female heads of households thought that the clinic at Ondobe is adequate and therefore it can be ranked after toilets. However, if this clinic did not exist then health facilities would be ranked before toilets. Other development priorities which were mentioned, include: education for children, education for adults, personal hygiene, community discussion and planting of trees. The ranking of these priorities are described in Tables 3 and 4.

TABLE 3. OUTWILO: DEVELOPMENT PRIORITIES IN OUTWILO FROM KEY-INFORMANT INTERVIEWS

KEY-INFORMANTS/ DEV. NEEDS	HEADMAN AND HIS ASSISTANT	MIDWIFE
WATER	1	3
TOILETS	2	-
FOOD	3	4
EDUCATION FOR CHILDREN	-	1
ADULT EDUCATION	-	2

TABLE 4. OUTWILO: DEVELOPMENT PRIORITIES FROM FOCUS GROUP DISCUSSIONS

GROUPS/ DEV. NEEDS	PARENTS	OLD WOMEN	OLD MEN	FEMALE HEADS OF HH.
WATER	1	1	1	1
TOILETS	2	3	4	2
FOOD	-	2	-	3
HEALTH FACILITIES	-	4	3	4
COMM. DISCUSS.	3	-	-	-
EDUCAT.	4	-	2	-
ADULT EDUCAT.	5	-	-	-
PERSONAL HYGIENE	6	-	-	-
PLANTING OF TREES	-	-	-	-

5. MAIN FINDINGS FROM ETOPE

The research material from Etope was collected with:

- * 2 mapping exercises with community members (6 females/3 males)
- * 1 Focus Group Discussion with parents of children at school with ranking exercise (4 females/4 males)
- * 1 Focus Group Discussion with old people with mapping and ranking exercise (1 male/1 female)
- * 1 Focus Group Discussion with female heads of household with a Venn Diagram exercise, ranking and mapping exercise (8 females)
- * 1 Key Informant interview with the junior headman
- * 1 Key Informant interview with a herbalist

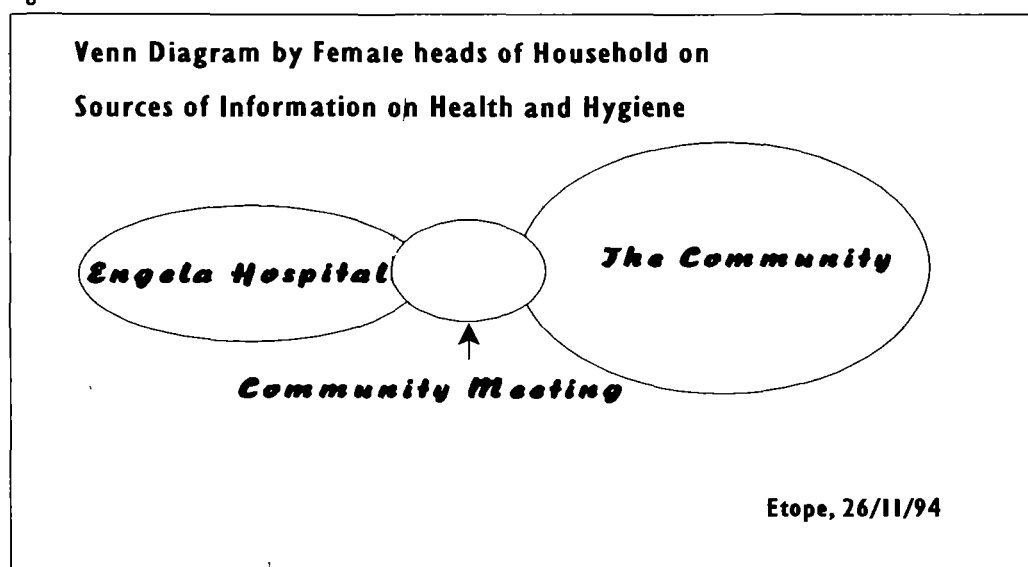
The research material from Onangwe school is based on:

- * 1 Focus Group Discussion with children who attend health and hygiene classes with ranking exercise (4 females/8 males)
- * 1 Key Informant interview with the head of department (with ranking exercise)
- * 1 Key Informant interview with health and hygiene teacher (with ranking exercise)

5.1. HEALTH AND HYGIENE EDUCATION

There has been no sanitation or hygiene programmes in Etope. The group of female heads of household said, however, that a meeting about water was held under "the meeting tree" last year by the people from Engela Hospital. During the discussion with female heads of household a Venn Diagram was drawn, but they could not think of any other source of information on health and hygiene than Engela Hospital. The Figure 14. describes the Venn Diagram based on the knowledge of female heads of household.

Figure 14.



Many children from Etope go to school in Onangwe, where they have lessons on health and hygiene issues. According to the children they are taught to keep their classroom and the surroundings of the school clean, for example they are taught never to leave the school gate open, because the goats can enter into the school area. They were also told to wash their hands before they eat, to drink milk, to eat meat to get protein, and to brush their teeth regularly.

The children stated that they have talked about hygiene practices to their parents and friends. They said that they have told their "mothers to look carefully what kind of water you are using" and to "keep the food away from flies" and their fathers to "wash his hands before he milks the cows". They have also told their parents that they should use a clean knife when slaughtering animals and that "if you help yourselves in the bush it might bring diseases to the community".

There has been no toilet demonstrations at the Onangwe School. According to the head of department at the school people from Engela Hospital came to talk about health issues to the school sometime during this year. The people from Engela told them about AIDS and how to prevent malaria. They also told them that they should start to use school toilets (which he said are widely used by people at the school now). He said that they would like to have toilet demonstrations at the school, even though the children are taught how to use toilets during the hygiene lessons and also "older children and most of all the teachers are teaching the children how to use toilets".

5.2. HEALTH AND HYGIENE PRACTICES

5.2.1. PRACTICES IN THE PAST

People in Etope used to get their water from traditional uncovered wells. According to the group of old people a deep pit was also constructed to catch the water during the rainy season. Household waste was dumped in special places outside *omagumbo*.

One of the female heads of household said that people sometimes gave plates for dogs to clean in the past, but this activity is not done any more. People did not wash themselves with water at all, but cleaned themselves with a mixture made from porridge and oil. The oil was made from *eenhanga* seeds or seeds in *eembeke* fruits. According to the parents' group this mixture was also used for small babies after the umbilical cord was cut to clean the navel. According to the group of female heads of household babies were often cleaned with a mixture made from the roots of *omugolo* tree and oil made from *eenhanga* seeds and seeds in *eembeke* fruits which was smeared on their skins.

Adults used to relieve themselves in the bush and they used sticks for wiping. People never washed their hands after relieving themselves, not even if they started to cook afterwards. Parents used to wipe their children with soft cotton cloth if available. If not available, they were wiped with sticks. Children's faeces were taken to the *epya* and buried there.

5.2.2. CURRENT PRACTICES

The Etope community is using only one traditional well in the area, since the water in other traditional wells, protected wells and the borehole is saline. The well is situated about two kilometres from the headman's house.. The other water point which can be used is the tap in Ondobe. The average distance to the tap from Etope is three to four kilometres.

