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**THE DEVELOPMENT OF SANITATION
AND HYGIENE EDUCATION
COMPONENTS FOR THE
UUKWALUUDHI INTEGRATED AREA
BASED PROJECT (IABP),
WESTERN OVAMBO, NAMIBIA.**

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THE DEVELOPMENT OF SANITATION
AND HYGIENE EDUCATION
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UUKWALUUDHI INTEGRATED AREA
BASED PROJECT (IABP),
WESTERN OVAMBO, NAMIBIA.

1.0 INTRODUCTION

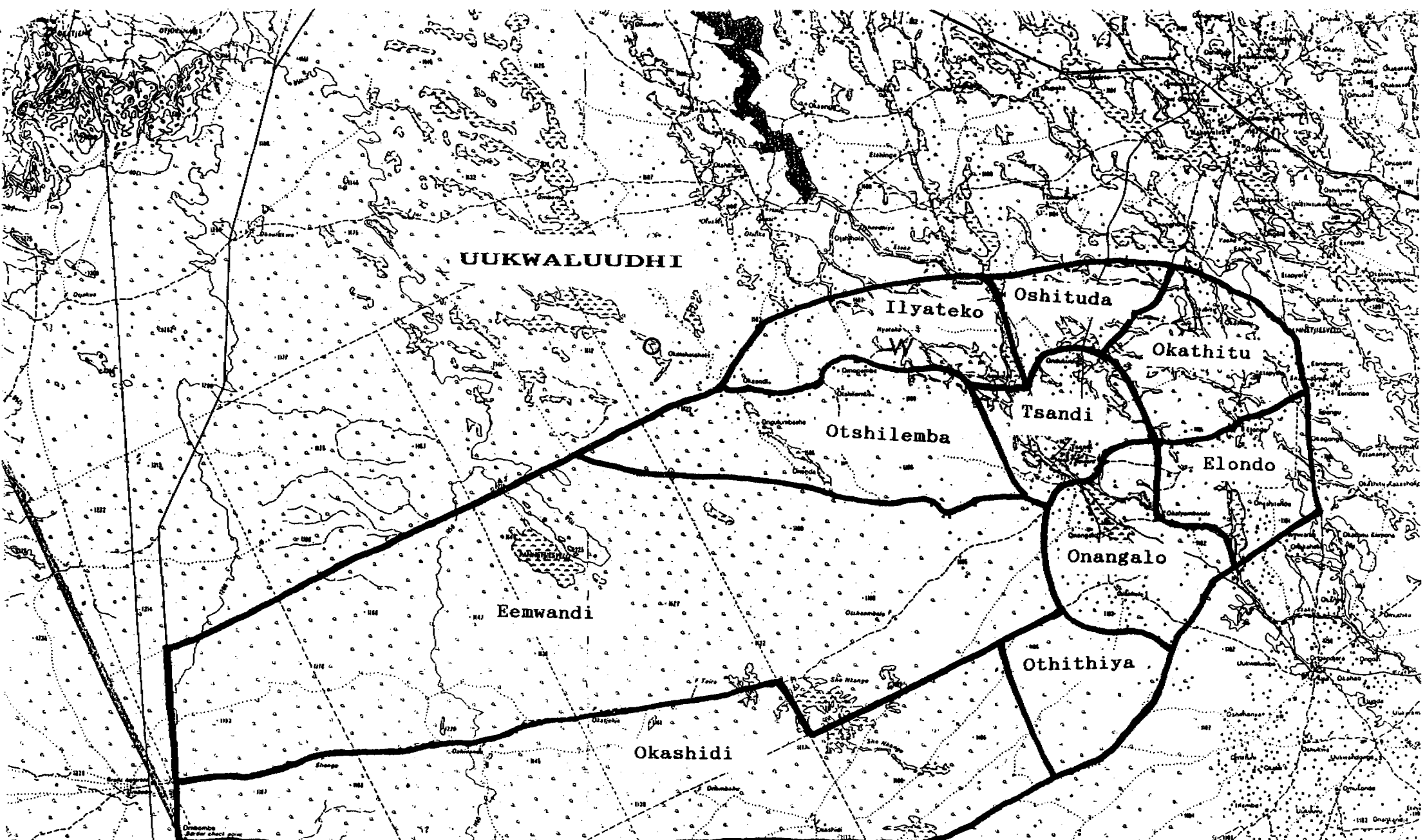
- 1.1 This document makes recommendations for the development of sanitation and hygiene education components for the recently launched UNICEF/CCN Integrated Area Based Project (IABP) in the Uukwaluudhi District of Western Ovambo.
- 1.2 The report findings are based on a four-week consultancy mission, spent mostly in the field, between 6-31 August 1990. Data was collected by means of a subjective needs assessment study (reported in Annex 1); field observation; discussions with project staff, members of the Uukwaluudhi Interim District Development Committee (IDDC), and government personnel in Western Ovambo; and a review of available documentation.

2.0 BACKGROUND

- 2.1 Namibia gained Independence in March 1990, after a prolonged period of highly restrictive colonial occupation during which the majority of the population were confined to impoverished "homeland" areas around the country's borders. Ovamboland, located in the far north of the country adjacent to southern Angola, and now divided into the two regions of Western Ovambo and Eastern Ovambo, was one such "homeland". The Ovambo region was the place in which the first shots were fired in the liberation war which eventually led to national independence.
- 2.2 The Ovambo area, covering 51,800 sq.kms. of a national total of 823,144 sq.kms., is home to an estimated 44% of Namibia's population or roughly 600,000 people.
- 2.3 The landscape is virtually flat, and dotted with palm trees and bush. Progressive environmental degradation, caused by population pressure and neglect, has resulted in the considerable thinning out of the vegetation cover in all but the remotest places. In the winter months, the area is extremely dry, with no perennial rivers or streams and little surface water. Annual rainfall is very limited, ranging across the region from 300-600mm. The area receives considerable surface runoff, however, from southern Angola, forming interlinked networks of oshanas, great shallow pools of water which sit on top of the impervious soils and drain into the

Etosha Pan to the south. At the height of the rainy season access to the rural areas is significantly restricted by the presence of *oshanas*, though these soon dry up with the onset of the arid winter.

- 2.4 Uukwaluudhi District is located in the north western part of Western Ovambo. Access to the area is by dirt road from Ombalantu, 90 kms. north-west of Oshakati. The district covers an area of roughly 1750 sq.kms., with an estimated population of about 35,000. Most of the population are concentrated into about a third of the land area, to the north and east, with the southern and western parts being used for livestock grazing at cattle posts. The District is divided into 88 wards, each with a headman. Wards vary in size from 6-235 households. The settlement pattern is highly dispersed, with households occupying scattered homesteads, often 500 m. or more apart, and no clearly evident village boundaries. The district corresponds to a traditional tribal area, with a paramount chief or king, to whom all of the headmen report, being resident in Tsandi.
- 2.5 For the purposes of project implementation, and community representation on development committees, the Uukwaluudhi area has been divided into 10 divisions, as indicated in the map.
- 2.6 Ovambo homesteads consist of fenced enclosures, of perhaps 1~~5~~-2 hectares in extent, with a stockaded housing cluster in the centre. The homestead farm is enclosed within the boundary fence. The stockades are sub-divided into sections, with areas for sleeping huts, cooking, grain storage, water storage, socializing, and so on, separated by stout wooden fencing. Access to the interior of Ovambo homesteads is quite severely restricted by local etiquette and visitors may not wander freely through the various sections. In spite of the apparent reflection of a strongly felt need for privacy and even secrecy which Ovambo homesteads suggest, the people are highly sociable and spend a considerable amount of time visiting friends and neighbours. Several community self-help projects have also been undertaken in the area, mostly centred around the development of schools and churches.
- 2.7 The local economy in Uukwaluudhi consists of a mixture of subsistence agriculture, livestock rearing, and wage employment. Pensions are an important source of income for the elderly. Average household earnings are estimated to be between R.100-R.300 a month.
- 2.8 Several studies have already been conducted in Namibia which have underlined the serious poverty and poor health conditions which prevail, not only in the north but throughout the country as a whole and it is not necessary to repeat their findings here. The Uukwaluudhi area is particularly poorly served and for this reason has been selected by UNICEF and CCN



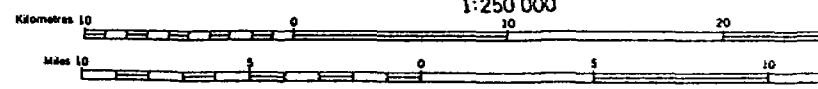
15° 30' 45' 15°

Contour interval 50 metres

1:250 000

REFERENCE VERKLARING

International boundaries	.....	Internasionale grense
Farm, area and reserve boundaries	.....	Plaas, gebied- en reservaatgrense
Railways	.....	Spoorwag
Narrow gauge railways	.....	Smalspoorlynne
Service railways	.....	Dienspoorlynne



Heights are in ground level in metres
Hoogtes is op grondoppes in meter

as the site for an Integrated Area Based Project.

3.0 ENVIRONMENTAL SANITATION AND HYGIENE CONDITIONS

- 3.1 Environmental sanitation conditions in Uukwaluudhi are very poor. In many respects, conditions in northern Namibia may be worse than almost any other area in the southern Africa region.
- 3.2 The number of latrines to be found in Uukwaluudhi is negligible, particularly outside of the district centre, Tsandi. A few people in Tsandi benefit from water-borne sanitation (as well as household water connections and electricity), and a few in the central area have built low-standard pit latrines. Elsewhere, however, latrines are so scarce that it is possible to drive around for several hours without seeing one at all. Excreta disposal is almost entirely a matter of individual discretion.
- 3.3 A lack of sanitary latrines is under any circumstances unacceptable from a health point of view. During the dry winter, environmental conditions are generally so arid and dessicating that the risks associated with open-air excreta disposal are relatively low. During the rainy season, however, the risk of water-borne and water-washed disease is likely to be extremely high. Although it is not at present possible to confirm this hypothesis, because of the inadequacy of current health information systems, one would expect there to be a marked seasonal pattern in the incidence of water and sanitation related disease, with a significant upswing in the rainy season.
- 3.4 The poor sanitation conditions are a function, to a very large extent, of the extreme inadequacy of the water supply situation in the area. Although an estimated 20% or so of the population have access to water from a pipeline which runs through the centre of the district, the remainder experience extreme hardship in obtaining even a minimum supply. During the rainy season surface water is abundant due to the heavy flooding characteristic of the area. This water is highly polluted, however, and soon runs dry when the rains stop. For many people the search for water is a major preoccupation, involving the constant re-excavation of unprotected shallow dug-out wells. Groundwater resources are completely inadequate to meet the needs of the population, and much of the underground water which is accessible is saline and undrinkable. Given this situation, it is not surprising to find low standards of personal hygiene.
- 3.5 Water storage practices, food handling, and solid waste disposal all present risks to health in Uukwaluudhi. The absence of any significant health education and preventive measures in the area have clearly not helped this situation.

Conditions in the home are in general very poor, and are scarcely any better at schools. Apart from a very few schools which benefit from the pipeline, the majority have no water supply and very few have pit latrines of any description.

3.6 Health care services in general are inadequate, with only a small 60 bed hospital and a single clinic available to serve the whole population. There is no effective environmental health inspectorate in Ovambo. Although it has been said that the emphasis on health care in Namibia to date has been on curative services, with preventive health care being almost totally neglected, it can not be implied that the curative services are in any way adequate. There is a clear need for a substantial extension of rural curative services, as well as the development of a vigorous outreach programme to improve preventive health care.

3.7 Although much can be done within Uukwaluudhi through the community-based IABP, many problems will nevertheless depend upon central government intervention and a major realignment of national resource distribution.

4.0 THE UKWALUUDHI IABP

4.1 The Uukwaluudhi IABP began to take shape towards the end of 1989, with the selection of the area as a principle target for concentrated project activities. Uukwaluudhi was identified as an area of special need, within a very needy region. After several months of consultation and preparation, field activities were launched by UNICEF/CCN from May 1990.

4.2 The IABP is based on the principles of community participation and self-help and is seeking to develop an intensive, integrated development programme.

4.3 In the few months since the project began, time has been devoted to planning, problem identification, and the development of community management and coordination structures. A basic framework has been established around the formation of an Interim District Development Committee (IDDC), and constituent sub-committees for Health, Water, Education, Agriculture, and Income Generation. These began meeting in July, and most had met on two or three occasions by mid-August.

4.4 During the field-work period undertaken for the production of this report, the project was staffed by a part-time local coordinator, part-time community mobilizer, full-time driver, and a short-term water supply and rural technology consultant. A community mobilization consultant, who had assisted in setting up the community committee structure, was just leaving the field when the current study began. In the immediate future, the part-time coordinator is expected to be joined by

a full-time partner, and the mobilizer will begin to work on a full-time basis. There is currently one project vehicle, and a second vehicle is expected soon.

- 4.5 The launch of the project has been well received in Uukwaluudhi, and expectations are clearly very high. The IABP provides an excellent opportunity, not just of benefit to the people of Uukwaluudhi, but also to field test approaches to development of broader benefit to the country as a whole.
- 4.6 The project is ambitious in scope and, as indicated by the sub-committee structure, aims at a broad, integrated approach to development. Sanitation and hygiene education are two of several components. In order to assess general expectations, and to analyse the relative standing of these particular components in relation to others, a modest subjective needs assessment exercise was conducted during the field work phase of this study. The results are contained in Annex 1, and provide background for many of the recommendations made in the main report.
- 4.7 Though willingness to participate in project activities appears to quite high, there appears to be some uncertainty within the community at present as to the relative inputs which can be expected from the external support agencies and government, on the one hand, and the community, on the other. In the wake of independence, expectations among the rural population are naturally high, and significant input from government is expected. The extent of community involvement in the project in the medium to long term is likely to be highly dependent on evidence of government's willingness to make a substantial input, particularly in relation to infrastructural and service improvements which the community may feel it is beyond its capacity to address.
- 4.8 In the immediate term, there is also a clear need for some rapid, concrete action on the part of the project itself to demonstrate development technologies and move swiftly from discussion to action. To date, a large number of meetings have been held, entailing difficult journeys for many members. Given the high expectations, there is some danger that a lack of immediate action will lead to demoralization and confusion.

5.0 PROPOSED STRATEGY

- 5.1 The success of the sanitation and hygiene education components of the Uukwaluudhi IABP will depend to a significant extent on the success of other project interventions. The more confidence the project as a whole is able to build among the local population, the greater will be the receptivity of people to the complex messages which sanitation and hygiene campaigns seek to convey.

population with the proposed models. Demonstration, not to mention to development of effective latrine designs, is of vital importance, particularly in view of the extremely low current service level. Although some guidance on designs is given in this document, experimentation in the field will be required and a creative approach adopted to find the right models to suit local conditions.

- 5.6 Demonstration units should be built at public places, where they can be inspected and used by the target population. Schools and churches are ideal sites for this work. A significant subsidy will probably be required to cover materials costs for demonstration units, though labour inputs can be expected from parents and church members. Improved latrines could also be built at the project office, as well as at the proposed demonstration centre in Tsandi. To ensure credibility, this work should not be rushed. Latrine designs should be experimented with out of the public eye until it is certain that successful demonstration models can be built. A longer lead-up time, provided it produces better latrines, will pay dividends in the long term, while an over hasty approach may prove disastrous if technical failures are the result.

*How do you
suppose to
handle the
issue of cost?*

- 5.7 The latrine construction programme itself will afford a good income generating opportunity for local artisans, and a period of training should begin during the demonstration phase. Prospective latrine builders should be recruited from within the local population. It is recommended that training be provided free of charge by the project, with the trainees being taught on-the-job while building demonstration units. Builders should be trained in relatively small batches, in a series of courses of perhaps two weeks duration each over a period of several months. Ideally, training courses would be held in each of Ukwaluudhi's 10 divisions. To ensure good supervision and adequate personal attention, it is recommended that no more than 20 builders be trained per course. A target figure of 200 trained builders would be more than ambitious enough for the first 12-18 months of the programme, with sufficient artisans being trained to allow for a drop-out rate.

- 5.8 In addition to practical training in construction methods, builders should also be carefully taught the operating principles of the latrines and siting procedures, and be briefed on the health and hygiene advantages of improved sanitation. Advice on how to subsequently promote their services and drum up business would also be of benefit.

- 5.9 In order to successfully manage and sustain an adequate training and construction programme, it will be necessary for the project to employ technical training and supervisory staff. These should be skilled artisans, with good communications and inter-personal skills. Since technical

personnel will probably also be required to assist with the water supply and other technical components of the project, it would be as well to consider hiring a small cadre of multi-purpose technicians (perhaps 2-4 people), and train these as trainers for technical instruction and supervision across the board.

5.10 A vigorous promotion and education campaign, coinciding with the demonstration phase and continuing during implementation, will be essential in getting the programme off the ground, and ensuring the effective use of latrines once installed. Emphasis should be laid on the health advantages of improved sanitation, but equal weight should also be given to other promotional factors such as increased privacy and status. These latter factors are likely to be of greater significance in encouraging participation in the early stages, though it is to be hoped that the health argument will be of greater importance in the longer term.

Who is
going to
do that

5.11 The technical and communications elements of the programme must be closely synchronized. Materials development, for example, should be scheduled to ensure that appropriate support communications are available to coincide with the launching of each phase. Field-testing of materials is also extremely important to ensure their effectiveness. Excessive field-testing generally yields limited results, but it is certainly worth taking draft materials to the field for review by small groups drawn from the target population to ensure that the messages they contain are presented in an understandable and unambiguous form.

5.12 The primary role of the project in the sanitation programme should be to act as a facilitating, training, and promoting agency. As far as possible, the responsibility for implementation should be passed to the community. This can best be done by the privatization of the construction programme through the training of local latrine builders. As well as creating income earning opportunities within the community, the training of local builders should also lead to strong promotion of improved latrines by the builders themselves, who will have a vested interest in persuading their friends and neighbours to participate.

