WASHING SLABS, WASHING HABITS AND WASHING SITES IN THE LAKE ZONE REGIONS

Final report by the anthropological consultant to HESAWA

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Bernhard Helander
Department of Cultural Anthropology
University of Uppsala
Tradgardsgatan 18
S-753 09 Uppsala
Sweden

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Summary

This report deals with two sets of problems that have emerged with the introduction of washing slabs in the HESAWA programme. Firstly, while villages and districts have planned for washing slabs to be constructed in their annual budgets and have had these budgets approved, few washing slabs have actually been built. Secondly, it has been observed that some of the washing slabs constructed are used very little.

While a number of specific reasons are involved at local levels, the two basic problems—production and utilization—are in principle attributable to the same basic difficulty: lack of participation. The local beneficiaries of HESAWA activities are always acutely aware of constraints that may affect their ability to actually use the facilities being constructed. However, in the case of washing slabs, local users have rarely if ever been asked if they desired anything like them, and if so, where they ought to be located. Washing is a female activity. Unmarried sons, school children and daughters still living at home are expected to help their mothers with the washing of clothes. Still, in my sample nearly 37% of the households reported the woman alone as responsible for the washing. However, although washing slabs are something that in the majority of cases is used by women, it is men who plan for them.

A major constraint on the ability to use existing washing slabs is that at a large number of water sources there exist regulations against washing. In Magu and Kwimba districts there are several shallow wells which have a limited supply of water during the dry-season. At such wells it is invariably prohibited to wash regardless of whether a washing slab is built there or not. In some cases it may be allowed to bring water to one's home for washing from such wells. However, that is only because the local perception is that the need for transportation of the water forced people to economize with it. At shallow wells which have a good water supply throughout the year, it may still be prohibited to wash due to the polluting effects of washing activities. The concern for such pollution is generally not expressed in terms of fear for ground-water infiltration. Rather such prohibitions tend to be based on past experiences of having the ground next to the water-source becoming muddy and unpleasant. In Bunda district such regulations are particularly common, but they exist in all three HESAWA regions. In Bukoba Rural the regulations against washing sometimes have a slightly different justification. In the district it is (correctly) believed that soap-water can hamper the growth of banana-plants. As water-points and shallow wells are frequently located within the banana plantations a general prohibition of washing close to them is strictly enforced.

While facts like these are always well known among the people in the neighbourhood next to a water source, this study has shown that village leaders are not always familiar with the particulars of each water source. As decisions about HESAWA activities often are formed within the sphere of the male village leaders, many washing slabs have been constructed in the vicinity of water sources where it was prohibited to wash. Sometimes local residents in a sub-village have resisted when they became aware that a washing slab was going to be constructed and such cases account for part of the backlog of production.

In several cases plans for washing slabs have been forced upon villages who had no intention of constructing them. This was based on a bureaucratic principle, that have since been discontinued, that each new water source should have its washing slab. The change in policy concerning washing slabs has not yet fully penetrated the responsible officials at the district level. Nevertheless, the same officials have in most cases long been aware of the local restrictions for washing. This awareness have affected their motivation to initiate

construction work for planned washing slabs, yet they have continued to plan for new washing slabs that knew would never be built.

An important finding of this study is that the vast majority of washing slabs, rather than serving to protect the environment, constitute potential environmental hazards. Many of them are built too close to the water source and only a few of them have a proper drainage constructed.

It may well be that the issue of washing slabs have become too infected within the programme as whole to allow for production to be resumed at a meaningful level. However, for the future it is extremely important that the hygienic benefits of washing slabs are realized and that washing slabs are thought of, not solely as a working surface of cement, but as a washing site that facilitates drainage and a disposal for potentially harmful waste water. The case of the washing slabs should be treated as an alerting signal for the HESAWA programme. It directs attention to fundamental shortcomings in achieving sound community participation. It also gives ample illustration of what lack of participation may lead to. In the course of conducting this study it became apparent that ordinary villagers—including women—on the sub-village level are not only capable of participating in the planning process, but that they also are indispensable for successful planning. In order to prevent future problems of a similar type as that of the washing slabs to develop, it is essential to create mechanisms within the programme to incorporate the voices of those people.