According to the group of female heads of household people save the food for the next day, but other household waste is thrown outside *omagumbo*. The old people's group said that people try their best to keep their houses clean, but "the children often bring a lot of rubbish into the *egumbo*". Regarding sanitation, most people still go to the bush for defecation. According to the group of old people, special bushes around *epya* are often left for toilet purposes. These bushes are called *oluxwa*. According to the health and hygiene teacher in Onangwa school those few people who have toilets in the community usually let their neighbours use them as well if they so wish.

These days there are still special places for urination inside *omagumbo*. According to the group of community members there are usually four separate urination places for husbands, wives, girls and boys. Husbands and wives have their own separate urination places, but girls and boys have their urination places with bathing places in *omagumbo* (See Figure 15. A Traditional Homestead by Community Members at Etope.) The parents' group said, that the urination places are cleaned by removing the soil first, then throwing soil in the fields (they did not mention it as fertilizer, though) and then replacing the soil in the urination place with new sandy soil and ash. The cleaning of urination place is done by women.

A HOUSEHOLD IN ETOPE

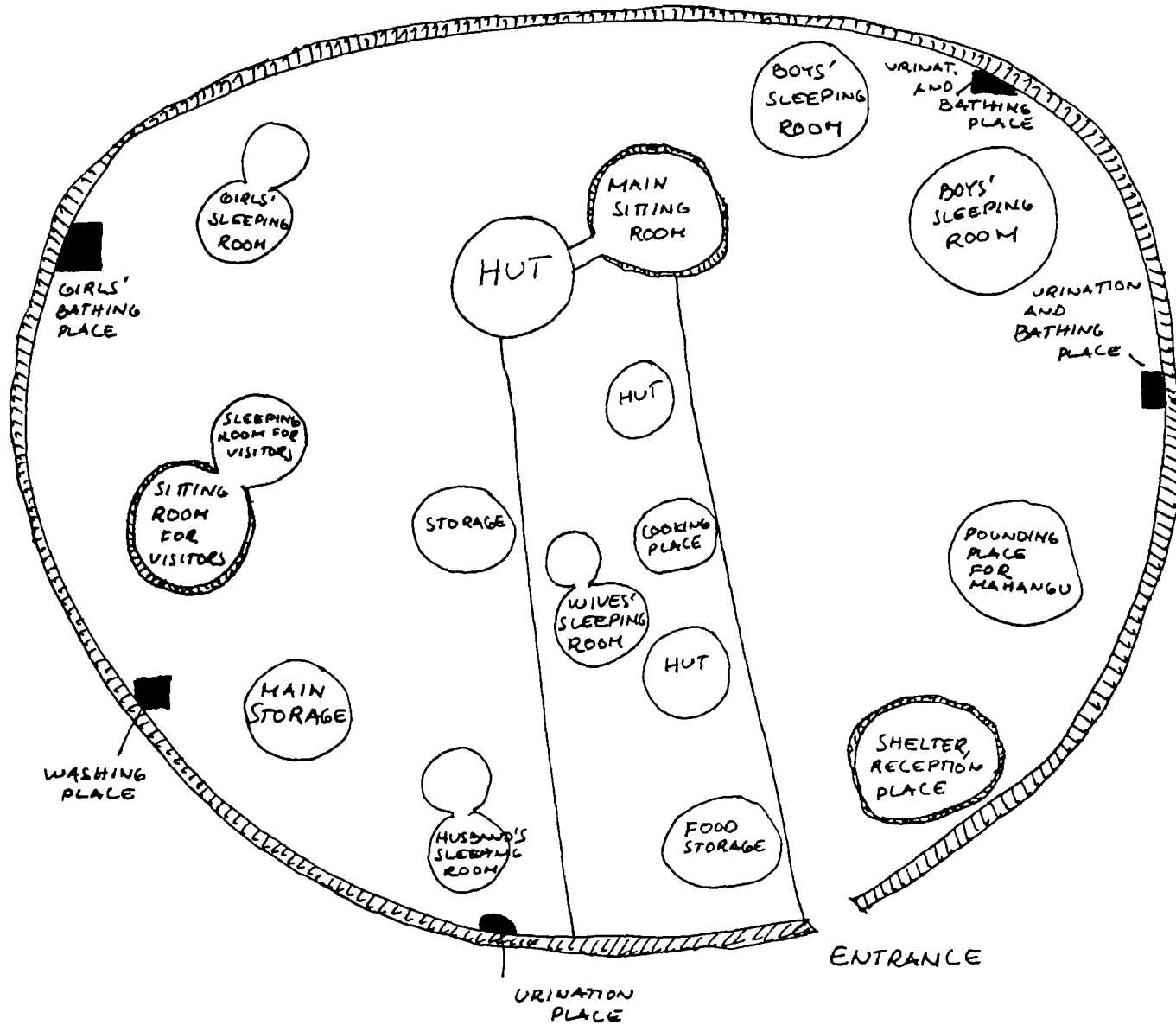
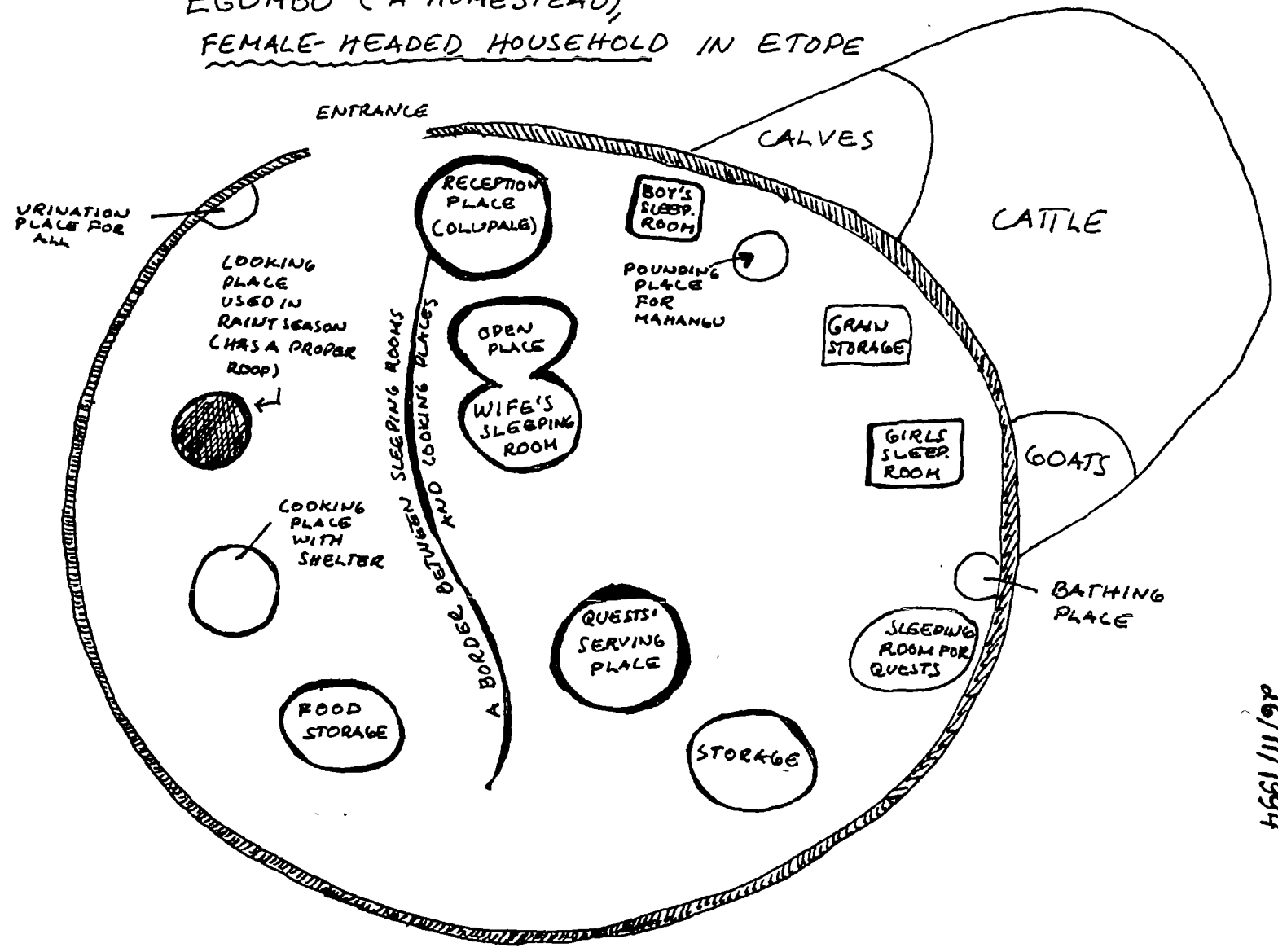