5.13 In order to reach as near as possible to 100% coverage with improved sanitation in Ukwaluudhi, of the order of 5000 latrines will need to be built, assuming a population of 35,000 with an average household size of seven persons. In view of the scarcity of resources in the area, and the many other development needs which will make demands on both the resources and the time of the population, it can not be anticipated that this target will be met in a short time. A programme of many years duration will probably be required.

5.14 In many rural sanitation programmes, output figures for

latrine construction have been characterized by an S-curve pattern. After an often lengthy period of low output, the rate of construction typically rises quite steeply for a period of time (often several years) before levelling off, or even declining as coverage reaches high levels. The period of time required before the curve begins to steepen and take off is very hard to predict. In unsubsidized programmes, as might be expected, it tends to remain at the lower level for longer. Such a pattern should be anticipated in Uukwaluudhi. If latrine output is to be targeted, a very modest output (perhaps as few as 50-100 household latrines) should be expected during the first year or so of operations. Hopefully, this will rise steeply before too long, but poor results in the early days should not be seen too quickly as evidence of failure. Consistent promotional work is likely to pay dividends in the long term, and people must be given time to study and evaluate the new technology before committing themselves.

- 5.15 A seasonal fluctuation in output should also be anticipated, with more latrines likely to be built in the dry season, when working conditions are more favourable and people have fewer commitments to farm work. Project activities should be timetabled in such a way that promotional and training activities are intensified during the dry season to maximize output during this period. During the rainy season, slack periods should be used for evaluation and review, and preparation for the next intense period of construction. Careful monitoring of latrine output should be carried out, on a month by month basis, in order to identify such patterns.

6.0 RECOMMENDED TECHNOLOGIES

- 6.1 Familiarity with latrine technologies in Uukwaluudhi is very low. Outside of Tsandi itself, the incidence of household latrines is negligible. In a few schools and churches, efforts have been made to construct rudimentary pit latrines. Though an important gesture towards the improvement of sanitation conditions, these are of a low technical and hygiene standard.
- 6.2 In many parts of Africa, simple pit latrines are often found in rural areas, providing a starting point for encouraging the development of improved designs. In Uukwaluudhi, this is not the case. The experience of migrant labour has familiarized many men in the area with latrine technologies, but this has not apparently led to an effective desire to install facilities at home.
- 6.3 Of all of the interventions to be promoted by the Uukwaluudhi IABP, the construction of household latrines will probably be the one entailing the greatest individual cash contribution by community members. It is important, therefore, that technical options are sought which are not only attractive, but also do

not entail disproportionate investments, in relation to both income levels and other needs. Too high a cost will obviously inhibit success, and may undermine community confidence in project ideas in general.

6.4 Equally important, options must be offered which allow as many people as possible to install safe excreta disposal facilities. A high level of coverage is required if health improvements are to be seen. The promotion of options which may only fit the pockets of a small proportion of the population will have little overall effect.

6.5 The most desirable option for the Ukwaluudhi area is the ventilated improved pit (VIP) latrine. This is widely accepted as the basic standard for rural sanitation in Africa, and has been successfully promoted by UNICEF and many other external support agencies throughout the continent. Within the region, rural VIP latrine programmes have been developed in Botswana, Lesotho, Zimbabwe, and Tanzania, to cite just a few examples. All have enjoyed significant degrees of success, though none without considerable effort. In Zimbabwe, where the VIP latrine was developed for use in Africa, well in excess of 100,000 units have been installed during the past 15 years.

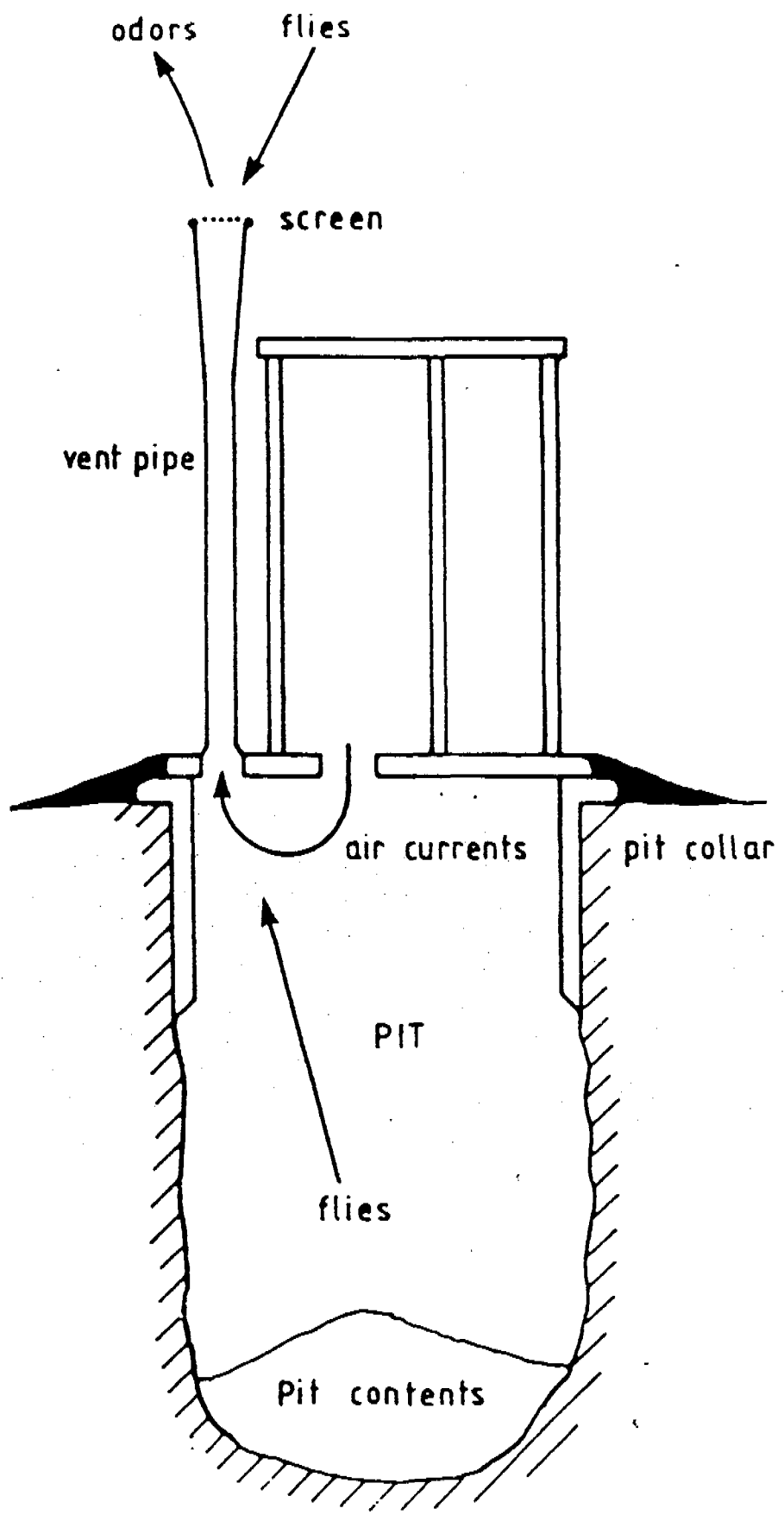
6.4 The VIP is an improved version of a dry pit latrine, requiring no water in its operation. Water-based systems are clearly out of the question in Ukwaluudhi given the abject scarcity of this resource. Ordinary, unimproved pit latrines can provide a relatively sanitary means of excreta disposal, and are generally an improvement on open-air disposal. Their desirability is limited, however, by their tendency to be highly odorous and, associated with this, heavily infested with flies. An odorous latrine is generally more attractive to flies, and other disease carrying vectors, than to humans. Unimproved pit models are often shunned by potential users, and provide repositories of infection for vectors to transmit. In addition, many are built to poor technical standard and users, particularly children, may be frightened off by the risk of pit collapse.

6.5 The characteristic features of the VIP latrine, which set it apart from the ordinary pit latrine, are a ventilation pipe, fitted with a fly screen. The basic principles of the VIP latrine's operation are indicated in the illustration below.

6.6 Access to the pit is allowed by two openings, one through which excreta is deposited, and the second to which a vertical vent pipe is tightly fitted. Apart from these two openings, the pit is completely sealed off. The pipe, which protrudes above the latrine structure, allows the pit to be ventilated, through a combination of wind-shear and solar radiation.

6.7 As wind moves across the top of the pipe, a suction effect is created which draws air out of the pit and disperses it into

Also in such a dry area?



the surrounding atmosphere, with fresh air being drawn in through the drop-hole. A more or less continuous airflow is thus created which ensures that the interior of the latrine structure remains odour-free. Provided that the vent pipe is of adequate diameter and properly fitted, even the mildest of breezes will ensure effective ventilation. This effect is supplemented by the influence of solar radiation on the outside of the pipe. As the pipe heats up during the course of the day, the air inside will tend to rise, drawing cooler air in from the latrine structure and contributing to the general flow.

- 6.8 Optimum advantage can be taken of these effects by orienting the latrine in such a way that the vent pipe has maximum exposure to sunlight, and the latrine doorway faces the prevailing wind. Constructing the latrine away from trees, and not too close to taller buildings, will help prevent air turbulence from compromising the ventilation effect.
- 6.9 The fitting of a screen to the top of the vent pipe almost entirely eliminates the fly nuisance in the latrine. The screen works in two ways. First, by preventing flies from entering the pit. Second, by preventing those that do get in from escaping.
- 6.10 Flies are attracted to pit latrines by odours. In the case of the VIP latrine, these emanate from the top of the vent pipe. Flies which are attracted to the top of the pipe are prevented by the screen from entering the pit. A few flies will get in through the drop-hole, and lay their eggs inside. When their offspring attempt to leave, they will be attracted to the brightest source of light. Since the light entering the pit through the drop-hole is minimized by the roofed enclosure, this will be the strong shaft of sunlight which shines down the vent pipe. When the flies reach the top of the vent pipe, the screen prevents them from leaving. Rather than seeking an alternative exit, they will continue to buzz around the screen until they eventually die from exhaustion and dehydration. Experiments have shown that VIP latrines can reduce fly populations by up to 99%, compared with ordinary pit latrines.
- 6.11 A kit version of the VIP latrine has been developed by the Rural Development Centre (RDC) at Ongwediva, a few kilometres south-east of Oshakati. This comprises a spiral, corrugated iron sheet shelter, a circular reinforced cement slab, ferro-cement pedestal seat, and pvc vent pipe with fly screen. These are available commercially at a cost of R.300 per kit. At this price, the RDC latrine kits are probably beyond the reach of most residents of Uukwaluudhi. However, they do provide a design model which could be used as the basis for a locally produced version.
- 6.12 The basic concept of a concrete cover slab and screened vent pipe should be used in Uukwaluudhi as the basis for the

development of low-cost, locally appropriate VIP designs. A basic design for the Zimbabwe VIP, known as the Blair Latrine in recognition of its development at the Ministry of Health's Blair Research Laboratory, is attached as Annex 2 to this report. This indicates well-tried dimensions and procedures which may be adopted in the construction of a VIP latrine. Considerable variation is possible in VIP construction, provided that the basic design principles are adhered to. These may be summarized as follows:-

BASIC DESIGN PRINCIPLES: VIP LATRINE

- * a ventilation pipe
 - * a fly screen
 - * a well-sealed pit
 - * a stable pit
 - * a strong, safe cover slab
 - * a darkened interior
-

6.13 The instability of the soil in most of the Uukwaluudhi area means that latrines will require a full lining. In some parts, notably Okashidi, the sub-soil is sufficiently stable to allow the cover slab and superstructure to be supported on a concrete ring-beam or brick collar, but this is unlikely to be the case for most of the area. The need to construct fully lined pits has obvious cost implications, and savings will therefore need to be sought in the shelter design. A stable and secure pit is absolutely essential for safety reasons, and no compromises should be sought in this part of design development.

6.14 Fortunately, there is considerable scope for improvisation in both the design, and choice of materials, for the latrine shelter. In Zimbabwe, for example, VIP latrine shelters have been built from anything from sticks and mud plaster to bricks. Similarly, VIPs in Lesotho have been built from cement blocks, sun-dried bricks, corrugated iron sheeting, and local stone. All of these options provide perfectly adequate shelters and do not in any way compromise the basic design

principles of the VIP.

- 6.15 The development of several options, from minimum to more ambitious cost, should allow a range of consumer choice which will help maximize the opportunity for all income groups to participate in the programme. At the same time, the maximum cost must be kept within the limits set by the generally low income levels in the area. As a general guide, a materials cost range of R.100 to R.300 should be aimed for. Though modest, it should be borne in mind that this will on average entail an investment cost roughly equivalent to a month's income for most households. Consideration should also be given to designing an option with a wooden cover slab, perhaps covered with a light cement plaster, to cut down further on materials costs.
- 6.16 Recommended superstructure materials options which could be tried out in Ukwaludhi include zinc sheeting, locally produced sun-dried blocks, and sticks and mud plaster.
- 6.17 VIP latrines in Zimbabwe are made with a simple squat hole in the slab, while in Lesotho consumer preference is for bench or pedestal seats. Initial indications are that seats, rather than squat holes, are likely to be preferred in Ukwaludhi. Nevertheless, it may be worthwhile to demonstrate a squat hole version to test the acceptability of this lower-cost option.
- 6.18 The VIP latrine should be strongly promoted as the preferred option for improved sanitation. It will inevitably be the case, however, that a latrine of this relative sophistication will remain beyond the reach of at least some proportion of the population. It may be desirable, therefore, to also promote other, lower-cost sanitation options, to increase as widely as possible the potential of eliminating open-air defecation.
- 6.19 The fundamental purpose of any latrine is to provide a means of excreta disposal which ensures that human waste is removed from the possibility of further human contact. The simplest way to do this is by burial. Although by no means the most desirable option, the use of simple trench toilets can at least fulfill this basic condition. The project may wish to give consideration to promoting the use of trench latrines as a no-cost measure for those who simply cannot afford a more acceptable latrine. This could comprise of little more than a shallow slit trench into which soil is deposited to cover excreta after each use. A lightweight portable screen, made from sticks, could be made to provide adequate privacy. Although somewhat labour intensive, this option would have no cost implications at all, and would at least provide an improved means of excreta disposal in comparison with using no facility at all. The depositing of soil after every use should minimize the risk of a fly nuisance and eliminate odours.

quab a bt

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6.20 In addition to human excreta disposal, the sanitation component of the IABP should also address other issues of environmental health protection. In particular, steps should be taken for the adequate protection of water points, and for the improvement of solid waste management.

6.21 Water points in Uukwaluudhi, including tapping off points from the pipeline, are very poorly protected and constitute an important health risk. Paradoxically, pipeline tapping points, although they deliver the cleanest water, are often found to be in the worst condition. Tap leakages and careless use have resulted in the creation of muddy pools of standing water around many of these water points, creating potential breeding grounds for disease and insects. The project should promote the adequate protection of all water points, and all should be fitted with aprons, spillways, and soakaways.

6.22 The sanitary disposal of solid waste should also be strongly promoted. Many residents of Uukwaluudhi simply throw rubbish away in the farming area or over the fence. The promotion of rubbish pits should form an important part of the hygiene education programme.

7.0 HYGIENE EDUCATION AND SUPPORT COMMUNICATIONS

7.1 Technical interventions alone are unlikely to be sufficient to lead to real improvements in health conditions in Uukwaluudhi. Equally important, and perhaps most decisive, will be the introduction of behavioural modifications by the population itself to increase household and personal protection from sanitation-related disease. An effective hygiene education programme, supported with appropriate communication materials, will therefore be of crucial importance.

7.2 Examples of promotional and educational materials developed for sanitation programmes in Zimbabwe and Lesotho are contained in Annex 3, and may provide useful models for the development of similar support communications for use in Uukwaluudhi and elsewhere. Although literacy levels are only modest, written materials should nevertheless be appropriate provided they are written in Oshivambo.

7.3 Among other things, a successful communications package will depend on the materials developed being:

- * simple and straightforward
- * easy to understand
- * varied and attractive
- * linked to training, personal contact, and community action

- 7.4 Many promotional materials fail because they try to say too much. Simple and straightforward messages are likely to have a greater impact. Posters, for example, are more often glanced at than read and studied. They should be eye-catching, and contain a straightforward and unambiguous message, which is easy to absorb, literally at a glance. Simplicity is the key to ease of understanding, while variety of materials and attractiveness will catch the eye. Unpleasant or dull images will either put the viewer off, or fail to attract attention.
- 7.5 More detailed materials will be required in the form, for example, of booklets, leaflets, or flip-charts. The use of these should be linked to training activities, personal contact through home visits or at clinics and schools, and at community meetings when self-help action is being planned or undertaken. Posters alone will not educate, but may arouse curiosity or reinforce messages which have been transmitted in more detail in other contexts. Calendars, photo-strip magazines, and T-shirts can also be valuable reinforcers of promotional and educational messages, as well as being gifts which can be distributed to increase goodwill.
- 7.6 A successful communications support package should be developed around a set of related materials, each with defined objectives and a strategic role. Continuity in design and/or content should be sought in order that target audiences will be aware of the relationship between the different media. A communications campaign, where possible, should have a "corporate image" so that it becomes familiar and noticed.
- 7.7 In order to sustain interest over a lengthy period of time, variety is of great importance. A single poster left on a wall for a year or two will attract no attention at all after a very short period of time. Similarly, having produced an interesting set of posters, it is preferable to release them in ones or twos at intervals. Putting them all out at once will allow people to become bored with all of them very quickly.
- 7.8 Variety is very important, both in relation to individual materials (i.e. producing several posters, rather than just one or two), and in the media used. The chart below offers some suggestions as to the types of materials which could be developed to support the sanitation and hygiene education components of the Ukwaluudhi IABP. In addition to suggesting different material types and messages, the chart also indicates the contexts in which they could be used and distributed.