Introduction

This report describes the results of an anthropological study undertaken within the HESAWA programme in the Lake Zone Regions of Tanzania. HESAWA stands for *Health through Sanitation and Water*. The HESAWA programme is funded by the Swedish International Development Authority (SIDA) and the Government of Tanzania and is aimed at improving the rural water-supply and providing sanitary facilities. A fundamental idea of the programme is to operate by mobilizing participation both among the beneficiaries and within the relevant agencies on regional and district levels. SIDA provides the hardware and the input of technical know-how, but actual construction work is carried out by villagers. To achieve this, the programme has a marked focus on what is called Human Resources Development, e.g., training of technicians and craftsmen, and study groups for villagers on health issues and other topics related to the programme.

HESAWA may be said to belong to a "new generation" of water programmes in Tanzania. Installations of earlier programmes often conveyed a sense of "don't touch" to the beneficiaries which in several cases made villagers regard water schemes as somebody else's responsibility.[1] Current ambitions include involvement of communities to have them

[1] Women and Children in Tanzania: A Situation Analysis. Unicef, 1990, p. 60.

participating in all phases of the programme. All technological input must therefore be of a kind that facilitates handing over of responsibility for operation and maintenance to locally trained caretakers. Furthermore, while the ability to pay for new installations differ a lot between different communities, some form of partial cost recovery from the beneficiaries are now generally under way. The ultimate goal is to gradually minimize the need for foreign input to "facilitate the realization of the villagers own development efforts in a sustainable way".[2]

The three HESAWA regions—Kagera, Mara and Mwanza—together cover an area of some 70,000 sq km comprising a human population of 4.5 million. Out of the more than 1 500 villages in the three regions, there are today ongoing HESAWA activities in some 300 villages.[3] Naturally, the programme does not operate in a uniform way throughout this vast area of activity, but has adapted its focus to fit local circumstances. However, one general activity within the programme has been to construct special sites for washing of clothes in the vicinity of water sources. This has been done primarily in order to alleviate women from some of their workload, but also with an eye at the hygienical advantages of concentrating waste water at safe distances from water sources. The washing sites, known as washing slabs, are of a fairly simple design and mostly consist of an elevated surface casted in cement some 8 to 10 metres away from the water source.

Two problems have emerged in relation to this activity. Firstly, although villagers in many cases have planned and districts have budgeted for the construction of washing slabs at newly developed shallow wells or other water sources, few of these have actually been constructed. Secondly, it has been widely felt, both within the HESAWA coordination office and among the district authorities concerned, that a large number of the washing slabs constructed have remained little in use. It was therefore agreed that "a study should be undertaken to assess the demand for washing slabs" and that " special attention should be paid to women's attitudes to slabs of different designs".[4] An anthropological consultant to perform this was brought in through the cooperation the Section for Development Studies, Stockholm University, and the Terms of Reference for the study established.[5]

Study design and methods

The study was performed during January 13 through February 13. The choice of this period proved to be timely as the spring rains had not yet started and attention could

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[2] Brief on the Hesawa Programme. Zonal Office, 1991. p. 7.

[3] Brief on the Hesawa Programme. Zonal Office, 1991. p. 6.

[4] Tanzania HESAWA Rural water supply, environmental sanitation and health education programmes in Kagera, Mara and Mwanza regions Agreed Minutes between PM & 1st VP and SIDA. November 14, 1990. § 3.6.1.

[5] See Appendix 2.

therefore be paid to some of the particular dry-season problems. Towards the end of the study, however, the rain was sufficient to also provide illustrations of the conditions during the rainy season.

While the terms of reference stipulate that field work should be conducted in three districts, one in each of the three regions, the logistical support for the study was so good that the time-frame allowed a fourth district to be added. Prior to the first week in the field an agenda to be followed in each one of the districts was developed and discussed with the district staff that collaborated with me.[6] The agenda was subsequently modified to fit the special condition in each one of the districts.