Figure 15.

A Traditional Homestead
 Drawn by Community
 Members in Etope

24/11/1994

EGUMBO (A HOMESTEAD),
FEMALE-HEADED HOUSEHOLD IN ETOPE



26/11/1994

Figure 16.
 A FEMALE HEADED EGUMBO IN ETOPE

The female heads of household said that they usually have two urination places: a public place and a place for the female head of household. They have two bathing places in the *egumbo*: one for boys and one for girls (See Figure 16. A Female Headed *Egumbo* at Etope.) In the urination places they have shallow pits which are cleaned with ash to prevent any smell. Bigger children must go to bush for defecation while the younger ones defecate inside the *egumbo*.

People do not usually wash their hands after "helping themselves", since there is not much water. The group of female heads of household stated, that they always wash their hands before they start to cook. They said that people use sticks for wiping, because they "cannot afford to buy toilet paper".

People in Etope have never used human faeces as fertilizer and the idea was generally considered to be strange. It was thought to be a harmful and even an unhealthy activity. Female heads of households thought it might ruin the taste of the wild spinach grown during the rainy season.

The group of female heads of household mentioned some special beliefs and practices concerning health and hygiene which are followed by the community. They said that if a small baby, who cannot walk yet, defecates inside an *egumbo*, her/his faeces are buried where people walk, so that she/he will learn to walk at an early age. They also said that people are expected to bury the faeces when relieving themselves during the time of *embe* fruits in rainy season.

It is also believed that a pregnant women will have problems when delivering if she does not adhere to some beliefs. If meat is hung up to be dried, she should never take down a little piece of hanging meat, but the whole piece if she likes to eat it. When she is in the bedroom, none should enter there, "not even her husband if he has been with another woman". A pregnant woman should never go inside a room and out of it without turning, and she should never sit outside a hut by the door.

In addition to modern health care, people use traditional medicines in Etope. The headman's wife is a herbalist. She is also under midwife training in Onangwa. She can treat *onylai* disease (symptoms include blood coming out of ears and nose), *onvia* (septic wounds) and symptoms of high blood pressure. She collects different kinds herbs from local environment. The roots of *omguya* tree are especially important. Patients either drink the herb liquid (*onyla*), or the mixture of herbs is smeared on their skins (*onvia*), or they are asked to breath the smoke of burned herbs for high blood pressure. She said that she can treat only these diseases and she has always been successful with them.

5.3. TOILETS

5.3.1. EXPERIENCE WITH AND ATTITUDES TOWARDS TOILET USE

There are three private toilets in Etope and some people have never used a toilet. One of the community members said that her child (who is a teacher) has a private toilet in Etope, but that she has never used that toilet, either.

None of the people rejected the ideas of having a private toilet, although people stressed that there are other development needs which should be dealt with first. People lack experience in toilet use, but they like the idea of having toilets in Etope. The bush covering Etope is as scarce as in Outwilo. The group of old people said they "understand that it is important to have toilets" and the parents' group mentioned that "it is good to have toilet for hygiene reasons."

5.3.2 HOW MUCH CAN PEOPLE AFFORD TO PAY?

The main obstacle for building toilets in Etope is lack of money. The Old people said that they could not afford the toilet at all, but the parents' group became interested in having an ombili plat. The reason for this interest was its cheap price. They were told it would cost only about N\$20. When old people were asked if they could afford a toilet of N\$400 which could be paid monthly, they said they "could not decide now". On the other hand, the female heads of households said that they are dependent on a small pension and "could not

afford to have a toilet at all", since "they have other things to spend their money on", such as school fees. The junior headman said he would like to have a toilet himself, but thought that "most of the community members can not afford to pay for the material and labour for constructing toilets."

5.3.3. BUILDING SKILLS IN THE COMMUNITY

According to the old people's group there are skilled builders in the surrounding area who construct modern buildings. However, they have to transport their material from Ohangwena, Ondangwa and Oshakati, and this is very expensive. The parents' group said that there is one person with modern building skills in the community, but no transportation for the modern building material. The group of female heads of household said, that there are three builders in the community which are from the same family. The father of the family has traditional building skills and uses local building materials. His two sons have modern building skills. They know, for instance, how to construct walls, roofs, floors and how to paint houses. Builders in Etope used to collect the building material from the surroundings and carry it on their shoulders. If they manage to find local building material, that is what they use. But the local material has become scarce. There is nobody in Etope with special digging skills.

However, if toilets are to be built in Etope at some point of time, people would like to build them themselves. This method will be less expensive than hiring the labour. The group of female heads of household said, that for them it would be very difficult to build toilets, since "it is physically too hard" and they "would need someone to do it for us." If there was a pit latrine programme in the community based on people's own labour, they would like to have training and guidance. They would also need assistance with building materials. Since there are no trees any more they think they would be obliged to use modern building material. This is known to be very expensive and the transportation problem exists.

5.3.4. THE TYPE OF TOILETS PREFERRED

There are no cultural taboos forbidding females and males from using the same toilet, although some people thought it would be nice to have separate toilets for adults and children. The parents' group said that they would like to have *ombili plats* with seats and doors. They are against the idea using poles for the slab, since "it will become old and fragile and people might fall into the pit". The junior headman suggested that local material, such as *omahangu* sticks could be used for toilet construction as well.

5.4. DEVELOPMENT PRIORITIES

The teacher for health and hygiene education in Onangwa school thinks that the community awareness concerning health and hygiene issues is the first priority. All the others said, that most of all Etope needs clean water. The general impression was, that people felt, that it is no point of talking about toilets if there is no clean water. Once, when we waited for the people to join us, the headman laughed and said to us that "if this meeting were about water, here would be a big crowd." In all of discussions people talked a lot about their water situation. During the community meeting in Etope, the community members raised the water issue again and we gave them advice on how to make an application for a pipeline.