COMMUNICATIONS MATERIALS FOR SANITATION & HYGIENE EDUCATION

MATERIAL	MESSAGE	CONTEXT	AGENT
Posters	<i>Build a VIP & stay healthy</i>	Public buildings, clinics, churches, shops, schools, etc.	Project staff, extension agents
	<i>Protect your privacy - build a latrine</i>		
	<i>Ordinary toilets smell & attract flies - the VIP is clean & healthy</i>		
	<i>Wash hands after toilet, & before cooking & eating</i>		
	<i>Keep water in a sealed, clean pot</i>		
	<i>Teach children how to use the toilet</i>		
	<i>Protect your water point & keep it clean</i>		
Leaflets	<i>Don't litter - put your rubbish in the ground</i>	Training courses, home visits, meetings	Trainers, nurses, community health workers, teachers, church leaders
	<i>The VIP & how it works</i>		
	<i>Sanitation & health</i>		
	<i>Preventing disease in the home</i>		
	<i>How to build a VIP</i>		
	<i>How to care for your VIP</i>		

*Water
to put it like this
in poor areas*

Flip charts	<i>The VIP & how it works</i> <i>Sanitation & health</i> <i>Preventing disease in the home</i> <i>How to build a VIP</i> <i>How to care for your VIP</i>	Training courses, home visits, meetings	Trainers, nurses, community health workers, teachers, church leaders
Calendars	<i>Varied health messages</i>	Public buildings, clinics, schools, shops, homes	Project staff, extension agents
Photo-strip magazines	<i>Varied health stories</i>	Schoolkids, adults	Project staff, extension agents
T-shirts	<i>Project slogans</i>	Latrine builders, Community Health Workers, public	Project staff, extension agents

7.9 In the early stages of materials development, it is recommended that a limited number be made and field-tested, prior to the production of a fuller set. In the course of time, community involvement in materials production should be encouraged, for example through school competitions, group work by community health workers, and so on. The production of materials should also be undertaken in close collaboration with involved government ministries, and opportunities created for the use of materials developed for the Ukwaluudhi IABP in other parts of the country.

7.10 Communications materials will be required for all aspects of the Ukwaluudhi IABP and it is important that these be developed in an inter-related way. The suggestions above focus specifically on sanitation and hygiene education issues, but these should form part of a broader set covering all development objectives of the project.

7.11 The distribution of materials should be carefully planned and monitored to ensure that target audiences are being reached, and that the materials are well-received and understood. Extension agents, including church leaders, schoolteachers, community nurses, and the soon to be established cadre of volunteer Community Health Workers, should be briefed and trained on the effective use of the materials.

7.12 Health education forms part of the curriculum in schools, and a review of current materials and text books should be considered at national level. At present, primary schools in Ukwaludhi are using the "Health Education for All" series, by L.V.Mohr and F.J.Schreuder, a four volume text book series published by Maskow Miller Ltd. of South Africa in 1980. The series gives basic background in human biology, safety, basic hygiene, and rudimentary epidemiology. The series was produced in South Africa, primarily for use in White schools. Teachers at Ukwaludhi expressed doubts about its appropriateness in a rural context. UNICEF may wish to consider offering assistance to the Ministry of Education in developing more appropriate texts.

8.0 COSTS AND FINANCING

8.1 The cost implications of the sanitation and hygiene education components of the Ukwaludhi IABP depend to a very large extent on the policy position adopted by UNICEF/CCN in respect of subsidization.

8.2 If a decision is made to leave the responsibility for construction and materials costs to householders, the cost implications to the project are likely to be modest, and confined to training, demonstration, and promotion overheads. Rates of output, however, are likely to be modest. If a subsidized approach is adopted, this could be modest, or high, depending on the degree of subsidy envisaged.

8.3 At present, cement in the north costs about R.20 per pocket, and vent pipe material about R.7 per metre. A VIP latrine is likely to require about five to six bags of cement, making a basic unit cost of R.100-R.120 per latrine, discounting the cost of shelter materials. A total cost of R.200-R.300 can be anticipated when additional materials and labour costs are taken into consideration.

8.4 The policy decision on subsidies needs to be made in relation to all project components, and can not be usefully done for one or two. It is recommended, therefore, that UNICEF/CCN review this problem as a matter of urgency.

8.5 If the Ukwaludhi IABP is to be viewed as a pilot for more broadly based rural development programmes in the future, it may be advantageous to provide some subsidies in order to

stimulate fairly rapid progress. In relation to latrines, for example, UNICEF/CCN may wish to consider subsidizing the costs of, say, the vent pipe and screen and perhaps two or three bags of cement per household latrine (a subsidy of about R.70 per unit). Training costs and the production of education and promotion materials should be met directly by the project. These are likely to be fairly modest. Builder training, for example, may cost as little as R.2-R.5 per trainee per day, though the materials costs of demonstration latrines will need to be added to this. Consideration will also need to be given to the technical staffing of the project, as recommended in section 5, and the cost implications taken into account.

9.0 SUMMARY OF RECOMMENDATIONS

9.1 In summary, the following recommendations are made for the development of sanitation and hygiene components for the Uukwaluudhi IABP:

- a. A phased sanitation programme of design, demonstration, training, and implementation to be developed, linked to a synchronized hygiene education and promotion programme.
- b. Adequate time to be given to the development and testing of locally appropriate, low-cost latrine designs, with a range of materials options being offered.
- c. The ventilated improved pit (VIP) latrine to be adopted as the first-choice technical option.
- d. Least (or no) cost trench latrine option also to be promoted to allow sanitation improvement in homesteads where no cash outlay can be afforded.
- e. Training of local latrine builders to include health and hygiene education and income generation components, as well as technical issues.
- f. Technical personnel to be employed by the project to train and supervise construction of latrines and other civil works.
- g. Water point protection and solid-waste disposal to be included in sanitation programme.
- h. Emphasis in the promotion programme to be put on issues of privacy and social status, as well as on health issues.
- i. A long-term, sustainable commitment to sanitation and hygiene improvement to be developed.

- j. Promotion and education materials to be simple and straightforward, and a varied package to be developed.
- k. Field-testing of materials to be conducted before finalization and dissemination.
- l. Promotion and education campaigns to be phased, and linked to training, community contact, and community action.
- m. Extension agents to be trained in use of promotion and education materials.
- n. UNICEF/CCN to review possibility of offering assistance to Ministry of Education in the development of more appropriate schools health education materials.
- o. Subsidy and cost-sharing policy issues to be reviewed by UNICEF as a matter of urgency.

Annex I

**SUBJECTIVE NEEDS ASSESSMENT
UUKWALUUDHI, WESTERN OVAMBO**

1st Draft

P.A.Evans

UNICEF
Namibia

August 1990

SUBJECTIVE NEEDS ASSESSMENT
UUKWALUUDHI, WESTERN OVAMBO

1.0 INTRODUCTION

- 1.1 This annex presents the results of a subjective needs assessment exercise undertaken with community members in Uukwaluudhi District, Western Ovambo, during August 1990.
- 1.2 The objective of the exercise was to assist the gathering of qualitative data from community members on felt development needs, as background to the formulation of sanitation and hygiene education components for the UNICEF/CCN Uukwaluudhi Integrated Area Based Project (IABP).
- 1.3 The Uukwaluudhi IABP is seeking, in close collaboration with the community, to provide basic services for child survival, protection and development; assist in the process of rehabilitation from war and drought; and improve child nutrition and household food security. Improved sanitation and an associated hygiene education programme will play an important part in achieving these objectives. In seeking to place these particular components within the context of a multi-intervention, integrated programme, it was considered useful to attempt to identify their standing in relation to other project components in the felt needs of the community.

2.0 METHODOLOGY

- 2.1 The principle method used was the conducting of informal, open-ended interviews in individual households. Since the aim was to collect data of a qualitative kind, a more formally structured approach was not considered appropriate. This might have inhibited the natural flow of discussion, and may have denied community members the opportunity to focus on the issues they considered to be of greatest importance. In this sense, the needs assessment exercise may be considered part of the process of community consultation in project planning.
- 2.2 At the same time, a degree of structuring was required in order to provide a basis for comparing data from the individual interviews, and building up an aggregate picture of community views. To this end, a set of flash cards, depicting proposed project interventions, was prepared and used as a focus for the interview sessions.
- 2.3 The flash cards were used early in the interviews, following a short briefing by the interview team on the basic aims and objectives of the IABP, and provided the framework for the subsequent discussion.

2.4 A set of seven cards were prepared, depicting the following interventions and development resources:

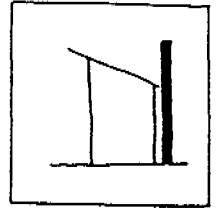
- * agricultural development
- * rural clinics
- * child immunization
- * improved water supply
- * improved sanitation
- * schools
- * income generation

2.5 The illustrations used, shown below, were intended to correspond to the likely development goals of the community sub-committees established under the auspices of the Uukwaluudhi IABP. The committee structure is made up of an Interim District Development Committee (IDDC), with the following sub-committees: Health, Water, Education, Agriculture, and Income Generation. The cards were intended to be broadly representative of development goals, and not as overly narrow, literal representations. The picture of the clinic, for example, was intended to represent the general goal of improved health care rather than the single intervention of building more clinics, and so on.

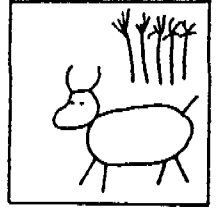
2.6 Early in the interview, the set of cards was randomly placed before the respondent and the meaning of each carefully explained. Once it was clear that each card was understood, the respondent was asked to place them in an order of priority, with the most urgently required development resource placed at the top, and subsequent needs placed in a descending order of urgency. It was explained that the project considered all of the interventions to be important, and that all would play a part in the Uukwaluudhi programme. There was no risk, therefore, that resources placed at the bottom of the list would be omitted from project activities. What the project required, however, was guidance on the relative weight to be placed on each in programme development.

2.7 Once the respondent had made a choice, the interview was conducted with reference to the priorities identified. Typical interviews lasted 30-45 minutes. Respondents were asked to elaborate on their choices, and give more detailed explanations of the problems they faced which could be countered by the development resources illustrated on the cards. Respondents were also asked to identify development needs, if any, which were not illustrated in the cards. Many of the respondents were also asked to indicate which of the developments they felt were primarily a government responsibility, and which were issues that should be principally addressed by members of the community.

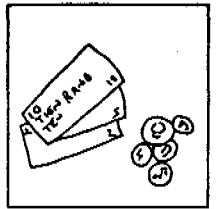
Sanitation



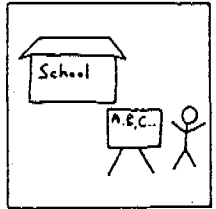
Agriculture



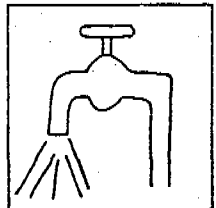
Money



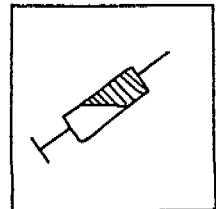
School



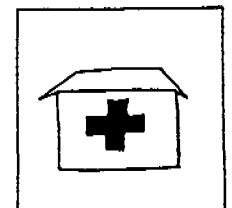
Water



Immunization



Clinic



- 2.8 A total of 25 card selections were noted during the exercise, which was conducted in seven of Uukwaluudhi's 10 divisions over a nine day period between 16-24 August, 1990. The study was undertaken under the auspices of the IABP Health Sub-committee, with a sub-committee representative forming part of the interview team in all but one of the divisions. Twenty-one of the selections were made by individual community members, three by groups of local schoolteachers, and one by a larger community group. Households to be visited were selected randomly, by the simple expedient of driving around each division and picking households at whim. With the exception of Okishidi, where a small community meeting was held, at least two or three households were visited in each of the divisions.
- 2.9 The information gathered in the interview sessions was supplemented by observational data, with the opportunity afforded for noting conditions both inside and outside of the homesteads. In the course of the field trips, schools and churches were also visited, and water points and latrines (in the few places where these were found) inspected. Access to individual homesteads allowed casual inspections to be made of environmental health conditions in the home. Data obtained in this way has been incorporated into the main report.
- 2.10 The informality of the methodology used, the modesty of the sample size, and the rudimentary nature of the analysis, place severe limitations on the scientific validity of the data obtained. The approach was more anthropological than statistical, and generalizations made from the data should be treated with the necessary caution. At the same time, a relatively high degree of consensus was evident in the views expressed by community members, and the method allowed a qualitative assessment of felt needs to be made in ways which may not have been possible by the use of a more formal approach. The use of the flash cards created a participatory atmosphere in the interview sessions, and many respondents clearly enjoyed the challenge. Few experienced major difficulties in making their choice, while many expressed pleasure at the consultative opportunity which the interviews presented. As noted, members of the Uukwaluudhi IABP Health Sub-committee assisted in the implementation of the exercise. The preliminary results were discussed with the sub-committee prior to the preparation of this report and many of the comments made have been incorporated into the analysis.

3.0 DATA ANALYSIS

- 3.1 The development resources represented on the cards were analysed on the basis of an inverse scoring method by which choice number one was given a score of seven, choice number two a score of six, and so on. The scores obtained by each resource were then aggregated, and an overall ranking obtained.

EXPRESSED NEEDS FOR DEVELOPMENT RESOURCES,
UUKWALUUDHI DISTRICT

DIVISION & RESPONDENT	SCORE OBTAINED						
	Wat.	Clin.	Sch.	Imm.	Mon.	Agr.	San.
ONANGALO							
<i>Teachers</i>	6	5	2	3	7	1	4
<i>Old woman</i>	7	6	4	3	1	5	2
<i>Middle-age man</i>	6	5	7	3	4	2	1
<i>Old man</i>	7	4	3	2	6	5	1
<i>Young woman</i>	6	5	7	2	3	4	1
<i>Middle-age man</i>	6	7	3	1	5	4	2
TSANDI							
<i>Middle-age woman</i>	7	6	5	1	3	2	4
<i>Middle-age man</i>	3	6	7	5	1	2	4
<i>Middle-age woman</i>	7	2	3	1	4	5	6
<i>Middle-age woman</i>	7	6	2	4	1	5	3
<i>Young man</i>	5	7	6	4	2	3	1
<i>10-yr-old boy</i>	7	4	6	5	1	3	2
OKATHITU							
<i>Young woman</i>	7	6	4	5	1	2	3
<i>Old woman</i>	6	7	5	4	2	3	1
<i>Old man</i>	7	6	5	3	4	2	1
OKASHIDI							
<i>Community group</i>	4	7	6	5	3	1	2
OSHITUDA							
<i>Teachers (community)</i>	7	6	4	2	5	3	1
<i>Teachers (own choice)</i>	6	5	7	4	2	1	3
<i>Middle-age man</i>	7	6	4	5	2	3	1
<i>Middle-age man</i>	7	6	5	3	4	2	1
ELONDO							
<i>Old woman</i>	7	6	3	4	1	5	2
<i>Middle-age woman</i>	7	6	1	4	3	6	5
<i>Old woman</i>	7	5	1	6	4	3	2
OSHILEMBA							
<i>Middle-age woman</i>	7	6	3	4	2	1	5
<i>Young woman</i>	7	6	5	2	1	3	4
<hr/>							
TOTAL SCORE	160	141	108	85	72	72	62
RANKING	1	2	3	4	5	6	7

3.2 The basic data obtained from the exercise is shown in the table above.

3.3 As the table shows, interviews were conducted at Onangalo, Tsandi, Okathitu, Okashidi, Oshituda, Elondo, and Oshilemba. There was insufficient time to conduct interviews at Ilyateko, Othithiya, or Eemwandi divisions.

3.4 In addition to individual home interviews, group discussions were held with primary schoolteachers at Onangalo and Oshituda. At Oshituda, teachers at Onkunga Junior Primary School were asked to make two selections with the cards, the first representing their own views, and the second what they considered to be the community's likely views. At Okashidi a community meeting was held, attended by about 25 residents, in place of individual home visits.

3.5 As the table indicates, the overall ranking obtained for the seven development resources was as follows:

1. WATER
2. CLINIC
3. SCHOOL
4. IMMUNIZATION
5. MONEY
6. AGRICULTURE
7. SANITATION

3.6 The table below gives a more detailed analysis of the selections made.

3.7 The very strong bias towards water supply is clearly evident from the scores. In 16 out of 25 cases, respondents selected water as the most strongly felt development need. The preference for water was so strong that it was selected as first option at a rate at least four times higher than for any of the others. If water was not selected as first choice, it was almost invariably placed second.

3.8 Expressed needs for improved, and more accessible, health care facilities were also strong, with the clinic option achieving a very high score. This choice dominates the second-place spot, and was selected in the first three in 22 cases out of 25.

SUBJECTIVE NEEDS ASSESSMENT, ANALYSIS OF SCORES

Resource	Score Frequency							Total Score	Mean Score
	7	6	5	4	3	2	1		
1 WATER	16	6	1	1	1	0	0	160	6.4
2 CLINIC	4	13	5	2	0	1	0	141	5.6
3 SCHOOL	4	3	5	4	5	2	2	108	4.3
4 IMMUN.	0	1	5	7	5	4	3	85	3.4
5 MONEY	1	1	2	5	4	5	7	72	2.9
6 AGRIC.	0	0	5	2	7	7	4	72	2.9
7 SAN.	0	1	2	4	3	6	9	62	2.5
Total	25	25	25	25	25	25	25	700	4.0

- 3.9 In most cases, respondents moved very quickly to the water and clinic cards and immediately placed them in the first or second spots. The felt need for these facilities appeared to be so strong that respondents showed little or no hesitation in singling them out. More thought was often given to the placing of the remainder of the cards.
- 3.10 The next most popular choice overall proved to be for more schools, with an aggregate score of 108. This was followed by immunization (85), money (72), and agriculture (72). The distribution of scores for these options was more spread out than for water and clinics and there was far less consensus over these later choices. Sanitation, with 62, was at the bottom of the list, with 15 out of 25 selections placing this option in last or second to last place.
- 3.11 The chart below shows the distribution of scores in a schematic form, in an attempt to illustrate the general trend in respondents choices. In general, the trend indicates the placing of higher priority on the more major infrastructural and/or specialist interventions, likely to require the greatest external assistance, with more individualistic development resources scoring less well.