The methodology relied upon throughout the study borrows from both Rapid Assessment Procedures (RAP) and Participatory Rural Appraisal (PRA). The focus of RAP/PRA methods is to provide reliable qualitative data in a short period of time. The techniques employed—open-ended interviewing, transect walks, participatory mapping, key-informant interviewing, household observations etc.—are generally not able to produce reliable quantifiable data. That, however, is more than well compensated for by their capacity for eliciting trends in decision-making, attitudes, culturally based values and other "soft" aspects of human behaviour.[7] To provide some data that would allow for statistical treatment, a questionnaire for household interviews was developed and directed to a non-random sample of 48 households (see Appendix 1).

The RAP/PRA methodology draws upon techniques that originated in academic anthropology but that have been further developed to fit the data-generating needs in development programmes. PRA in particular is not just a set of techniques for studying people, but is also a way of involving people into the study and planning process. The potentials for further employment of PRA within HESAWA appear splendid. It has some similarities with the so-called Problem-based learning approach that has already been utilized within Hesawa.[8]

A major constraint on this study as a whole is the fact that I do not speak Kiswahili, nor any of the other languages used in the Lake Zone. All interviews had thus to be performed through an interpreter. A partial compensation for this was the skill and devotion of the HESAWA staff who collaborated with me in the field. My personal aim was originally to cover at least 3 villages in 3 districts. However, much due to the ingenuity and diligence of my HESAWA counterparts a total of 21 villages have been covered.

Ideally a visit to a village was structured in the following way: We arrived at the village office and signed the visitor's book. If the village had been alerted prior to our

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[6] See Appendix 4.

[7] Mascarenas, J. et al. 1991. Participatory Rural Appraisal: Proceedings of the February 1991 Bangalore PRA Trainers Workshop. RRA Notes, No 13.

[8] School Health Sanitation Package, Developed by Dr E. S. Mwasha, Amref Health Advisor for HESAWA, Revised edition with short term evaluation results. Zonal Office, 1991.

arrival we were usually met by a delegation consisting of village chairman, village secretary, village health workers, village craftsmen and women from the different sub-villages. Following a brief discussion with these people in which the purpose of our visit was made clear, we asked them to collectively make a map of the water resources available in the village, the seasonal constraints upon these and the places were it was possible to wash. Having initiated this we left them on their own. The benefit of that was that with the village officials occupied with the mapping, household interviews could be conducted in a more relaxed way than if the chairman or secretary was present.[9]

We requested the assistance of one woman and then went for a transect walk through the village. While walking I made a rough sketch of all water related activities and constructions we encountered and we stopped occasionally at households and water sources to interview people or to discuss things we had observed with villagers we encountered. After 2 or 3 hours we returned to the village office and discussed the map that they had drawn. Based on the information of the map we then selected one or two additional sites to visit in the village, thanked those who had drawn the map and went off to the selected sites. This final selection of sites to visit was usually done in order to check up things that remained unclear.

While this was the basic pattern several departures from it was made. In the Bukoba Rural district it turned out to be unnecessary to map the villages due to the local conditions. In Bunda district the villages I visited had so few water sources of any kind that it was possible to visit them all and perform household interviews in the vicinity of each one of them. In Kwimba district the District Promotion Officer had already initiated participatory mapping exercises in the villages and therefore those maps could be used as a point of departure for discussion. Some villages in all regions have such a dispersed settlement-pattern that walking through them was simply too exhausting. In such places we omitted the transect walks and concentrated on the household interviews.

In some villages we arranged to have groups of various kinds assembled in order to conduct focus group discussions. Often such groups assembled themselves spontaneously while in the process of conducting a household interview. Neighbours and by-passers would join in, and frequently I found that what had begun as a household interview ended up as a neighbourhood assembly. The only disadvantage of that was that it often required great efforts to allow the women to express their opinions. [10]

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[9] The major disadvantage of having village officials present when interviewing household members was that it tended to muffle the women. In Kwimba district where the village officials partook in several interviews, it happened too many times that the interview with a woman developed into a discussion between her husband, the chairman and a male member of my field team.