TABLE 5. ETOPE: DEVELOPMENT PRIORITIES

GROUPS/ DEV. NEEDS	OLD PEOPLE	FEMALE HEADS OF HOUSEHOLDS	PARENTS
WATER	1	1	1
FORMAL EDUCATION	2	2	2
ADULT EDUCATION	3	-	-
CLINIC	4	3	3
SHOP	5	-	4
TOILETS	6	-	6
FOOD	-	4	7
VETERINARY	-	-	5

TABLE 6. ONANGWA SCHOOL: DEVELOPMENT PRIORITIES ¹

PEOPLE/ DEV. NEEDS	STUDENTS			TEACHERS	HEAD OF THE DEPARTMENT
	1.	2.	3.		
DRAFTS	1.	2.	3.		
WATER	5	3	1	2	1
TOILETS	-	-	-	4	2
COMMUNITY AWARENESS ON HEALTH	-	-	-	1	-
CLINIC	2	-	4	3	-
ENVIRON. HYGIENE	4	7	6	-	-
PERSONAL HYGIENE	1	4	5	-	-
FORMAL EDUCATION	6	5	3	-	-
HEALTH EDUCATION FOR ALL	-	-	-	5	-
INCOME GENERATING PROJECTS	-	-	-	6	-
HOUSING	7	1	-	-	-
CHURCH	-	6	-	-	-
FOOD	3	2	2	-	-

¹Some interviews were conducted at the Onangwa School. The students had a long discussion about development priorities. They made two drafts of the order of development priorities, before they accepted a third one as a final order of development priorities. All the three rankings are included in the Table 6.

6. THE THREE VILLAGES: DIFFERENCES AND SIMILARITIES IN HYGIENE AND SANITATION

6.1. THE INFORMATION SOURCES FOR HEALTH AND HYGIENE

Engela Hospital was seen as the most important source of health and hygiene education at Oshikango Combined School. It was mentioned as a source of information by the other community members in Oshikango as well. People in Etope mentioned the hospital as the only source which has given information on health and hygiene issues. In Outwilo, people could not mention even one source of information for health and hygiene.

Children have health education lessons at schools. At Oshikango school the children were able to mention only a few things they have learned from the health education lessons and FINNIDA's toilet day. They assured us that they have told their parents about some things that they have learned. A group of community members from Oshikango said, however, that while the children have told them to build toilets, children are not practising the hygiene lessons taught at school. The principal of the Oshikango school thought that students are not giving any information on any health and hygiene to their parents. Many children from Etope and Outwilo go to school in Onangwe where we talked with groups of children and teachers. Children from Onangwe assured us, that they have told their parents about some things they have learned at school.

6.2. HEALTH AND HYGIENE PRACTICES

6.2.1. PRACTICES IN THE PAST

Regarding health and hygiene activities practised in the past, comments were quite similar amongst respondents in all three villages. While a sufficient amount of clean water was available in the past, people still did not use it for washing themselves. Rather, traditional means of washing were undertaken, such as washing by using oil from various plants, grain meal porridge or butter.

Most groups mentioned that defecation most often occurred in the bush, while occasionally specific bushes were left in the *epya* near the *egumbo* for toilet purposes. At the time when *omahangu* is tall some people tended to use the *epya* for defecation. Most groups stated that adults used sticks for wiping after using the toilet, while young children either used sticks or had their bottoms rubbed on the sandy ground. Small babies, in contrast, usually had their bottoms rubbed with plant oil and a soft cloth or skin. Generally people did not wash their hands after using the bush. Only one group in Outwilo mentioned that children's hands were washed. All the groups reported that a specific place was available inside the *egumbo* for urination, although the number of these places in each *egumbo* tended to vary from one to four, according to different respondents.

All groups stated that solid waste/litter was disposed of in a special place outside of the *egumbo* which was later utilised as fertilizer. Livestock manure was also utilised as fertiliser. This process of fertilisation occurred because the *egumbo* and kraals were moved every two or three years and the crops were then planted on top of the old kraal area.

6.2.2. CURRENT PRACTICES

Health and hygiene practices have not changed much from the past. The biggest change has been that people now wash themselves with water. The current water situation makes it difficult for them to stay clean: there is not much water available and it is often dirty and saline (especially in Outwilo and Etope).

Very few people have yet to build toilets in their homes. Therefore, there are still urination places in the *omagumbo* and people go to the bush for defecation. People still use sticks for wiping. Faeces are not usually buried, unless defecation occurs in the *epya*. Some people in Etope said that faeces should also be buried after eating *embe* fruits. People do not usually wash their hands after relieving themselves.

People use animal and household waste as fertilizer in their fields, but not human waste. The idea of using human waste as compost was perceived as being very strange to most people. The group of old men from Outwilo said, that people tend to burn their household waste more often than before, since it contains a lot of plastic and they do not want their animals to eat it.

6.3 TOILETS

6.3.1. EXPERIENCES AND ATTITUDES TOWARDS TOILET USE

Many people in the three villages only have little experience with toilet use. Some of them have never used a toilet. Although it was stressed in all three villages that there are other, more important needs than toilets, people in all three villages generally liked the idea of having private toilets. It was said that they are needed for privacy, since the bush is scarce now, to keep the waste in one place and to prevent diseases from spreading.

6.3.2. HOW MUCH CAN PEOPLE AFFORD TO PAY

The biggest problem for toilet construction is lack of money in all three communities, people cannot spend a lot of money for building materials and transportation. The Table 7. in the next page provides estimates on how much people can pay for toilets in the different villages.

TABLE 7. ESTIMATES ON HOW MUCH PEOPLE CAN PAY

VILLAGES	OSHIKANGO	OUTWILO	ETOPE
PEOPLE WHO ESTIMATED	ESTIMATED AFFORDABILITY	ESTIMATED AFFORDABILITY	ESTIMATED AFFORDABILITY
HEADMAN	N\$0	N\$100 (max.)	Junior headman: N\$0
PARENTS	N\$300-600	less than N\$120	Ombili plat for N\$20
COMM. MEMBERS	N\$0	N\$100-200	
OLD PEOPLE	Old men: N\$200-400	Old men: under N\$200, N\$300-400 Old women: N\$0	
FEM. HEADS OF HOUSEHOLDS		N\$60 (max.)	N\$0

6.3.3. BUILDING SKILLS IN THE VILLAGES

In all three villages people were interested in building the toilets themselves, because it would be less expensive than paying someone to do the construction. In order to do so they would need assistance in getting building materials and guidance in construction work. Most of the people seem to have some kind of experience in traditional building. There are also some people in the communities who are hired by others to do "modern" building. In Oshikango there is also a group of six women who have been trained by the Rural Development Centre to build glass bottle buildings.

While traditional builders usually collect the building materials themselves, modern building materials are usually provided for modern builders by the owner of the future building. There used to be special diggers for graves in each village before, but not any more.

6.3.4. THE TYPE OF TOILETS PREFERRED

In all the three villages it was said, that there are no cultural taboos preventing males and females from using the same toilet. The ideal situation, according to one group of respondents, would be to have one toilet for adults and one for children, but this was also seen as being unrealistic, because of lack of money. One person from Outwilo said that he might like to build a toilet with one hole for adults and one for children. The other common wish in every village was that the toilet should have a seat and a door with a lock, so no one could not go in and make it dirty. People thought some toilets should be movable and some permanent, because some people move their *omagumbo* every now and then, but some do not any more.