SCHEMATIC REPRESENTATION OF SCORE DISTRIBUTION

Rank	Resource	Score Distribution						
		7	6	5	4	3	2	1
1	WATER	██████████						
2	CLINIC	██████████						
3	SCHOOL	██						
4	IMMUNIZATION	██						
5	MONEY	██						
6	AGRICULTURE	██						
7	SANITATION	██						

3.12 The likelihood of strategic bias among respondents in an exercise of this kind is very high. Confronted with an interview team representing an external agency, with proven access to significant resources (evidenced by the presence of project vehicles in Uukwaluudhi, and UNICEF's contribution to immunization campaigns in the area), it would be surprising if there was not some tailoring of choices in accordance with respondents' expectations.

3.13 This possibility was raised by a member of the Health Subcommittee during the review of initial findings. In the ensuing discussion, many sub-committee members were of the opinion that the leading choices made may be those where people felt that a major input from government or external support agencies was required. This was likely to be particularly true in the case of the first four choices (water, clinics, schools, and immunization), which represent problems which the community may feel are beyond local means to solve. The latter three (money, agriculture, and sanitation), may have been seen as more of an individual responsibility, though assistance from government may nevertheless be anticipated.

3.14 Those members of the sub-committee who had participated in the exercise expressed the view that people generally felt that all of the resources shown on the cards were important and necessary. The order in which they were placed may reflect genuine preferences to a significant degree, but strategic bias was also likely to play a role.

3.15 The views of the Health Sub-committee were to a large extent borne out by the results obtained from the questioning of some of the respondents as to where the basic responsibility lay for developing the resources represented on the cards.

RESPONSIBLE AGENCY FOR DEVELOPING RESOURCES																						
Respond.	WATER			CLIN.			SCH.			IMMUN			MONEY			AGRIC			SAN.			
	G	J	C	G	J	C	G	J	C	G	J	C	G	J	C	G	J	C	G	J	C	
Old wom.	*			*			*			*			*				*			*		
Old wom.	*			*			*			*			*			*			*			
Old wom.	*			*			*			*			*			*			*			
Old man	*			*			*			*			*			*			*			
Old man	*			*			*			*			*			*			*			*
M-age wom.	*			*			*			*			*			*			*			
M-age man	*			*			*			*			*		*				*			*
M-age man	*			*			*			*			*		*				*			*
M-age man	*			*			*			*			*		*				*			*
Young wom.	*			*			*			*			*		*				*			*
Young wom.	*				*			*		*		*	*		*				*			*
Young wom.	*				*			*		*		*	*		*				*			*
Community		*			*			*			*		*			*			*			*
TOTALS	12	1	0	11	2	0	11	2	0	13	0	0	11	2	0	5	2	6	4	2	7	

G = Government

J = Joint Responsibility

C = Community

3.16 Twelve individuals, and the community group at Okashidi, were asked to identify the agency they felt was principally responsible for developing the resources under discussion. As the table shows, the trend away from government intervention towards community and individual responsibility was generally in inverse proportion to the priority accorded to development resources, lending support to the Health Sub-committee's views on the likely influence of strategic bias on informants' responses. Although the sample size was very small, it is also worthwhile noting the apparently greater interest in self-help approaches among younger respondents than among the elderly.

3.17 The evidence of high expectations of government-led interventions suggested by these findings need not be read, however, as indicating a lack of willingness on the part of community members to participate in the development process. When it was suggested that joint enterprises might be developed, with community members providing labour and locally available materials, for example, for the construction of

clinics and schools, with government providing staffing and equipment, the response was generally positive. Respondents expressed a willingness to play their part if this would lead to more rapid development and mean that more could be made of available resources. The suggestion that community contributions might also include cash inputs was greeted with less enthusiasm.

3.18 Evidence of a significant capacity for self-help within the community can be found at schools and churches in the District, many of which have been strongly supported by voluntary community efforts. Onkunga Junior Primary School, for example, was entirely built by the local community, including the provision of cash contributions for the purchasing of metal roofing material. Many government or church-built schools in the area use additional classrooms, built in the local style from wood and thatch by groups of parents. During the interview team's visit to Oshilemba a parent-teachers meeting was in progress at which such a project was being discussed. Community contributions to church building are also typical.

4.0 INTERVIEW FINDINGS

4.1 Interviews were conducted largely on the basis of the initial card selections, though a limited number of standard questions were asked of almost all respondents. These included inquiries about access to water, water storage, child health, sources of income, and attitudes towards community self-help. Many respondents were also questioned on their knowledge of disease transmission. Although preoccupations varied somewhat from division to division, there was a fairly high degree of consistency in opinions expressed. Some important differences were noted in the views and attitudes of younger people in comparison with those of older people.

4.2 The strong expressed need for *WATER* was the dominant feature of virtually all of the interviews held. Though strategic bias may have played some role in this, an objective assessment of the situation in Uukwaluudhi would necessarily point to the extremely poor water supply situation in the District.

4.3 The main preoccupations of respondents were with water quantity and proximity to the home. The majority of the population have to travel far from home to obtain water, particularly in the dry season. Dry season water points often yield limited supplies, and many people complained that they were unable to obtain sufficient quantities to meet their needs. Where water was obtained from unprotected wells, considerable labour input was often required to repeatedly dig out the wells, to clear siltation and pursue the water table as the level drops. As one young mother pointed out, the

absence of many of the men on migrant labour contracts made this a particularly difficult problem for the women left behind.

- 4.4 It was clear from the interviews that there was a high degree of expectation that the government held the key to solving the water crisis, with the extension of the pipeline network being seen as the only truly viable long-term solution. Many respondents reported making considerable efforts to obtain groundwater, only to find no water at all, or water which was saline and undrinkable. The difficulties experienced in obtaining sufficient water were clearly a source of considerable frustration.
- 4.5 Several respondents, especially in Onangalo and Elondo, reported having to pay vendors to deliver water, particularly at the height of the dry season. It was evident that a number of donkey cart owners were doing very good business transporting water from the pipeline outlets to people in outlying settlements. People reported paying between R.0.50 and R.2.00 per 25 litre container: a considerable expense when set against estimates of average earnings.
- 4.6 Water storage practices varied considerably. Many kept their water in sealed plastic containers, but open containers were also seen. Sealing of containers was often done to prevent domestic animals, particularly chickens, from gaining access. Some improvements in water storage are clearly required, though the current widespread use of closed containers means the situation is probably less of a cause for concern in Uukwaluudhi than in many other African rural settings.
- 4.7 Although water is often polluted at source, efforts do appear to be made to control further pollution. Several respondents expressed concern at animal pollution of water sources. This was at its worst during the rainy season when many people draw water from heavily polluted *oshanas*. There is evidence at many well sites of efforts being made to control animal access, by rudimentary fencing or the covering of wells with logs. As well as being concerned about pollution, people appeared to be equally concerned to prevent livestock (as well as children) from falling into the water, particularly at the deeper well sites. In general, water quality was of lesser immediate concern to respondents than the issues of quantity and accessibility. Where concern was expressed about quality, this came from younger women and schoolteachers.
- 4.8 The majority of people in Uukwaluudhi draw water from unprotected sources, all of them vulnerable to contamination. Diarrhoeal disease is highly prevalent, particularly among children, as confirmed by all of the mothers interviewed. A relationship between the quality of water and such problems is very likely to hold. Fortunately, the consumption of raw water

appears to be limited by the widespread enjoyment of *ontaku*, a non-alcoholic brew made from grain and water. Water used in making *ontaku* is boiled for some considerable time during preparation and this must help to reduce the health risk inherent in drawing supplies from unprotected sources. Most children bring containers of *ontaku* to school with them. Often, this constitutes the only source of nourishment between leaving for school and returning home. For many people, *ontaku* is their daily drink, with plain water rarely, if ever, being taken.

- 4.8 Water consumption appeared to be significantly less than 20 litres per person per day; in some cases, far less. This is clearly inadequate for good personal hygiene, and serves to underline the needs for greater water quantity and improved access.
- 4.9 During discussions about health care, and the need for *CLINICS*, many respondents expressed anxiety at the distances they had to travel in order to receive medical assistance for themselves and their families. As one would expect, this anxiety increased the further away one got from Uukwaluudhi Hospital, in Tsandi, and the clinic at Ilyateko. Respondents complained that the long distance many had to travel meant that trivial illnesses soon turned serious through lack of attention, and that lives were at risk because help was not quickly available in the event of acute illness or accident. In some cases, respondents complained that at times they were not able to pay the modest attendance charges at the clinic and hospital. The desire for "modern" health care was strongly expressed, and respondents seemed to have a great deal of faith in clinics and hospitals.
- 4.10 The idea that health care was a specialist skill was fairly widespread, with many people being hesitant to express theories about disease transmission, saying they did not know the cause of illnesses but relied on doctors and nurses to cure them. Respondents were asked in particular about diarrhoeal disease. The few who offered explanations attributed diarrhoea to bad or poorly prepared food, and in some cases to dirty water or to dust. No mention was made of poor personal hygiene, or person to person transmission, as likely causes. Home remedies were rarely admitted to, though one woman said she made a binding mixture for her children from cake flour mixed with water, while another said she gave a mixture of water and salt.
- 4.11 There are currently 30 *SCHOOLS* in the Uukwaluudhi area. Many of these are very small and overcrowded, and children often have to travel long distances on foot to reach them. Long journeys to school, and the lack of school feeding facilities, mean that many children are tired and hungry before classes even begin. Teachers said that this clearly affected the

children's ability to concentrate, and their education suffered as a consequence.

4.12 The need for more schools, closer to home, was often expressed. Many parents saw education for their children as a valuable investment in their own futures, as well as that of their offspring. Education is seen as a means to wage employment, leading to a better life for the children themselves and greater prospects for security in old age for the parents, through the cash assistance they would almost certainly receive as a result.

4.13 Teachers complained of poor facilities, pointing to the lack of water and sanitation facilities in almost all schools, and the lack of feeding programmes. Health issues are taught as part of the curriculum, but many teachers felt that the textbooks and materials they were required to use, produced in South Africa, were inappropriate to the rural setting in which they work.

4.14 The desire for child *IMMUNIZATION* appeared to be closely linked to the expressed need for more health care facilities, and the evident concern of parents for their children's health. Unsurprisingly, immunization was exclusively seen as an expert intervention, requiring external assistance. A more widespread immunization programme appeared to be desired. In Okashidi, for example, community members said that the mobile immunization programme had visited their area, but visits were unpredictable and rare.

4.15 *MONEY* is in short supply in most homes, with old age pensions being among the more consistent sources of personal income. Remittances from migrant labour are also important, but by no means every home benefits from these. Casual income is earned by many respondents through the occasional sale of livestock, local handicrafts such as roofmaking and the weaving of grain stores, and the running of *cuca* stores. People in Ukwaluudhi have little money, and struggle hard to obtain what they can. Money is personally controlled by the individual who earns it, and the incomes of household members are not subject to the control of the head of the house. Expenditure is thus often a matter of individual discretion rather than a household decision, though all are expected to make their contribution to the general welfare of the family.

4.16 Improvements in *AGRICULTURE* appeared to be generally seen as a personal responsibility. Men farmers expressed the desire for advice from government on improved farming methods, greater access to improved seed varieties and better veterinary care. Several women expressed concern at both the quantity and quality of the local diet, saying that they often did not have enough food in the house and that there was insufficient variety.

important info

- 4.17 *SANITATION* was lowly placed in most people's priorities, though many expressed a degree of interest in latrine construction. No latrines were found in any of the homes visited. A few poor quality, unimproved pit latrines were seen, mostly around Tsandi, and at a school and church at Elondo. The value of a latrine as an health intervention was rarely stated, though one woman said that faecal matter could be carried into the house by animals and flies and could cause illness. Another saw a danger to water supplies from open-air toilet practices.
- 4.18 The increasing lack of vegetation cover, particularly in the more densely populated central and eastern parts of Uukwaluudhi, appears to have made people more aware of the issue of privacy in respect of toilet practices, and several admitted to embarrassment at seeking to conceal themselves from others. To some degree the use of latrines also appeared to be linked to status, and was desirable for that reason. Many respondents said they would like to build a latrine, but they did not know how. One respondent, a young woman, said that an attempt had been made to build a household latrine but had failed because unstable sub-soil had led to the collapse of the pit.
- 4.19 Familiarity with pit latrine technologies was low, with almost no awareness of the ventilated improved pit (VIP) latrine. Many people said latrines were important, but not as important as the other development needs shown on the cards. In this respect, they seemed to be regarded as something of a luxury, rather than an absolute necessity. It was far from clear how much people would be willing to spend in order to have a good latrine, but quite a few respondents said they would be prepared to build their own if someone could show them how.
- 4.20 Teachers showed a greater interest, and all said they needed latrines at school.
- 4.21 Environmental sanitation conditions are generally poor, with considerable risk of pollution at water points. This is particularly true at the pipeline outlets, where the surroundings are often soaked with water, posing a health hazard from animal pollution and providing breeding sites for insect vectors. The considerable numbers of livestock in the area clearly present a risk, particularly to unfenced dams and, in the rainy season, to the *oshanas*. Household refuse is not systematically disposed of, but often scattered in the farming area, or thrown over the fence.
- 4.22 As noted, water quantity is insufficient to ensure good personal hygiene. Children, in particular, appear to maintain very low standards. All homes have wash places within the compound, and many have simple urinals, consisting of a sand-filled pot which is periodically emptied. The shortage of

water means it is unlikely these facilities can be utilized sufficiently to ensure a high standard of hygiene.

4.23 Few respondents had much to say about *OTHER NEEDS*. Most said that the illustrations on the cards covered all of the things they needed in the immediate future. Three respondents expressed a desire for better quality housing, saying that living conditions were too cramped and dusty. During the winter, one said, houses were cold and children sometimes suffered burns from rolling into open fires lit inside at night. This practice would presumably also increase the risk of eye and respiratory ailments. At Okishidi, the anxiety felt by the residents as a result of their relative isolation was reflected in the desire for improved transport services.

Common
problem →

4.24 In general, the prospects for *SELF-HELP* in Uukwaluudhi appear to be reasonably good, in spite of the high expectations of government interventions. Mutual assistance, on a reciprocal basis, is a strong element in Ovambo culture, with considerable levels of cooperation between friends and neighbours. Although Ovambo households appear forbidding, and designed to protect the privacy of the occupants from those outside, daily life is very sociable, with frequent visitation between households. More often than not, neighbours and friends were found in homes visited.

4.25 Reciprocity forms an essential part of social relations. Although almost all respondents expressed their willingness to participate in development efforts they clearly expect a substantial *quid pro quo* from government, or external support agencies. Expectations are high in the wake of independence, and the end of the liberation war. The experience of colonial domination appears to have made people wary of the promises made by governments, and the continued willingness of people to play their part may depend to a large extent on clear evidence from government of its willingness to make a substantial contribution. This is particularly true in the case of water supply, where a major external contribution is seen by many as the only viable solution in the long term.

4.26 Schoolteachers and church leaders, many of whom are drawn from the local area, enjoy the respect of the community as a whole, and have the potential to play important leadership roles in the development process. The differing responses from the schoolteachers, when asked to express what they thought to be the development priorities of the community in comparison with their own, indicates however that there are some divergences of views.

4.27 Finally, from interview data and the results of questioning on responsibilities for development, it would appear that younger members of the community have a higher motivation towards self-help, and perhaps a greater interest in the development

process itself, than the more elderly. This is perhaps an unsurprising finding, but one with implications for the strategies to be developed by the Uukwaluudhi IABP. Respect for elders is an important part of Ovambo culture, reflected in part in the influence enjoyed by chiefs and headmen. The support of older members of the community is likely to be of vital importance, even if the project will need to look to the younger members of society for the greatest participation.