[10] As Drangert observes "the view that women should not raise their voices in the council or in the village assembly is strong... even highly verbal and aggressive women behave in a very traditional fashion in the context of otherwise all-male committees, speaking only when directly questioned". J.O. Drangert 1991, "Enough water during most of the year or water scarcity during part of the year - a description of the same

The districts studied

The field study was carried out in Magu and Kwimba districts in Mwanza region, in the Bukoba Rural district in Kagera region, and in the Bunda district in Mara region. These four districts, as well as the regions where they lie, vary markedly with respect to, e.g., agricultural profile, ethnic composition, natural water resources and also in how they have responded to HESAWA activities.

Magu district is located immediately south of Lake Victoria. It has 310,000 inhabitants and receives an average of 750-800 mm of rain, although rainfall in the area is known to be extremely erratic.[11] The main crops are cassava, cotton and maize and average farm sizes between 2.9 and 3.7 hectares. Most households also have livestock and for several villages fish from the lake constitutes an important ingredient of the daily diet. The average household size—a variable of considerable importance for washing practices—is in the national census given as 6.4. In my sample of households in this district the average size was 6.0.

Kwimba district, the southernmost of the HESAWA districts, has a population of 428.000 people. Rainfall is slightly higher than in Magu, or 800-900 mm per year and is also more reliable. The main crops are cotton, sorghum and cassava but many farmers also have substantial cultivations of legumes. Farm sizes vary between 2.5 up to as much as 6.0 hectares and the holdings of livestock are slightly higher than in Magu. The average household size is 6.7. In my sample from this district the figure was lower, but I worked in wards that are listed as having a smaller household size in the national census too.

Bukoba Rural in Kagera region is very different from all the other districts I studied. The population is 344,000 and the average annual rainfall may reach 3000 mm, well distributed over the year. Bad years in Bukoba rural rainfall may drop to 1200 mm. Extensive cultivation of commercial crops like banana and coffee has contributed to a noticeable higher economic standard for households in this district. This is something which also appears to influence washing habits since people in this district gave the impression of possessing more clothes than elsewhere and also reported to spend more time on washing. It should also be noted that traditional descent-based divisions have contributed to an

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problem but leading to different solutions. The case of household water in rural Sukumaland in Tanzanaia. Unpublished ms., chapter 8 p. 15.

[11] All figures in this section are, unless otherwise stated, drawn from *Lake Zone Regional Physical Plan, Main Report 1.* Ministry for Lands, Housing and Urban Development, 1982., and *1988 Population Census: Preliminary Report.* Bureau of statistics, Ministry of Finance, Economic Affairs and Planning. Dar es Salaam.

incipient stratification of the economic standing of households.[12] This can be observed in the comparably low average size of farm holdings: 0.7 -1.2 hectares. On the whole, my impression from this district was that the average household size was rather big. My sample has a mean value of 10.0 members with a standard deviation of 2.0. However, in the national census the average household size is given as 4.5 with even lower figures for some of the wards that I visited. Since my sample is a non-random one it is tempting to attribute the difference to this fact. However, it is also possible that the difference stems from a divergence in definitional procedures; a large number of households live in more than two buildings, sometimes at some distance from one another. It is easy to overlook the fact that they still constitute a united group of labour and solidarity.

Bunda is the ethnically most heterogeneous district that I visited. The 201.000 inhabitants of this district are distributed among more than 20 ethnic groups. The production profile resembles that of Magu with maize, cotton and cassava as the chief crops. Annual rainfall rates are slightly higher or 800-1000 mm. While the average household size is 7.1 it deserves to be noted that the top figure for the district is 8.9 and the lowest figure only 5.7. This variation seems attributable to the blend of different ethnic traditions in the area. In the villages that I visited it was not uncommon for people to have to walk 45 minutes to get to the nearest water source.

Why washing slabs?