The parents' group in Etope were against using poles for the slab, since it might become fragile and people might fall into the pit. The junior headman from Etope suggested that local building materials, such as omahangu sticks should be used for building toilets as well.

The teachers and the vice-principal from Oshikango school expressed the wish to have flush toilets at school. They clearly lacked any recognition about the problems associated with flush toilets in places with limited water source. Some people in Oshikango and Outwilo were also asked what they thought about public toilets. Parents from Oshikango and old men from Outwilo thought it is a good idea if the toilets are taken care of properly.

6.4. DEVELOPMENT PRIORITIES

Water was considered the most important development priority in all three villages. In Oshikango there was a large variety of other development needs mentioned after water, but it seems that better health care, education opportunities, hygiene and toilets were considered most important. The people in Outwilo thought that the most urgent development priorities after water are toilets, access to food (during drought year), education opportunities and health care. People from Etope thought that toilets, education opportunities, a clinic and access to food (when the crops are poor) were the most important development priorities.

7. CONCLUSIONS

1) Although Oshikango was chosen to represent a better off village compared to Outwilo and Etope, **the information got from three study villages did not differ much.**

2) **The assumption that individual community members are not interested in having toilets in private homes was clearly proven wrong in this research. The idea as such does not need any promotional effort.** There are, however, **two main problems which must be addressed, before a toilet construction programme can start in private homesteads in the study villages:**

Water problem

All the villages face water problem and it is especially difficult in Outwilo and Etope. The lack of clean water affects all aspects of life and without clean water, it is difficult to follow proper hygiene practices. People will not be motivated to start constructing toilets in current water situations, since the water problem is considered to be more urgent. Without a proper and convenient supply of water, any construction of latrines would be difficult as well.

Lack of money

People in rural areas stated that they cannot afford WSSPOR toilets at their current prices. On the other hand, there are some people in the rural areas who could afford more sophisticated toilet models, so several options of different toilet types should be available. Some people said that people in villages are generally too poor to pay for the toilets at all. According to LeBeau and Pendleton (1992) people might, however, have cash available for such things as pit latrines. In a survey of 500 households in the project area the medium monthly expenditure was about N\$280. Also about 60 percent of households reported that they manage to save money each month and the medium monthly savings were estimated to be about N\$100. Most households spend money on the following: housing, clothes, food, transport, alcohol, medical treatment, tobacco and various other small expenses.

3) **All the family members can use the same toilet** and there are no cultural taboos preventing people of different sexes from using the same toilet, either.

4) **Most of the people were willing to build their toilets themselves** and they were ready to use both traditional and modern building materials. Traditional materials and building methods are already part of people's culture and knowledge. Some of the traditional building materials such as clay and *omahangu* (millet) sticks are also fairly easily available from surroundings. Traditional building materials are a cheaper option compared to modern building materials which have to be transported to villages. On the other hand, there is not much vegetation left and cutting down trees is forbidden, so there are limits to what extent the local vegetation could be used.

5) **The idea of using human waste as an fertilizer in fields will be difficult to promote to many people.** This subject was brought up in seven Focus Group Discussions and four Key Informant interviews. Only in **one Focus Group Discussion the idea was accepted immediately**, all the others thought that the idea is very strange. In the end one Key Informant and two groups were somehow willing to consider the idea, but only if they would not handle the waste themselves and the waste would be processed, so that it would not look like human waste, would not smell and would not have germs. Three Key Informants (which were the headmen in Oshikango and Outwilo and a junior headman in Etope) and four groups were strictly against the idea under any conditions.

6) **People have existing knowledge of health and hygiene and hygiene practices which can be developed further.** People said themselves that they are willing to have more information on health and hygiene, but in the current water situation they will have difficulties in following improved hygiene practices.

7) **Many people do not know about the WSSPOR project or the fact that latrines can be constructed through the WSSPOR Ohangwena office.**

8. RECOMMENDATIONS

- 1) **WSSPOR should take the problem of water very seriously. The project should attempt to facilitate or become involved in the solutions to the water problems in the various villages** before any toilet programmes will be introduced to communities. **If necessary, a shift of policy might be needed.** Thinking of project's own interest, it will be very difficult to get people interested in improved hygiene practices and toilets if a major water problem exists.
- 2) **There exists a variety of low cost latrine designs developed in Southern Africa. The WSSPOR should look into these models and pilot test some of them.** Toilets should offer various features at various prices. Some of the options should be very inexpensive (under N\$50) and even the most expensive models should not be over N\$600-700. The toilets already built in villages should be examined, since people have already built some toilets with cheap and available building materials. In some cases people might be willing to improve the existing latrines (e.g. with lining the pit).
- 3) The first additional features to be added in basic toilet structures with pits and holes, are seats and doors which can be locked. Small children are afraid of falling to the pit, so toilets have smaller squat holes and seats for children. Some people might prefer movable toilet, which could be moved with *omagumbo*, but the others would like to have a permanent toilet.²
- 4) Some people preferred **separate toilets for adults and children** or to have a toilet which is divided into two sections (one for children, one for adults). This was because children were said to make a mess in the toilet, so adults wanted to have a separate toilets they could keep clean. The idea of **children's toilet** is, however, dangerous: it **can become a major source of diseases** if parents will not see it is kept clean properly. **WSSPOR should consider, however, health risks which are involved with children's toilets and not start building separate toilets, before it is fully convinced that the both toilets would be cleaned properly.**
- 5) When developing different toilet options the **availability and cost of building materials should be closely examined.** There are now less local building materials available in the surroundings than before. On the other hand, the cost of toilets will increase easily, if the material needs to be transported far away. **WSSPOR should first try to cost out the use of traditional materials versus modern materials. In addition, the project should also analyze other aspects connected to building materials such as availability of materials, availability and cost of transport and the building skills of villagers involved in the construction.**
- 6) **Payment or credit plan could be introduced to people, but it involves some risks.** Since people do not have much money and are not used to paying things little by little, they might overestimate their paying capacity (especially if something unexpected happens in their lives) or they might stop paying once the toilet is ready.
- 7) **Since many people want to build their own toilets at a very low price, the current contractor based program needs to have another alternative which is based on people's own labour.** The role

² *Omagumbo* is a plural form for the word *egumbo* referring to a homestead. People used to move homesteads once in two to three years in the past. Currently some *omagumbo* are moved approximately once in four to eight years and some are not moved at all, since they contain modern permanent buildings. The reason for moving the homesteads are that the household and animal waste from the kraal serve as fertilizers for fields which will be then established there. Also the structures and buildings in traditional *omagumbo* become soon worn out in local conditions and will be thus replaced with new ones.

of contractors should be examined closely in sanitation program. How far should it be expanded if most of the people want to build their own toilets in villages? Will contractors continue only building toilets at public facilities or to a bit wealthier people through the current application system? Or will they get involved with a larger scale sanitation programme in villages as "construction instructors" who could give guidance on how to build toilets and how to get materials? And, most of all, does the project have the capacity to meet and expand any construction programme? There are already toilet applications piling up in Ohangwena office and people waiting for their toilets to be constructed.