5.0 SUMMARY AND CONCLUSIONS

5.1 The principle findings and conclusions drawn from the needs assessment exercise are summarized below:

- * There are strong expressed needs within the community for improved water supply, particularly in respect of water quantity and accessibility, and better access to health care facilities. These needs predominate over all others.
- * Respondents exhibited a bias towards "expert" infrastructural and service resources in their selection of priorities, placing less emphasis and urgency on issues requiring the greatest elements of self-help. It is important for the IABP to recognize the resources which the local population feels it has the capacity to develop, and those which, at present, it does not.
- * Willingness to participate in development programmes on a self-help basis appears to be high, but in the context of equally high expectations of government\external agency support. Younger people exhibit a greater openness to new ideas and more willingness to participate than older people, though respect for and adherence to traditional authority structures appears to be strong.
- * Financial resources are very limited. People appear to be willing to contribute time and labour to self-help activities, but show greater reluctance when the issue of financial contributions is raised.
- * Environmental health conditions in Uukwaluudhi are very poor. The number of household latrines is negligible; there is insufficient water quantity and, away from the pipeline, poor water quality; awareness of preventive health measures is low, as are standards of personal and domestic hygiene; dependence and faith in "modern" curative health interventions is high.
- * There is a clear need for the IABP to participate in the development of improved school health education materials and teaching aids, and to develop project support communications materials aimed at adults to promote programme goals. Receptivity to project messages is

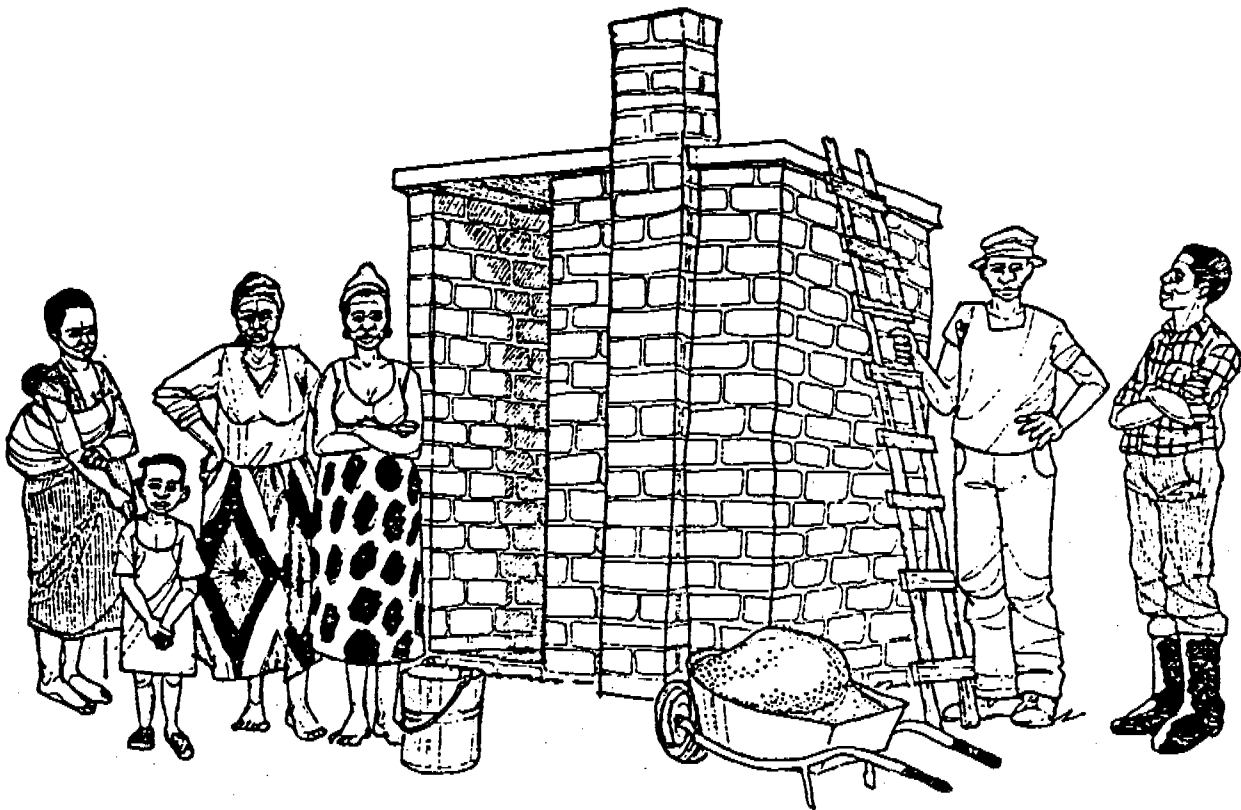
likely to be dependent to a large degree on winning community confidence through the delivery of at least some of the "expert" interventions which the community feels are beyond the scope of self-help.

- * Schools and churches provide excellent channels of communication for reaching and mobilizing the community. Teachers and church leaders, as well as nurses, are respected and valued in the community, and schools and churches have been focal points for previous self-help efforts. The IABP should be sensitive, however, to the possibility of differences in priorities between communities and local, "modern" leaderships.
- * Awareness of latrine technologies is very limited, due to the very low levels of coverage in the area, indicating the need for fairly widespread demonstration activity, particularly in respect of the ventilated improved pit (VIP) latrine. Schools, in particular, and churches would provide good sites for such activity.
- * Given the low starting point, a long-term programme of sustained development is likely to be required in Uukwaluudhi, implying the need for firm institutionalization and the development of close links and cooperation with government ministries and departments.

Annex 2:

Example VIP Designs

THE BLAIR LATRINE BUILDERS MANUAL



BLAIR RESEARCH LABORATORY

MINISTRY OF HEALTH

ZIMBABWE

ACKNOWLEDGEMENTS

This manual describes the technique of building a single compartment Blair latrine, designed at the Blair Research Laboratory. It is an updated version of the original manual developed by Mrs Sue Laver for the Ministry of Health. The fine illustrations used in this manual are those of the artist Kors de Waard whose excellent work has appeared in several manuals developed for the Ministry.

Much credit is also due to the field teams who have trained large numbers of builders over the years. The techniques described are also in great part a result of the strong support given to the rural sanitation programme by the Department of Environmental Health.

Acknowledgement is also made to Piers Cross, the UNDP/World Bank Water and Sanitation Adviser for assistance in final production. The Norwegian Agency for International Development (NORAD) have assisted the Ministry in financing the printing of this manual.

Peter Morgan

BLAIR RESEARCH LABORATORY.

May 1989

MANY PEOPLE IN ZIMBABWE ARE BUILDING BLAIR LATRINES !

People like Blair latrines because:

- ▲ They do not smell when properly constructed
- ▲ They do not breed flies when properly constructed
- ▲ They are easy to maintain
- ▲ They are private
- ▲ They are safe for children to use
- ▲ They can also be used as a washroom
- ▲ They can be built with bricks and local skills
- ▲ They will last for many years

It is the Government's wish that each family in the Communal Lands should have their own Blair latrine

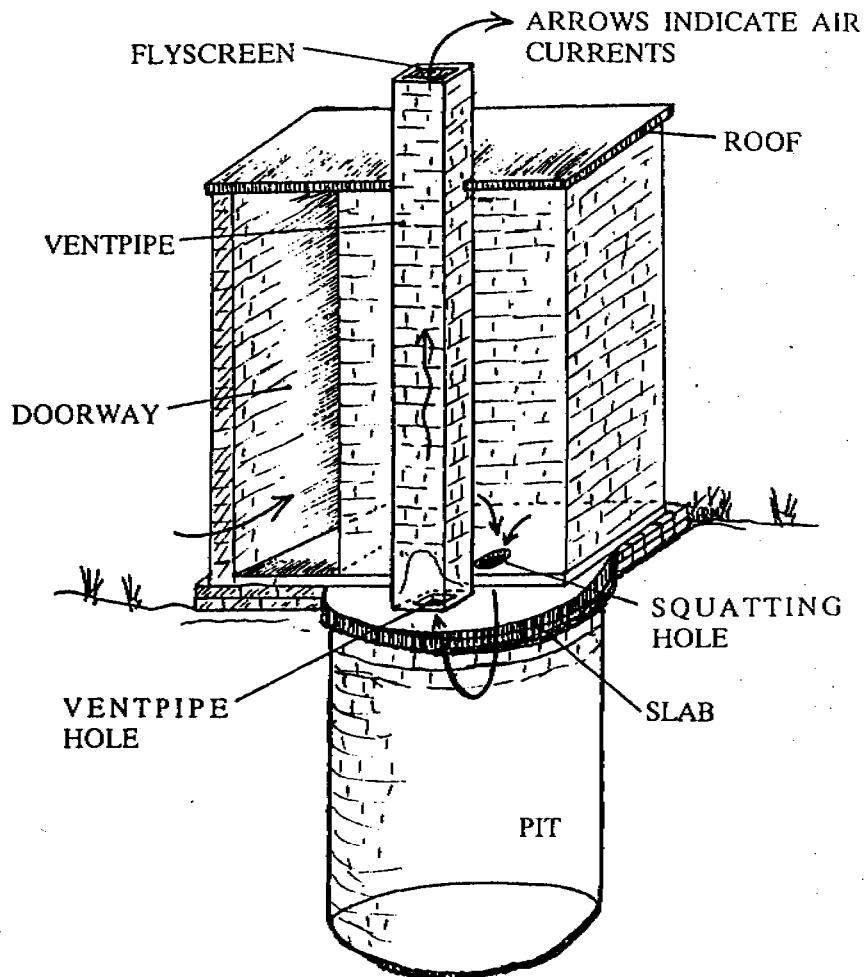


HOW THE BLAIR LATRINE WORKS

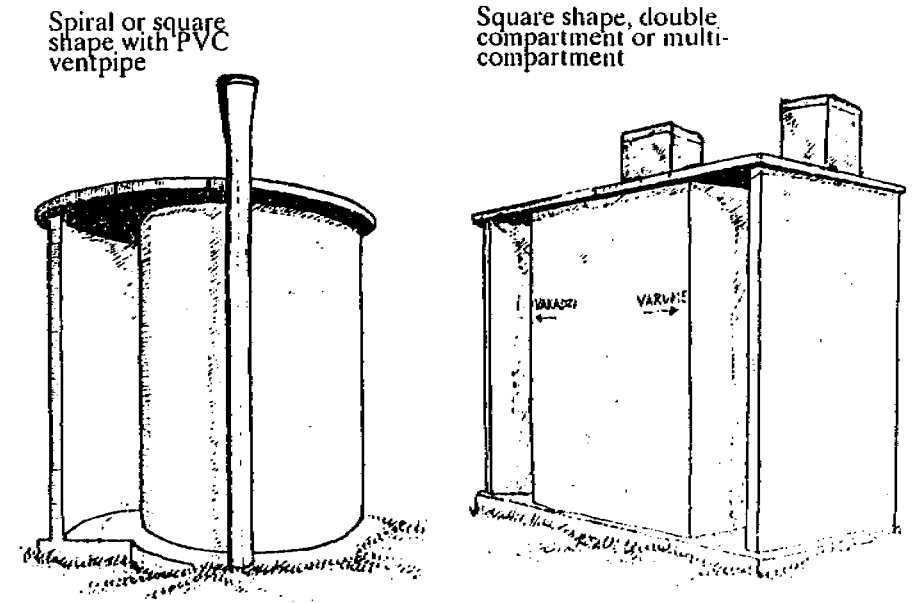
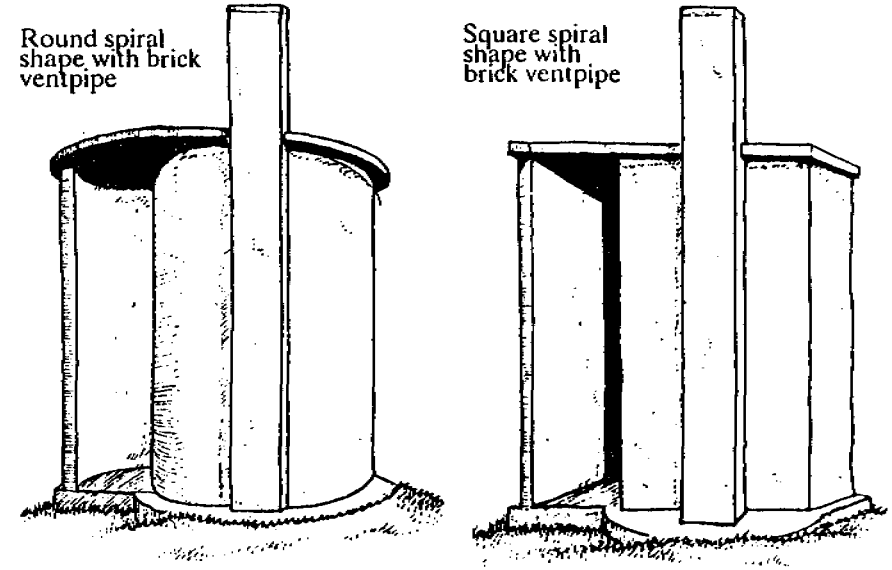
The latrine slab is made with two holes, one for the squatting hole and one for the vent pipe. The vent pipe sucks air from the pit and fresh air is drawn down through the squat hole. The latrine itself is therefore odourless.

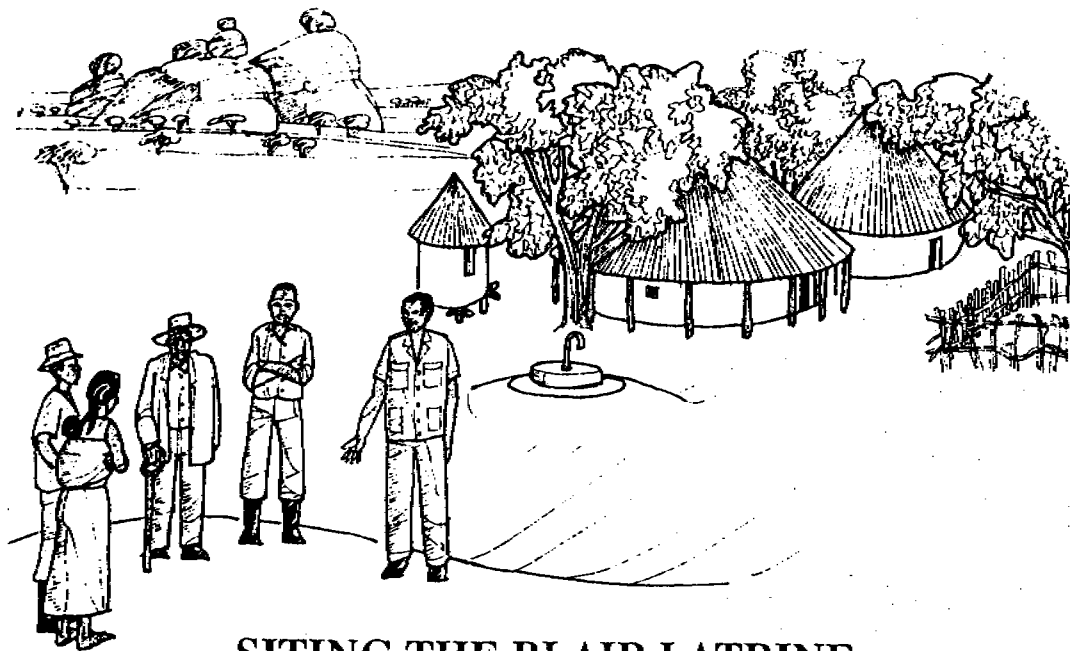
Flies approaching the latrine are attracted to odours coming from the pipe but cannot pass the screen to enter the pit. Flies escaping from the latrine are attracted to the light coming down the pipe but are trapped by the screen and cannot escape.

THIS IS A CUT OPEN VIEW OF A BLAIR LATRINE



MANY TYPES OF BLAIR LATRINE CAN BE BUILT





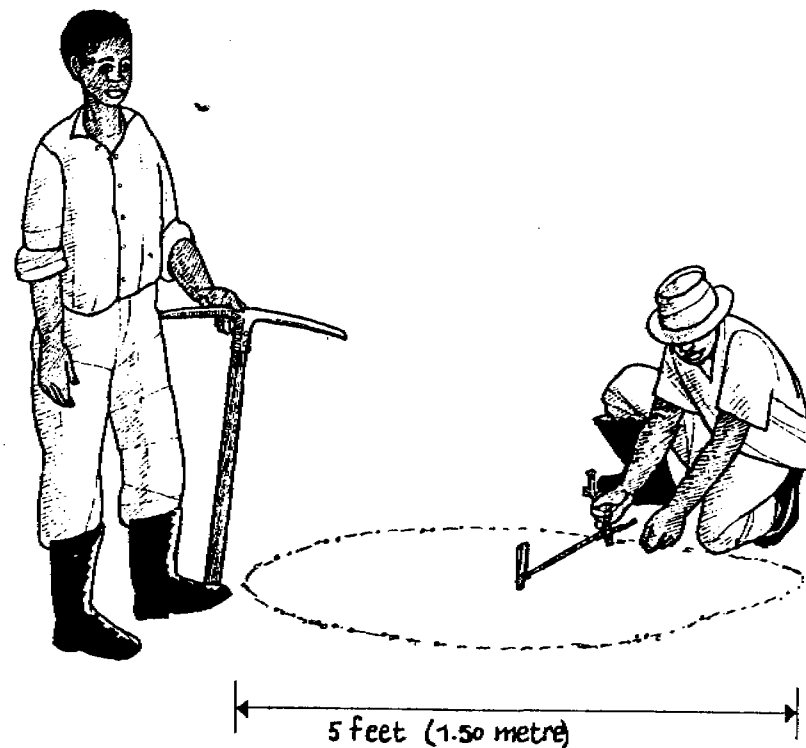
SITING THE BLAIR LATRINE

The site should be chosen by the family with assistance from a health worker and should be at least 30 metres from a well.

The site should be:

- ▲ **Downhill From A Well Or Borehole** - so that waste from the latrine does not drain into the water supply
- ▲ **Where The Soil Is Firm** - so that the latrine will not collapse
- ▲ **On Slightly Raised Ground** - so that the rainwater can drain away
- ▲ **Near The House** - so that the latrine can be used easily
- ▲ **Away From Trees** - so that air can flow freely over the pipe
- ▲ **Facing Into The Wind** - so that fresh air blows into the entrance

STAGE 1. MARK THE SHAPE OF THE PIT



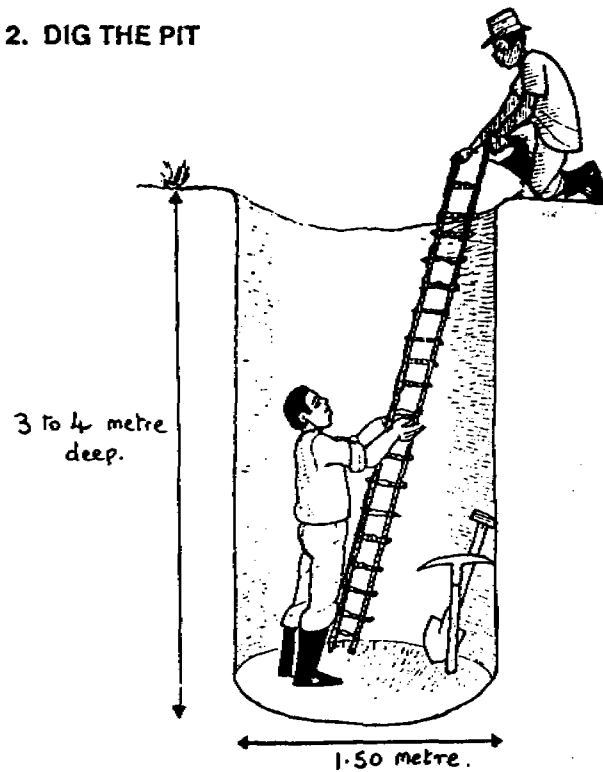
Mark the diameter of the pit before you start to dig.