Washing slabs were introduced in the HESAWA programme mainly in order to minimize the need to carry water across great distances, thus alleviating the workload of women and other household members engaged in water collection.[13] In the rural regions covered by the HESAWA programme, the predominant technique for transportation of domestic water is to carry it in buckets or other vessels on the head. In comparison to other ways of manual transportation of water this technique implies fewer health hazards. Still, as for all types of repeated heavy lifts, carrying water on the head is known to cause early ageing of the vertebral column and may, when combined with hereditary factors, lead to the acquisition of a degenerative rheumatism known as arthrosis in either the cervical, thoracic or lumbar columns. The most common effect of arthrosis is the limitation of flexion at an unexpectedly early age, thus depriving households of labour.[14]

For children, who are also frequently engaged as water carriers in all three HESAWA regions, the main problem associated with carrying water is the impact it has on the growth

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[12] See Birgitta Larsson, 1991. *Conversion to Greater Freedom? Women, Church amd Social Changein North-Western Tanzania under Colonial Rule.* Uppsala: Almqvist & Wiksell International.

[13] Brief on the Hesawa Programme implementation performance during 1990/91. p. 3.

[14] Dufaut, A. 1988. Women Carrying Water: How It Affects Their Health. Waterlines, Vol 6, No 3, pp 23- 25. Curtis, V. 1986. Women and the Transportation of Water. Intermediate Technology Publications.

of their bones. When children begin to carry water they are still growing and a deformity known as scoliosis of the vertebral column may occur.[15]

An additional, and important, motive for the construction of washing slabs is to be found in the HESAWA programme objectives for environmental hygiene. One may particularly note the ambition to protect water sources and secure reliable drainage of waste water at safe distances from water sources.[16] However, it should be pointed out that the sanitary benefits of washing slabs on the whole have remained little observed within HESAWA. With the exception of a couple of villages in Kwimba district, washing slabs are invariably constructed without drainage and often far too close to the water sources they should be protecting. Many washing slabs that I have seen have been constructed uphill in relation to the water source. That seems extremely unwise unless the precise shape and size of the catchment area of the water source is known.

Regardless of these problems it deserves to be underlined that washing slabs *could* be an important activity in the HESAWA programme. Where washing slabs have been introduced elsewhere in Africa, they appear to have been met with appreciation.[17]

How the reasons for washing slabs are understood in the villages

It cannot be expected that the above "scientific" reasons for constructing washing slabs are automatically understood by the people intended to use them. In the HESAWA course files that I have consulted the subject is not directly touched upon,[18] nor were washing slabs mentioned in the Study Groups I attended, except as an explanation for my presence there.

In each of the 21 villages I have visited I have attempted to assess how the villagers viewed the reasons for having washing slabs. This was done both during longer interviews with individual household members, in focus group discussions with selections of different categories of villagers, and in more casual, conversational format at water sources and sites for washing. The issue was also brought up at the district level in discussions with Maji engineers and technicians, Maendeleo technicians and HESAWA technicians. I approached

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[15] White, G. F., Bradley, D. J. and White, A. U. 1972. Drawers of Water. University of Chicago Press.

[16] A good summary of basic principles of environemntal hygiene in East African water programmes is given by ERik Nordberg and Uno Winblad, 1990, Environmental Hygiene in Sida-Supported Programmes in Africa. Review and Recommendations.

[17] See e.g. Peter Morgan, 1990, *Rural Water Supplies and Sanitation.*London: Macmillan, pp 241-243.

[18] The only exception I have found is in the HESAWA Concept Course, Participants Manual where there is an illustration by Oscar Makoye between p 14 and 15 showing women drawing water from a well and a woman washing at a slab.

the issue both as a direct question ("why do you think that washing slabs are important?") and more indirectly by asking people to rank water use for different purposes, describe and rank the workload in the different phases of washing clothes, and also, in some cases to rank according to their personal priority the different HESAWA activities with which they were familiar.