8) Because gender issues are important in any rural development project, it should be noted that in all the communities **both men and women were equally willing to have toilets**. Although women and men have building experience and were willing to build toilets, specific male builders were more often mentioned to have modern building skills than females. This might indicate, that women might need additional encouragement and support for building toilets themselves. The information connected to toilet cleaning should be addressed to both women and men, even though it has been traditionally a woman's duty to clean the toilet places.

9) **People should be informed about WSSPOR and how and where to make an application for a toilet.**

10) **WSSPOR should expand its health and hygiene education programme** when implementing a sanitation programme in villages. WSSPOR should try to network with all the possible parties who could be helpful in planning and implementing activities. The project could contact Ministry of Health and Local Services, Ministry of Education and Culture, various hospitals and clinics, the Health Inspector, different NGOs and local scout organizations, for example.

When expanding the health and hygiene information programme both adults and children could play an important role transferring information, but it should be noted that many people in the area lack formal education (LeBeau and Pendleton 1992). Informal education might provide information in a way that counteract the effects of a lack of formal education (Roussow 1989). That is why WSSPOR should closely examine **how** to communicate the information to people. Lecturing might not be the best way to transfer information, but the use various kinds of other extension methods, such as small role plays and demonstrations might help people to understand the message better. Since female headed households are generally fairly poor, demonstration toilets could be built at some of their homesteads free of charge, but under conditions that anybody who wants can use them.

The WSSPOR staff could prepare a programme with suitable teaching materials together with staff from Engela Hospital, for example. Although people lack formal education in the area LeBeau and Pendleton (1992) stated that quite a few people can read Oshiwambo in the study area. This is why written material should also be included in the information programme for the villages. The use of radio should be also investigated as a means to deliver the message. Some people might be interested to be trained as health motivators in communities, but this should be not imposed on people, since they need to be motivated themselves. If found, such people could serve as permanent "extension workers" and be examples for other people in their communities.

11) **All the aspects of the idea of human waste as a fertilizer should be closely examined before introducing it to the communities.** The handling of human waste might create health risks if it is not done properly. The benefits versus opportunity cost both for the project and the villagers should be analyzed, because the activity might not be worth the effort which might have to be undertaken. The project should consult a few medical practitioners and technicians in order to design and develop the following: a proper method for producing human waste as compost, methods for removing the compost from the pit and scattering it on the fields, and an information sheet stating how and where the human compost can be or cannot be utilised. The issue regarding whether the separation of urine from faeces is necessary or not should be researched also.

12) Instead of introducing the human compost idea which is commonly rejected the project might want examine how more animal waste could be used in fields. One option might be big **commercial farms which produce a lot of cow manure which could be used**. If this cow manure is used, the problem of distribution needs to be solved.

13) **The WSSPOR management staff must provide feedback to the field staff on what recommendations are going to be acted upon and in what order of priority.** Then the field staff can visit communities and discuss with people the decisions WSSPOR has made.

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Appendix I:

OSHIWAMBO WORDS

<u>SINGULAR/PLURAL</u>	<u>MEANING</u>
eenhanga	seeds from onhangwa plant
egumbo/omagumbo	a homestead
eno/omano	a bush
efundja	a big flood which originates from Angola
epya/omepya	a field
etale/omatale	a seasonal river
oini/oshini	a pounding place for omahangu
okalupale komusamane	a courtyard with husband's sleeping room
olukula	a tree which roots were used for a mixture people cleaned themselves with.
olupale/omalupale	a place in an egumbo where visitors are received
oluxwa	bushes outside an egumbo which are left for toilet purpose
omahangu	<u>(Pennisetum typhoides)</u> a type of millet
ombe/embe	<u>(Berchemia discolor)</u> a fruit from omuve tree
omheke/eemheke	seeds found in fruits of Oshibeke bush
ombike	local drink
omugolo	<u>(Terminalia sericea)</u> Silver terminalia tree
omukunda/omikunda	a group of households which are under junior headman's responsibility
omumakani/eemumakani	<u>(Rhigozum brevispinosum)</u> herbal tree
onylai	a disease with symptoms such as blood coming out from nose and ears
onvia	septic wounds

omuguya	(<i>Ptrerocarpus angolensis</i>) Kiaat tree
oshara/iishara	a disposal place for household waste outside an egumbo
oshitameno/oisitameno	an urination place inside an egumbo
osiwatu	a disease which a pregnant woman will have if she has sex with someone who is not her husband - if not cured with herbs the woman will have problems when delivering her baby.
tombo	local beer
oxupa/exupa	a gourd made from <i>Lagenaria siceraria</i> plant
oshana/iishana	channel or pan in which water accumulates during the rainy season

Appendix 2:

RESEARCH METHODS

1. FOCUS GROUP DISCUSSION (FGD)

Focus Group Discussion can be used to deal with specific issues. People in each group should be similar (homogenous) in some ways, e.g. by age, by gender, by similar occupation, by common interest, by common problems, all urban, all rural, all urban or all community leaders. The facilitator (interviewer) allows and encourages all individuals in the Focus Group to express their opinions and ideas, but at the same time probes people to keep on the topic and asks questions for more details and clarity (Terry 1994).

2. KEY INFORMANT INTERVIEW (KII)

A semi-structured interview with individual people who are important or relevant to the issue on hand, either because of their position, their knowledge or their experience (Terry 1994).

3. OBSERVATION

Active observation produces both new and additional information for double-checking the acquired information.

4. PARTICIPATORY RURAL APPRAISAL (PRA) METHODS

4.1. MAPPING

In mapping exercise community members draw a map. Maps can be drawn for many topics such as demography, social and residential stratification, a village's use of natural resources and spatial arrangement of a house, fields and land use, mobility, water and soils (Theis and Grady 1991).

4.2. VENN DIAGRAM

A Venn Diagram (named after the man who created it) shows the key institutions and individuals in a community and their relationships and importance for decision making. First key institutions and individuals responsible for decisions in a community or organization are identified. Then the degree of contact and overlap between them is identified and circles of different sized are cut or drawn to represent different institution. Size of a circle indicates importance or scope. Separate circles indicate no contact, touching circles indicate that information passes between institutions, small overlap indicate some cooperation in decision making and large overlap considerable cooperation in decision making (Theis and Grady 1991.)

4.3. RANKING

Ranking or scoring means placing something in order. Analytical tools, such as ranking, complement semi-structured interviewing by generating basic information which leads to more direct questioning. We used ranking to examine what thing and in which order people considered important for their communities (Theis and Grady 1991).

Appendix 3:

FOCUS GROUP DISCUSSION INSTRUMENT

Types of Focus Groups

- Group 1: parents with school age children whose children attend schools where there have been hygiene education demonstrations and/or pit latrines constructed [male and females separate] {Use questions no. 1, 3, 4, 5, 6, 7, 8}
- Group 2: parents with school age children whose children do not attend schools where there have been hygiene education demonstrations and/or pit latrines constructed [male and females separate] {Use questions no. 1, 2 (if any old people), 3, 5, 6, 7, 8}
- Group 3: school age children who attend schools where there have been hygiene education demonstrations and/or pit latrines constructed. {Use questions 4, 6, 7}
- Group 4: female head of households who are the decision makers for their families {Use questions no. 1, 2 (if any old people), 3, 5, 6, 7, 8}
- Group 5: community leaders (e.g., headmen, pastors, principals, VDC chairs, WPC Chairs, etc.) {Use questions 4, 5, 6, 7, and 8 if time allows}
- Group 6: adults with construction/building skills or who operate small-scale building enterprises {Use questions 5, 6, 8}
- Group 7: Teachers {Use questions 4, 6, 7, and 8 if time allows}
- Group 8: Business people {Use questions 5, 6, 7, 8}
- Group 9: Old people with knowledge about sanitation practices from the past [male and females separate] {Use questions no. 1, 2, 3, 5, 6, 7, 8}

Firstly, provide the group with an introduction of who you are, who you work for, what the project is about, why you are asking the group to meet, what you want to discuss today, how you are going to use the information, and how long you would like the discussion to last. Remember to mention that we are not connected in any way to any political party or activity.