To do this:

- ▲ Place a peg in the ground
- ▲ Tie a piece of string, which measures 0.75 metres on to the peg
- ▲ Walk around the peg and mark a circle in the ground

This marks the shape and diameter of the pit.

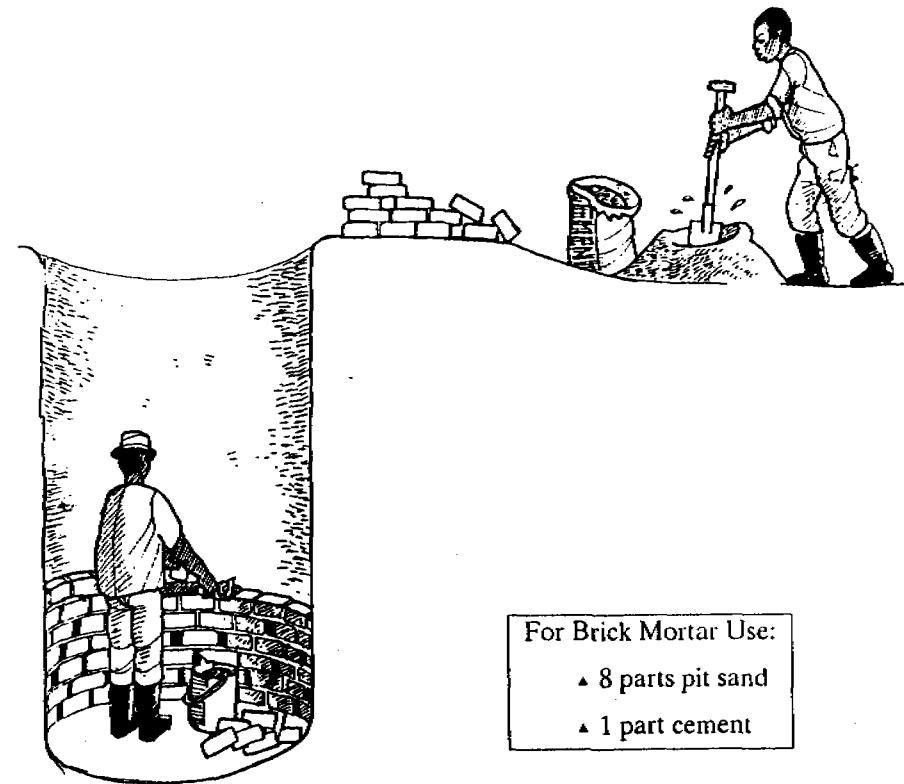
STAGE 2. DIG THE PIT



- ▲ Keep the walls of the pit straight
- ▲ Dig as deep as possible and at least 3 metres
- ▲ Keep the pit diameter 1.5 metres
- ▲ Remove soil and rock from the pit as you dig

The pit for a latrine must be dug at least 3 metres deep and it is better to dig it 4 metres deep. The deeper a pit is dug the longer it will take to fill up!

STAGE 3. LINE THE PIT



For Brick Mortar Use:

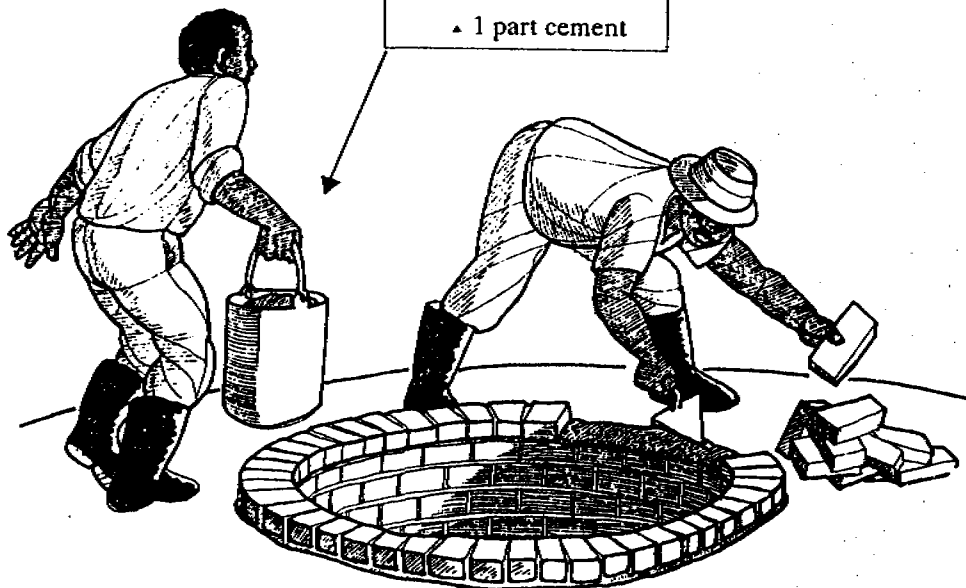
- ▲ 8 parts pit sand
- ▲ 1 part cement

- ▲ Line the pit from bottom to top with fired bricks and cement mortar in all soils, except rock.
- ▲ Line the sides only, do not line the base of the pit
- ▲ As the brickwork is being built up, backfill the space between pit wall and brickwork with soil and ram firmly.

STAGE 4. MAKE THE PIT COLLAR

For Brick Mortar, use:

- ▲ 8 parts sand
- ▲ 1 part cement



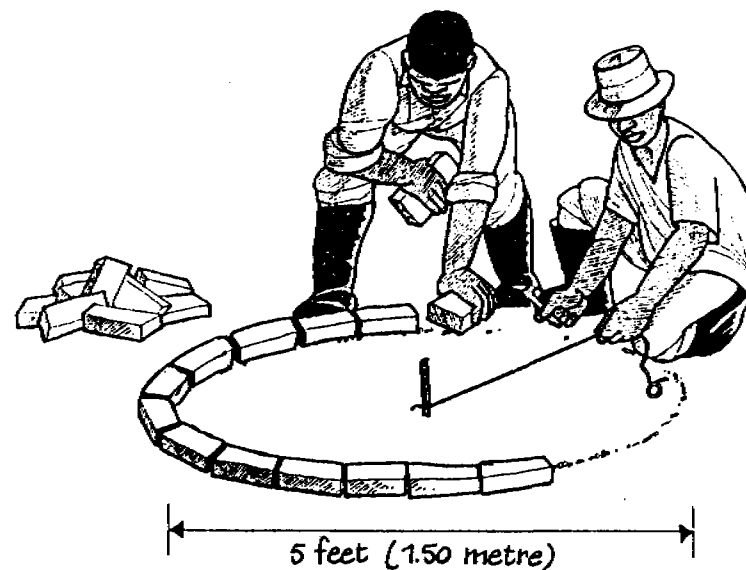
The pit collar is a ring of bricks cement mortared around the top edge of the pit. It is one course deep.

- ▲ Use a mixture of 8 parts pit sand and 1 part cement to mortar the bricks together.

The brick collar is very important. It provides:

- ▲ A strong foundation for the cover slab
- ▲ A good airtight and fly tight seal under the slab.

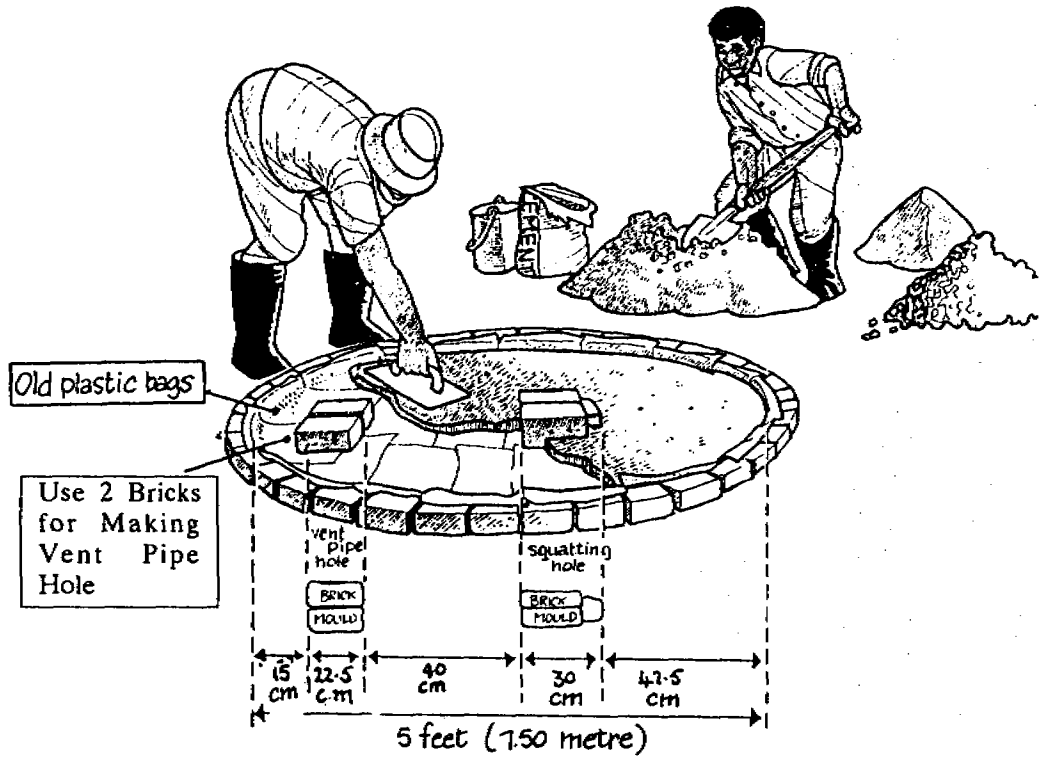
STAGE 5 MAKE THE COVERSLAB MOULD



- ▲ Choose a level place near the pit
- ▲ Mark a circle 1.5 metres in diameter
- ▲ Place a ring of bricks around the circle

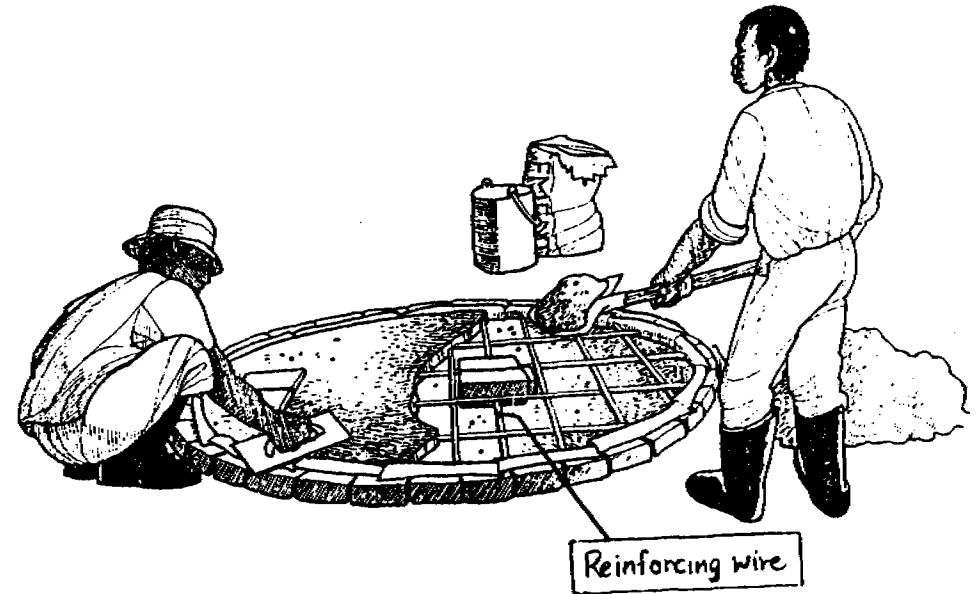
To stop concrete sticking to ground, add old cement bags or plastic sheet inside the mould or add river sand inside the mould and level off.

STAGE 6. MAKE THE COVERSLAB



- ▲ Use bricks to make the holes for squatting hole and vent pipe (If a PVC vent pipe is used, this can be used to make vent hole)
- ▲ Use the measurements shown in the diagram
- ▲ Make the concrete mixture for the cover slab using:
 - 5 parts washed river sand
 - 1 part cement
- ▲ If gravel or small stones are available the mixture should be made with 4 parts gravel, 2 parts river sand and 1 part cement.
- ▲ Place half the concrete mixture into the mould and stamp down well, especially around the holes made for the squatting hole and vent pipe.

STAGE 7. COMPLETE THE COVERSLAB



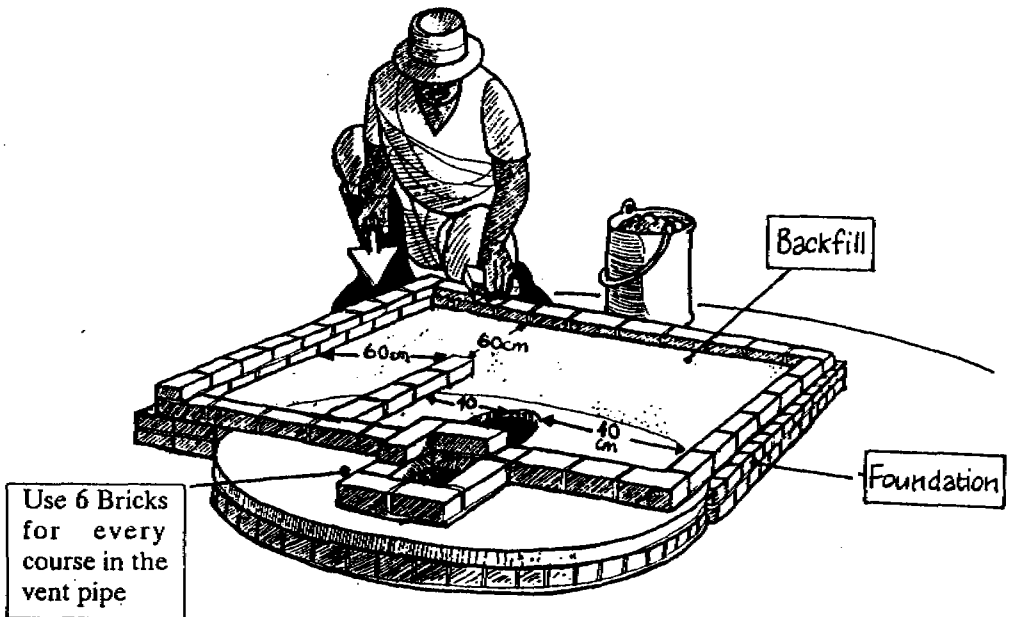
- ▲ Place reinforcing wire on top of concrete inside mould and cut to size to form a grid pattern with wires 10 cm apart
- ▲ Remember to add extra reinforcing around vent pipe and squat holes
- ▲ Place remaining concrete over reinforcing wire
- ▲ The thickness of the completed slab is 75mm
- ▲ Loosen and remove bricks for vent and squat holes after 1 hour
- ▲ Shape the squatting hole correctly so that it is a suitable size for children and adults. It should be about 300mm long and 150mm wide
- ▲ Cover the completed slab with wet sacks, wet sand or grass. Keep wet and allow to cure for at least 5 days

STAGE 8. POSITION THE COVER SLAB



- ▲ First put cement mortar on to the brick collar. Then place the cover slab over the collar above the pit. The cover slab and collar must fit tightly together
- ▲ Position the slab so that the vent pipe hole faces the correct position. This is normally towards the homestead and towards the wind. The vent pipe hole is on the same side as the doorway
- ▲ Make sure that the vent pipe hole is over the pit
- ▲ A good seal between the cover slab and the collar prevents flies from entering and leaving the pit other than through the squat and vent pipe holes. It also prevents smells coming up from inside the pit

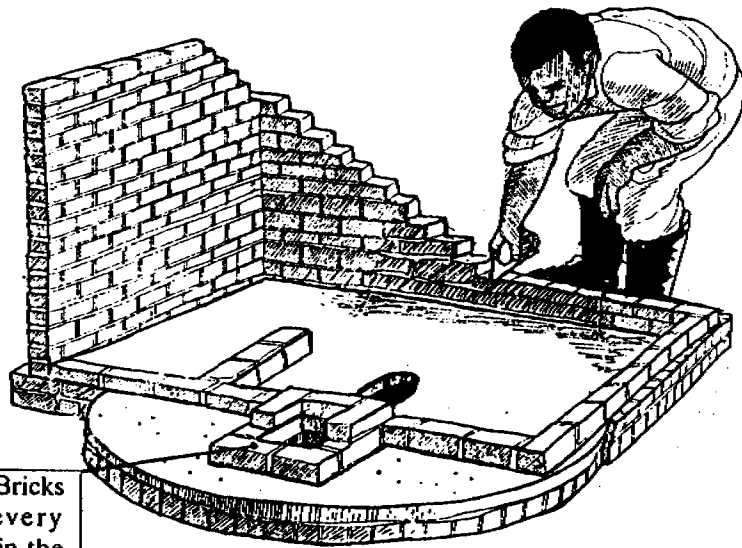
STAGE 9. BUILD THE FOUNDATION



Over the pit, the structure is built up on the cover slab. Outside the pit the structure is built up on a solid brick foundation.

- ▲ Build a 225mm wide brick foundation to a height which is level with the coverslab. This will require at least 2 courses of bricks. Take exact measurements from the latrine plan in this manual
- ▲ Backfill the space between the foundation and the coverslab with half bricks, stones or well rammed soil. Level off to height of the slab
- ▲ Start to build up the brickwork for walls and vent pipe

STAGE 10. BUILD THE WALLS AND VENT PIPE



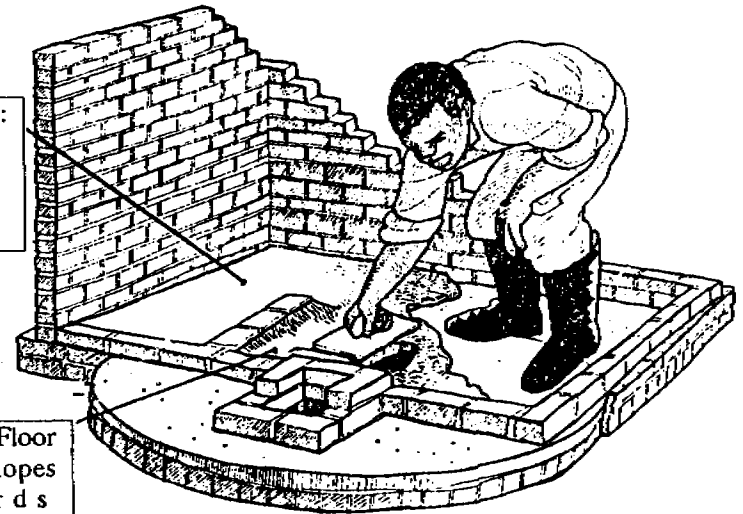
Use 6 Bricks
for every
course in the
vent pipe

- ▲ Build the latrine walls with fired bricks and cement mortar to a height of 1.8 metres above the slab level
- ▲ At the same time build the vent pipe to a height of 2.7 metres above slab level
- ▲ When completed the vent pipe rises 0.9 metres above the wall
- ▲ Use 6 bricks for every course in the vent pipe
- ▲ Smooth down cement mortar inside wall of vent pipe
- ▲ Plaster inside walls of structure with cement mortar

IMPORTANT

Air needs to move freely through the vent pipe. Do not block it with mortar when building.

STAGE 11. MAKE THE LATRINE FLOOR



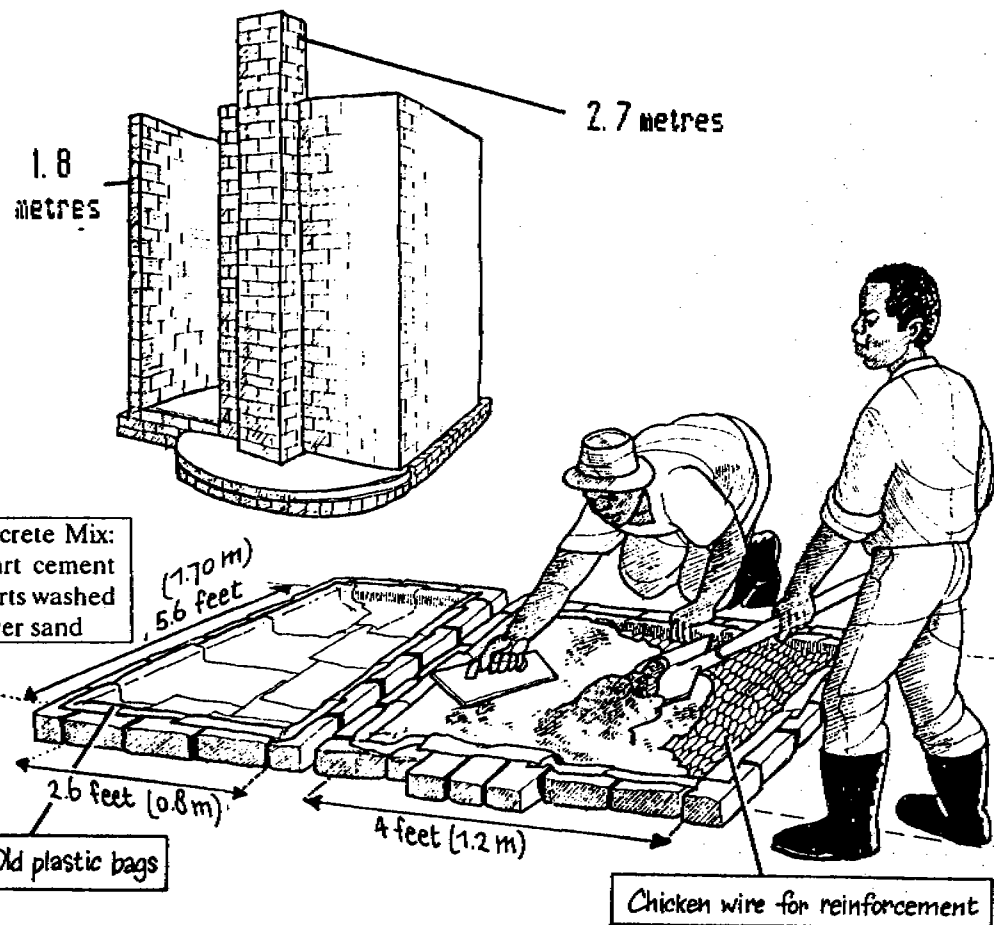
Concrete Mix:
1 part cement
3 parts washed
river sand

Smooth Floor
which Slopes
towards
Squathole

A well made sloping latrine floor with a hard working surface is easy to keep clean and is an essential part of the Blair Latrine.

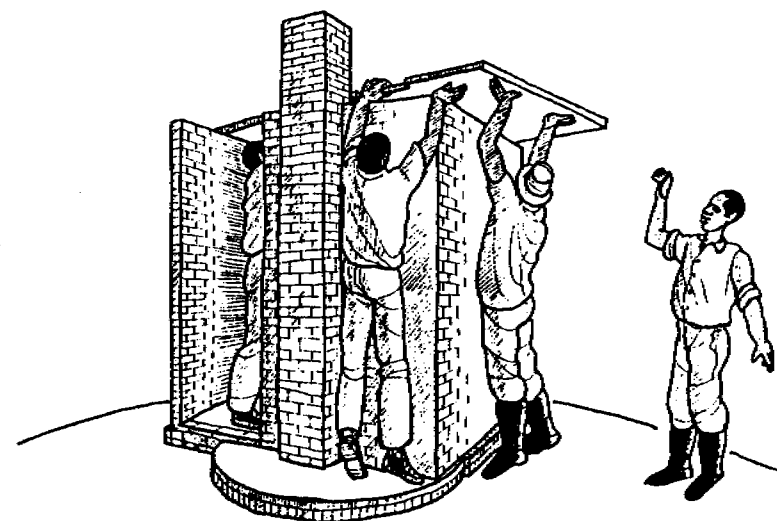
- ▲ The latrine floor is made with a mixture of 3 parts river sand and 1 part cement
- ▲ Build up one course of bricks at the entrance to the latrine
- ▲ The latrine floor is made by adding the concrete mixture from the brick step at the entrance so that it slopes down towards the squat hole
- ▲ Smooth the concrete work on the floor. The floor is then easier to keep clean

STAGE 12. MAKE THE ROOF SLAB



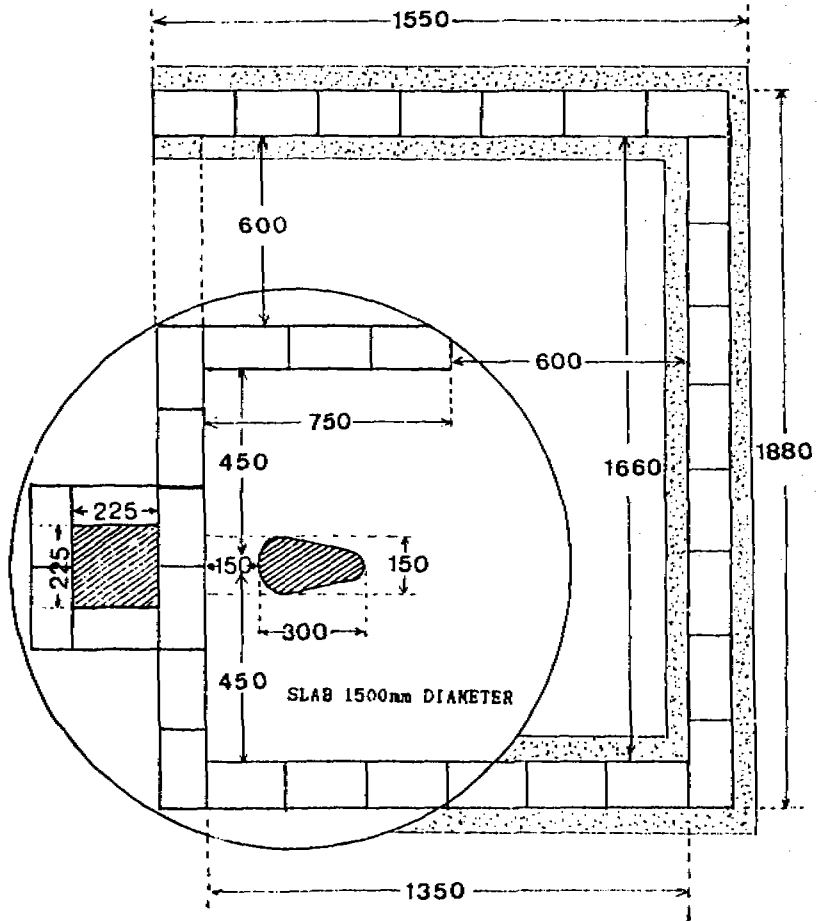
- ▲ Prepare the roof slab in the same way as the cover slab, but take exact measurements from the structure and make in two pieces. Use chicken wire cut to size for reinforcement (1.7m x 2.0m)
- ▲ The slab pieces usually measure 0.8m x 1.7m and 1.2m x 1.7m. This makes a roof of 2.0m x 1.7m with an allowance for overhang
- ▲ The mixture used for the roof slab is 3 parts river sand and 1 part cement
- ▲ The roof thickness lies between 25mm and 30mm when complete
- ▲ Keep the roof covered and wet, and allow to cure for at least 5 days

STAGE 13. FIT THE ROOF



- ▲ Use mortar to fix the roof slabs in position
- ▲ Lift the slabs carefully to avoid cracking

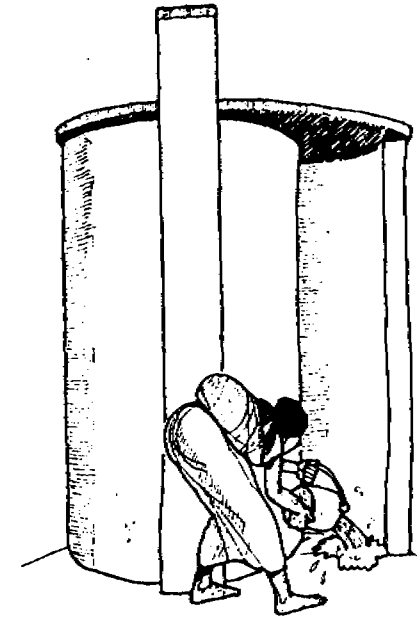
THE BLAIR LATRINE: DIMENSIONS OF SLAB AND STRUCTURE



Where a PVC or asbestos pipe is used the vent pipe hole should be made to suit this. It is important to keep close to the measurements in the diagram. Note the size of the vent hole for a brick pipe and the size of the square spiral superstructure. The dotted area shows the brick foundation for the superstructure walls.

CARE FOR YOUR BLAIR LATRINE

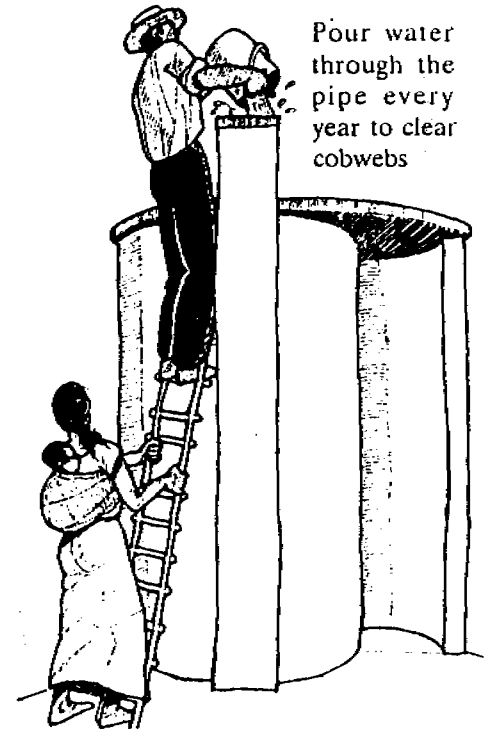
Clean the inside of the latrine with water every day



Check flyscreen at least once a year and replace if damaged



Pour water through the pipe every year to clear cobwebs



CARE FOR FAMILY HYGIENE

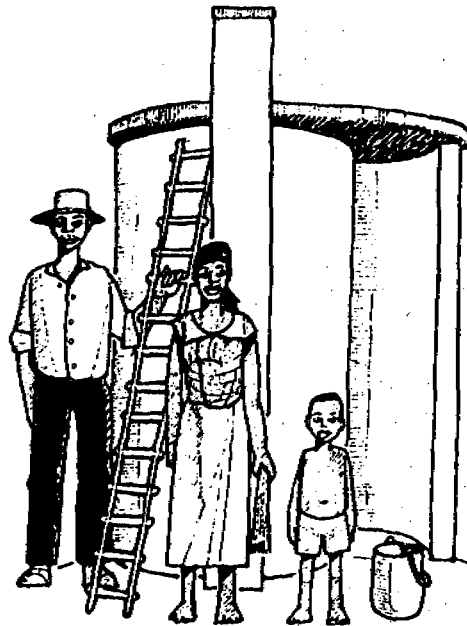


Help young children to use the latrine.

Always wash your hands after using the latrine.



A well kept family latrine is something to be proud of!



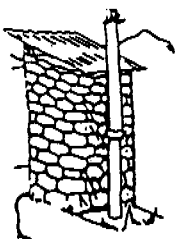
Annex 3:

Example Support Communications

Ntloana e ntlafalitsoeng (V.I.P.) e boloka lelapa la hao le phela hantle



**Haha V.I.P. hona joale!
Ha e na menko - Ha e na litšintši –
E ntlafatsa bophelo**



R.S.P.

1946 - 40 Years for Children
1986

unicef 

United Nations Children's Fund

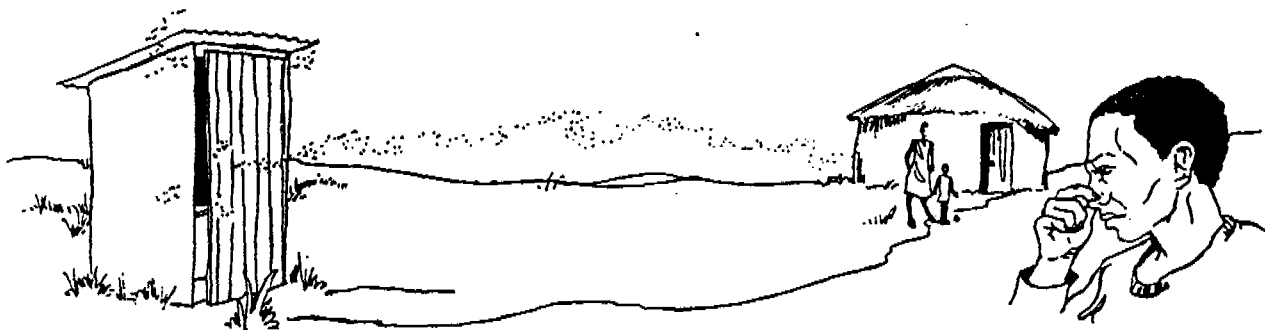
*Produced by:
Health Education Unit.
May, 1986.*

*Bakeng sa tlhakisetso ikopanye
le - DISTRICT SANITATION CO-ORDINATOR*

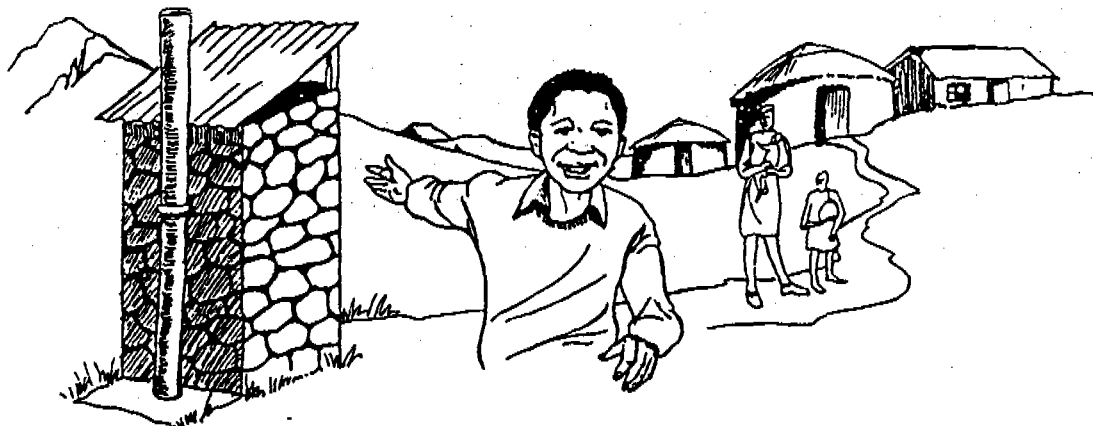
Sebelisa ntloana 'me u lule u phela hantle



Ho ea mohlabaneng ho ka baka mafu

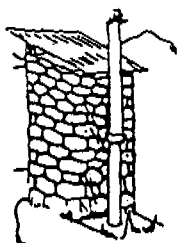


Ntloana e molemo, empa e ka nkha ka mohlomong.