1. Beginning of FGD: mapping the *epya* with a *egumbo*
{For FG 1, 2, 4, 9}

Begin with having the group draw a *epya* with a *egumbo*. Ask them to explain what went on (or goes on) in different places. Probe for entrances, cooking areas, eating areas, sleeping areas, who slept where, bathing areas, etc. Also ask if the *egumbo* was moved, how often in the past? Why? Then use the *epya* map to ask no.2:

2. Practices in the past {For FG 2, 4, 9}

[Obtain information on various hygiene and sanitation activities practised in the past (based on the assumptions that there were less people, more trees, greater adherence to formal cultural procedures), by using the map].

[Probe, use the map: Where did people find water? Where did they bath? What did they do with solid waste/litter? What did they do with leftover food?]

For urination and defecation -- [For each point determine if there is a difference for urination? For defecation? Or the same for both?]

Regarding their young children [5 yrs. old and under]:

Where did children go to relieve themselves. Were there any "rules" or beliefs or specific cultural practices for children?
What were the hygiene considerations regarding urination and defecation for children? [Probe if necessary: Faeces buried? Thrown some place? Ash thrown on place of urination or defecation? Put into a burning pit for rubbish? Other disposal? Were children wiped? If so, with what? Hands washed? Other personal hygiene practices?

Regarding adults:

Where did adults go to relieve themselves [use the map and probe for location; in the *egumbo*, *in the fields*, in the bush?] If in the bush, how far did people have to walk? Did this vary for males and females, in terms of place or place?

Were any structures (reed or wood fence for example) (*oshisitameno*), set up for urination in the *egumbo*? Describe. Who could use this?

Were any structures or pits of any kind built for defecation? Describe. Who could use this?

What were the hygiene considerations regarding urination and defecation for the adults? [Probe if necessary: Faeces buried? Ash thrown on place of urination or defecation? Put into a burning pit for rubbish? Other disposal? Did people wipe themselves? If so, with what? Hands washed? Other personal hygiene practices?]

Were there any strict cultural practices that had to be adhered to? Any cultural taboos?

What were some negative aspects of these practices? Positive aspects?

Was anything ever used to give fertility to the fields? What/How?

Was human excrement ever used for compost? Why or why not? How?

3. Current practices {For FG 1, 2, 4, 9}

Currently [e.g., now, today, in the present, this year]:

Where do you go for water? How far from your house? What type of water supply is it?

Please describe in detail various hygiene and sanitation activities practised today by people in your community:
[Repeat the same probes from No.2 as necessary, such as "you said earlier that people in the past did...., how does that compare with now? Do people do the same thing...?]

What are the hygiene considerations today? (Faeces buried?, Wiping? Toilet paper used? Access to toilet paper? Hands washed? Latrines or toilets cleaned? By whom? Other personal hygiene practices?)

4. Attitudes towards recent sanitation interventions
{For FG 1, 3, 5, 7}

To determine:

Have you or your children had any hygiene lessons through the school, clinic, or any other source? [If yes, discuss these questions. If no, go on to next topic.]

Please describe the hygiene education lessons that you have had.

[Probe for: Who conducted them? What were you taught? How were the lessons conducted (Where? For how long? Using what methods?) Briefly explain what you learned in the lessons?]

What do you think about these lessons? How useful are they? Are you doing anything that you were taught? Why or why not?

[For adults who have not had lessons, but whose children have had lessons]: Have your children shared any information or ideas with you? How? What have they said? Were you interested in what they said? have you practised anything they told you?

[For children]: Have you shared any information or ideas with your parents, other relatives, or friends? How? What have you said? Were they interested in what you said?

[For those groups who have had pit latrines built at their school and/or clinic.]

Please describe the pit latrine(s) that has(have) been built for your use. [Probe for location, type (VIP? Orientation? Squat or seat? Door?)].

Do you use it? Why or why not? What do you think about it? Positive and negative points for above descriptions.

Is it kept clean? Yes or No? Why or why not? If yes, by whom? Why?

Do others use it? In your opinion, why or why not?

5. Building skills and materials for building.
{For FG 1, 2, 4, 5, 6, 8, 9}

Now we would like to talk about people with building skills in you community. Who are the people in the community who have skills in traditional building methods (for house walls, roofs, fences, etc.)? Men or women? What types of skill do they have? Are there any people who "specialise" in digging or have special digging skills?

What materials do they use? Where/how are the materials obtained? If collected, how far away? [Probe for: type of transport, location, time to get there, time to collect, any problems, easy or difficult to get?] Are the materials or labour availability seasonally (based on seasons)?

Are their people with building skills using "modern" materials (cement, etc.) who build "modern" houses, etc. Where can they obtain materials? [Probe for problems, access, availability, easy or difficult to get?].

6. Experience with and attitudes towards pit latrine use. {For ALL FG}

[First collect some general information]

Are there any pit latrines in your surrounding area? Have you used this latrine or other latrines or flush toilets outside of your area (e.g., at Oshakati hospital)? What type are they?

[Probe for opinions on these pit latrines] Are people happy with the latrines? Why or why not? What is good about them and not so good? Should any changes be made to the design?

At the beginning of the discussion you mentioned some current practices for sanitation? Which methods/places do you prefer (e.g., field, bush, other or pit latrine). Why?

[Probe on general attitudes towards pit latrines, then on attitudes towards having pit latrines in public places, and then on attitudes towards having pit latrines at people's homesteads]:

Ask for opinions on different aspects of pit latrines. [Probe on the pros and cons of these different aspects. Probe as to the following aspects: Location (use the map)? Sitting or squat toilets? With or without doors? How private must it be (e.g., must it have a door? must it lock?) Can males and females and fathers and daughters use the same pit latrine?

Any problems? [Probe: Fears or objections that young children may have (e.g. falling in? dark?) Fears or objections that women may have? Smell? Filth? Baby dumping?]

[For those communities who have latrines and for those communities who do not have]

In general, what do you think about the idea of having a pit latrine at the school? Clinic? Other public place? At your own home? Is it a good idea? Are you interested in having pit latrine project in your community? Why or why not?

What do you think about the necessity of various personal hygiene practices, such as washing hands after using the pit latrine? Keeping the latrine clean?

From the latrine, are you willing to use the human excrement for compost? Why or why not? How could this be done?

7. Interest in or importance of sanitation programmes relative to other development needs and priorities.
{For FG 1, 2, 3, 4, 5, 7, 8, 9}

Intro: we are interested to learn about all the development issues and requirements for you and your community and their relative importance.

[Explain ranking cards. Ask them if they understand? Want to add any more? Ask them to pull out six which are the most important or highest priority for their community today. Then ask them to rank these six from top priority down. Probe as to Why these choices? Why others rejected?]

[Take notes, especially on How important is sanitation interventions and hygiene education in terms of all development issues and requirements for them and their community?]

8. Interest in having a pit latrine built in private homesteads {For FG 1, 2, 4, 5, 6, 7, 8, 9}

How does the idea of having a pit latrine constructed in your own homestead rank with other needs that you have for your own family, bearing in mind that you will be expected to cover at least some of the materials costs and labour.

If interested, ask:

Probe for requirements on pit latrine styles. Mention again the aspects that were listed from question no. 6. And/or show pictures of the 6 different toilet types, with their costs. Of these, which ones do you prefer for your own home? What are you willing to pay?

What level of labour are you willing (and able) to put in? How much are you willing to pay towards material costs? How will you meet these costs (any income: mahangu, goats, cattle, chickens, cash, etc.)? Probe on payment methods and schedules. How can these contributions be made? Probe for ability to pay all at once? Down payment? Loan? Payment plan?

Who should be responsible for seeing that the pit latrine is built? [If other parties are mentioned...], how will you work with this group, organisation, individual?

If pit latrines are ranked low or there is no interest, find out why. Will this opinion change if your circumstances change in the future?

THANK ALL THE PEOPLE FOR THEIR TIME, PATIENCE, AND IDEAS

Appendix 4:

KEY INFORMANT SEMI-STRUCTURED INTERVIEW INSTRUMENT

POSSIBLE KEY INFORMANTS

- * Senior Headman
- * Principal of School
- * Pastors
- * Health Inspector at Engela Hospital
- * Matron at Ohangwena Clinic
- * Other Nurses/Sisters, other health workers who have had pit latrines built at their institutions
- * Teacher who teaches Health/hygiene education
- * Builder -- if we do not do a FGD with them
- * Business people -- if we do not do a FGD with them

GENERAL QUESTIONS FOR ALL KEY INFORMANTS

Information on hygiene education and sanitation programme

1. What do you know about the hygiene education and sanitation programme and demonstrations which has taken place in your area?

Or

What health/hygiene/sanitation activities are taking place in your area?

Please describe. [If no programmes or does not know about any programmes go on to Question No. 4]

2. What do you think about this? Positive and negative points. What has been successful? Not successful?
3. In your opinion how are the community members reacting to this programme? Are community members using/undertaking any of the hygiene/sanitation practices, as far as you can tell?

Information on health/hygiene/sanitation problems

4. What health/hygiene/sanitation problems occur in your area?
5. If thinking about these health/hygiene/sanitation problems, how do they rank in priority in terms of other development needs/problems? [Use ranking cards]
6. If thinking about all these needs/problems, how does the building of pit latrines, specifically, rank in priority?

Solutions to hygiene/sanitation problems

7. What could be done to address some of these hygiene and sanitation problems? What improvements could be made in your area regarding hygiene and sanitation? What? How? By whom?
8. How could the community become even more interested/active in sanitation issues?
9. If there was to be a pit latrine construction programme in this area for private homesteads, in your opinion how should it be organised and implemented? What type of pit latrines could be built?

EXTRA QUESTIONS TO BE ASKED TO SPECIFIC KEY INFORMANTS

For clinic matrons, nurses --

- a. Please describe the area that this clinic services [Probe for names of villages, how wide an area, population, etc.]
- b. Is the clinic using an integrated or topical approach to its services?

and

[For those institutions which have had pit latrines built at their clinic.]

- c. Please describe the pit latrines that have been built for clinic's use. [Probe for location, type (VIP? Orientation? Squat or seat? Door?)].
- d. Do the community members use them? In your opinion why or why not? What do you think about them? Positive and negative points.
- e. Are they kept clean? Yes or No? Why or why not? If yes, by whom? Why?
- f. Are you working/networking with any other clinics, schools, groups, clubs, Ministry of Health, NGOs, etc. on any health/hygiene/sanitation issues? If not, would you like to be? What would the objectives be? Who should be directly involved?
- g. How do you and other health workers feel about the health/hygiene/sanitation interventions that are coming to this community?
- h. Parts of FGD 3, as time allows

EXTRA QUESTIONS TO BE ASKED TO SPECIFIC KEY INFORMANTS

For pastor of Evangelical Church --

- a. Where did the idea come from to build a pit latrine at your church?
- b. Do the church members use the pit latrine?
- c. What is positive about it? Negative?

- d. If another toilet was to be built, should any changes be made in the design? If yes, what type of changes?
- e. Do you know if the church members/community members have any pit latrines in their private homes?

For pastor of Anglican Church --

- a. Is there a pit latrine(s) at your church?
- b. If yes, do the church members use the pit latrine?
- c. What is positive about it? Negative?
- d. If other toilets were to be built, should any changes be made in the design? If yes, what type of changes?
- e. Do you know if the church members/community members have any pit latrines in their private homes?

For Headman --

- a. If there is time, some points from FGD no. 2.

EXTRA QUESTIONS TO BE ASKED TO SPECIFIC KEY INFORMANTS

For the Principal AND for Hygiene Education Teacher --

Use the Key Informant questions at the top but replace "community" and "community members" with school and school learners.

and

[For those institutions which have had pit latrines built at their school and/or clinic.]

- a. Please describe the pit latrines that have been built for teachers and children's use. [Probe for location, type (VIP? Orientation? Squat or seat? Door?)].
- b. Do the teachers and students use them? In your opinion why or why not? What do you think about them? Positive and negative points.
- c. Are they kept clean? Yes or No? Why or why not? If yes, by whom? Why?
- d. Specifically ask: In your opinion what improvements can be made to the following:
 - the latrines at the school
 - the hygiene education programme
 - the hygiene demonstration programme
 - community sanitation
- e. Are you working/networking with any other schools, clinic, groups, clubs, Ministry of Health, NGOs, etc. on any health/hygiene/sanitation issues? If not, would you like to be? What would the objectives be? Who should be directly involved?

- f. How do you and other teachers feel about the health/ hygiene/sanitation interventions that are coming to this community?

ASK THE KEY INFORMANT IF THEY HAVE ANY OTHER COMMENTS OR ISSUES THEY WOULD LIKE TO RAISE OR ANY QUESTIONS.
THANK THEM FOR THEIR TIME, PATIENCE, AND IDEAS

Appendix 5:

KEY INFORMANTS

1. Mr. Dumani, Vice-Principal at Oshikango Combined School
2. Headman at Outwilo
3. Headman at Oshikango
4. Ms. Emilia Jesaya, Herbalist and Headman's wife in Etope
5. Ms. Eunice Jowele, Midwife from Oshikango
6. Junior headman at Etope
7. Junior headman at Outwilo
8. Ms. Francina Kakololo, Small Business Woman
9. Mr. Kakololo, Health Inspector at Engela hospital
10. Ms. Rebecca Nghweni, Midwife in Oshikango
11. Mr. Johannes Shaluwawa, Head of the Department at Onangwe Combined School
12. Principal in Oshikango Combined School
13. Mr. Shinana, Pastor of Evangelical Church in Namibia (ELCIN)
14. Mr. Shilala, Pastor of Evangelical Church in Namibia (ELCIN)



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