Ntloana e ntlafalitsoeng (V.I.P.) e molemo haholo

**Ha e na litšintši – Ha e na menko
– E ntlafatsa bophelo**



R.S.P.

1946 - 40 Years for Children
1986

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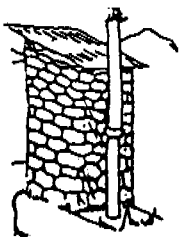
TŠIRELE TSA LELAPA LA HAO



Haha ntloana e ntlafalitsoeng (V.I.P.)

Ha e na menko – Ha e na litšintši –

E ntlafatsa bophelo



R.S.P.

1946 - 40 Years for Children
1986

unicef 

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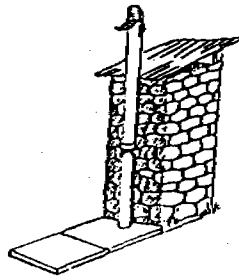
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VIP

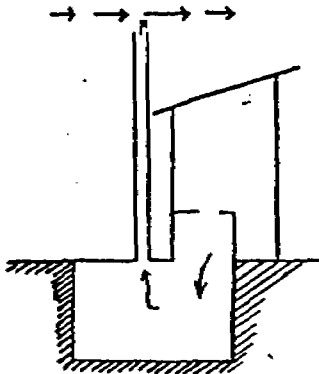
THE VIP LATRINE



The VIP latrine is an improvement of the traditional pit latrine. As a result, the problem of flies and smells have been eliminated completely. The main features are these:-

- all the gaps around the seat are closed.
- all the gaps over the pit are closed.
- a ventilation pipe with a flyscreen on top.
- a firm foundation.
- a concrete floor.

1. HOW DOES IT WORK?



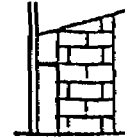
The ventilation pipe allows smells to be blown away by the wind. As air blows over the top of the ventilation pipe, air is drawn out of the pipe. Air is therefore drawn out of the latrine into the pit and eventually out through the vent pipe. This allows the latrine to remain fresh and free of smell. Since there is no smell, very few flies are attracted to it. Any flies inside the pit are then attracted by the light from the top of the ventilation pipe. they therefore fly upwards and are trapped by the flyscreen. The flyscreen also prevents flies from entering the pit from the top.

2. HOW IS IT BUILT?

You can build a VIP latrine yourself if you have some knowledge of masonry and can follow the building instructions. However, there are trained builders who put up VIP latrines for a small fee. Latrine components can be purchased locally or made on site. Any latrine builder can help you acquire the components. The latrine building itself can be made from any type of materials e.g. concrete blocks, bricks, mudblocks or zinc sheets. Therefore they can be built to suit all pockets.

REMEMBER that VIP latrines have:

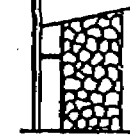
- Concrete floors
- Firm foundations
- Cheap latrine buildings



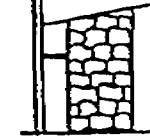
concrete blocks



zinc sheets



stones



mudblocks

- Ventilation pipes to keep them fresh and free of smells.

BUILD A VIP LATRINE FOR YOUR FAMILY NOW!

REMEMBER ALSO THAT A VIP LATRINE IS

- Free from smells
- Free from flies
- Safe and
- Affordable too

Be healthy. Be up to date. Build a VIP latrine Now!
Encourage your family and friends to build and use VIP latrines.

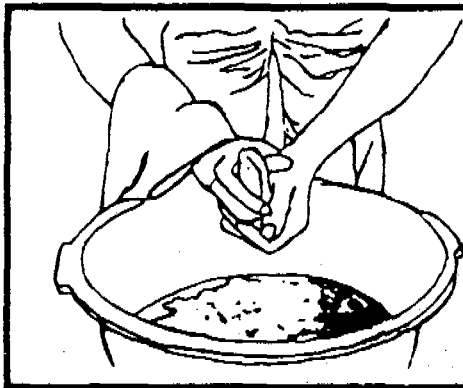
For further information contact any:

TRAINED LOCAL VIP LATRINE BUILDER, VILLAGE HEALTH WORKER,

HEALTH ASSISTANT
or

THE DISTRICT SANITATION COORDINATOR
c/o Public Health Office.

koala
sekoahelo
sa
setuloana



hlatsoa
matsoho



ruta bana
ho sebelisa
ntloana

hopola:

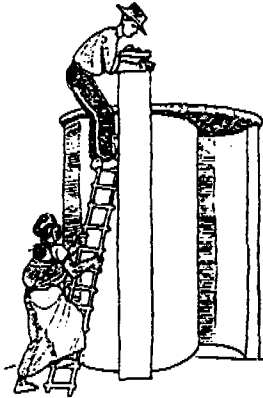
boloka
ntloana e
hloekile



CARE FOR YOUR BLAIR LATRINE



MINISTRY OF HEALTH ZIMBABWE



CHECK FLY SCREEN AT LEAST ONCE A YEAR AND REPLACE THE FLY SCREEN IF IT IS DAMAGED.



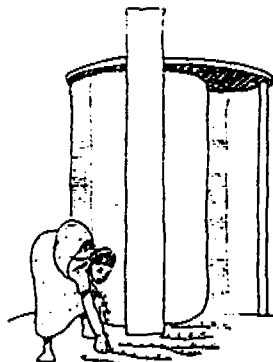
POUR WATER DOWN THE VENTPIPE ONCE A YEAR TO REMOVE COBWEBS AND DEAD FLIES THIS HELPS AIR TO MOVE FREELY THROUGH THE VENTPIPE.



CLEAN THE INSIDE OF THE LATRINE EVERYDAY WITH PLENTY OF WATER



CLEAN THE SQUAT HOLE EVERYDAY USING A HARD BROOM TO REMOVE DIRT THAT MIGHT BE STUCK AROUND THE SQUAT HOLE.



PLANT GRASS AROUND THE LATRINE TO REDUCE SOIL EROSION. BUILD UP SOIL AROUND THE LATRINE SO THAT RAIN WATER WILL RUN AWAY FROM THE SITE

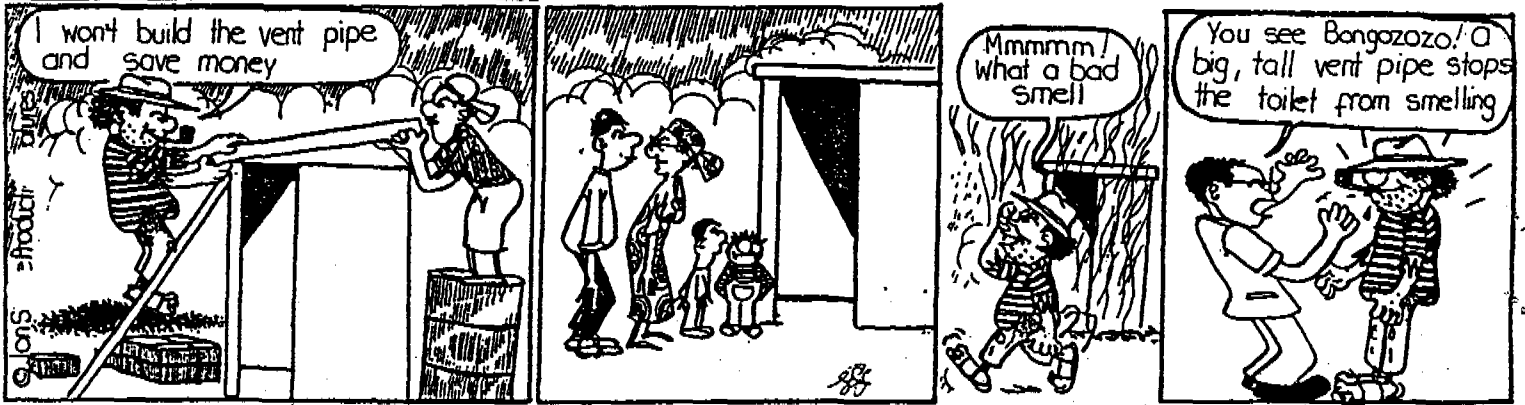
THE LATRINE WILL LAST LONGER IF THESE INSTRUCTIONS ARE FOLLOWED.

A WELL KEPT LATRINE IS SOMETHING TO BE PROUD OF!

BONGOZOZO - Builds a Blair toilet (1)



BONGOZOZO - Builds a Blair toilet (3)



BONGOZOZO - Builds a Blair toilet (4)



TLHOLISANO ENA E KA
KENELOA KE BATHO BA
TOROPO EA

Tlholisano

U ka ikhapela karolo ea
thepa ea ntloana —

chomela ea monko e nang le leraba la litšintši, matlapa a ntloana le
sekoahelo sa setuloana.

Araba lipotso tsena:

1. Ke ntloana e fe e loketseng bophelo ba hau?

2. Ke mang ea ka u ahelang V.I.P.?

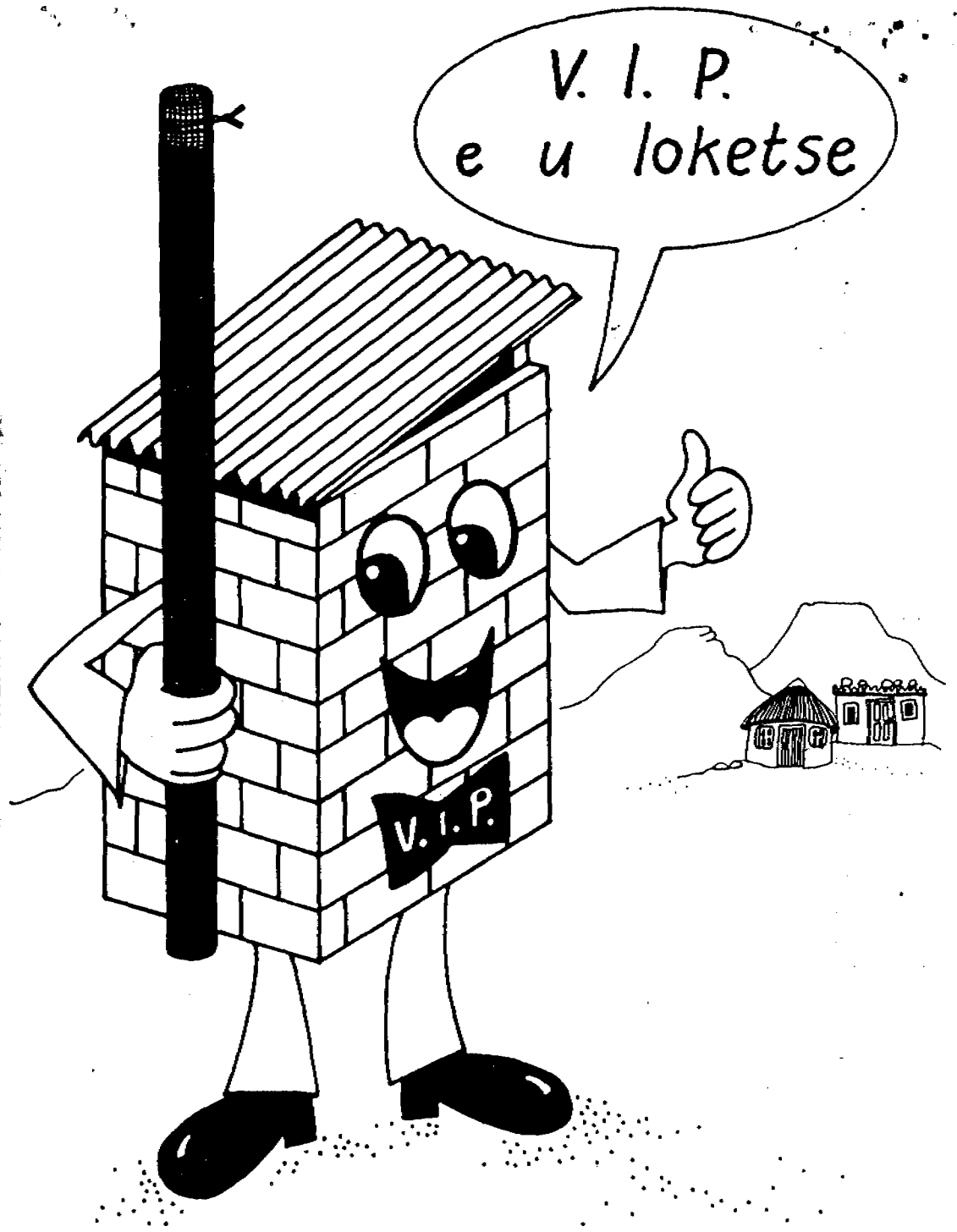
3. V.I.P. ke ntloana ea sekoti kapa ea metsi?

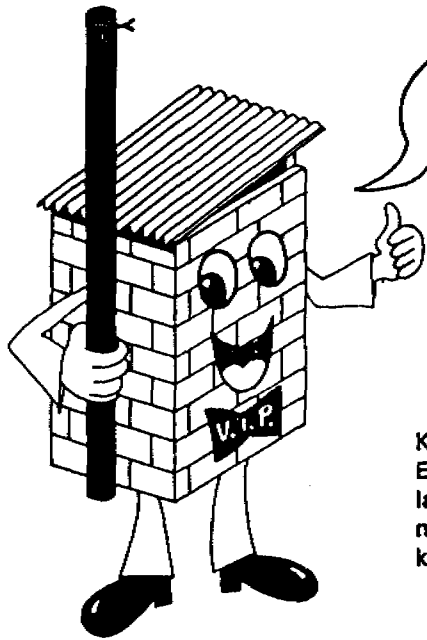
Lebitso la hao: _____

Aterese: _____

Mamela Se-ee-le-moea sa Lesotho lenaneong la Bophelo ba rona,
u tla utloa hore na likarabo tse nepahetseng li tla huloa neng, le hore
na ea lehlohonolo ke mang le lithaloso tse ling tsa tlholisano ena.

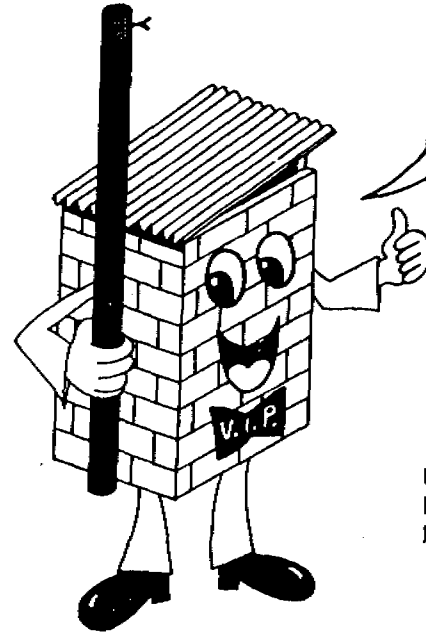
Les Ads - Maseru





V.I.P.
e tsebahala k'ang?

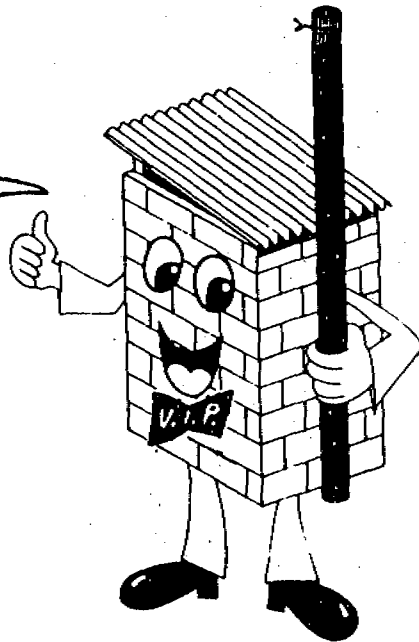
Ke ntloana ea sekoti e ntlafalitsong
E na le chomela e ntšang monko le laraba
la litšintši, setuloana se na le sekoahelo
masobana 'ohle a lebileng ka sekoting a
koalehile.



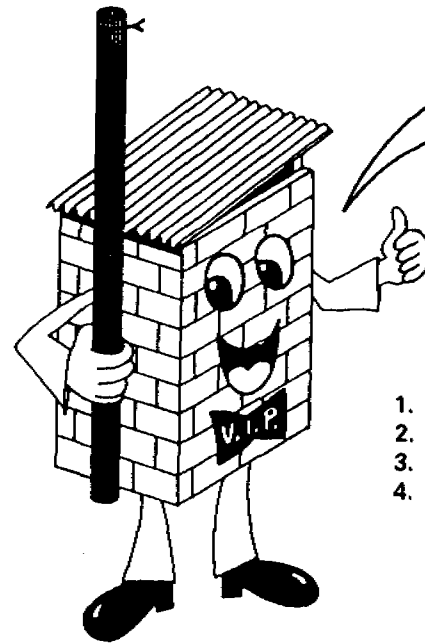
U ka etsa
joang ha u na le
khaello ea lichelete
empa u batla V.I.P.?

U ka ikopanya le ba USIT toropong ea heno
ba tla u hlalosea ka likalimo tsa chelete
ho u thusa.

U ka iphumanela
V.I.P. joang?



U ka e ahloa ke seahi se rupetsoeng ke ba
USIT. U tla tseba seahi ka phosetara e tala
le lengolo la bopaki.



Hopola!
V.I.P. e loketse bophelo
ba hau. Uena etsa
tjena:

1. Koala sekoahelo sa setuloana
2. Ruta ba ba nyenyane ho sebelisa ntloana
3. Boloka ntloana e hloekile
4. Hlapa matsoho ha u tsoa ntloaneng.