In the ranking of water use, washing of clothes rarely ranked higher than as the fourth or fifth most water requiring chore. The average ranking is that cooking requires most water followed by water for drinking (including that used for the production of local brew). Then comes the water required for washing of hands which, however, was mentioned as a specific category of water use only in Bukoba rural. In the other districts water for hand washing was included in water required for personal hygiene, the third category in those districts and the fourth in Bukoba rural. After that comes the water for washing of clothes. Sometimes the water required for washing of cooking utensils was mentioned as a specific category, either preceding that required for washing clothes or following immediately after it. Although these are subjective estimates it is interesting to see that they have some correspondence with detailed studies of actual household water consumption carried out in comparable parts of rural Eastern Africa. [19]

The conclusion that can be drawn from these ranking exercises is that nowhere in the districts I have visited is washing of clothes seen as the most water consuming household activity. On the contrary it is a type of activity that can be (and that frequently is) postponed when other tasks needs attention or when a single available water source is at risk of running dry. One may therefore suspect that the ambition to ease the burden of carrying water by building washing slabs appears misplaced from the perspective of villagers estimates of their own water use.

In another type of ranking exercise, villagers and technicians connected to the programme were asked to rank different HESAWA activities. In these rankings washing slabs always came out as the least important one. Shallow wells (or domestic points) usually rated as the number one priority, closely followed by improvement of traditional water sources. Rainwater tanks and latrines were seen as slightly less important than the preceding two activities but last of all came the washing slabs. Significantly, in some cases the villagers even forgot to mention the washing slabs, although they were aware that was my major topic of inquiry. This attitude is understandable given the fact that so little information on the potential benefits of washing slabs have been provided. It should also be noted that among those villages in the four districts that most recently had been phased-in within the HESAWA programme, it was explicitly said that an increase in the number of water sources must have priority over any other activities.

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[19] Cairnoss, Sandy. 1987. The benefits of water supply. Developing World: Water. Hongkong: Grossvenor Press International, p.p. 30-34.

In three of the districts I have studied (Magu, Bukoba Rural and Bunda) the technicians and others within the District Councils made it quite clear to me that they perceived of the washing slabs as the least important of all HESAWA activities. Partly, this view seemed to stem from the fact that, according to their impressions, many washing slabs erected had remained little in use.

The most clear illumination of a discrepancy between the HESAWA intentions with washing slabs, and the comprehension of those intentions in the villages, came out in response to the direct question concerning why washing slabs are important. When such questions were put to men with some kind of leading position in their villages I was often given very elaborate but entirely misleading answers. One village chairman said:

> education and training are part and parcel of development. Given the proper input of training and over time I am sure we will be able to convince are women to use the washing slabs...

In another village I was told by a ten-cell leader and HESAWA committee-member:

> we have learnt that HESAWA brings health by supplying clean water and providing our village with sanitary facilities. Without protecting our water from waste we cannot have health. Washing slabs are part of that.

Neither of these two men had ever seen a washing slab with a proper drainage installed. The second man lived in a village in Magu district where it turned out to be prohibited to wash at at least one of the washing slabs due to the hygienic problems the washing slab was felt to cause. The tone of the above statements, it can be noted, is rather official and declamatory. One should also observe that they fail to give any mention of the fact that women washing at a washing slab in the vicinity of the water source, is relieved from some of the burden of carrying of water. A third man, while acknowledging that washing slabs are for the women, did so in a most indirect way:

> it is customary among us that women collect the water, therefore the water sources can be said to be for the women. Since a shallow well is not complete without a washing slab, the washing slabs are for the women too.

On the other hand, women that were questioned on the merits of constructing washing slabs naturally mentioned the partial relief of the water burden as the chief benefit. The fact that this readily understood opinion has not become part of the men's rhetoric is indicative of that women to a large extent are left out of the planning process—even regarding activities that are of the utmost concern to them.

In summary, it appears that at least many of the male villagers have not really understood what problems washing slabs are meant to address at all. It cannot be excluded that decision makers on the village level, the majority of which are men, think that some hidden health motive is the rationale for the washing slabs. One may also suspect that such village leaders believe that all aspects of the HESAWA programme have to be accepted or at least paid lip-service to, lest one should loose the parts of it that are genuinely desired.

Washing habits

The study has generated a good understanding of the different techniques for washing of clothes employed in the different districts. It has also assembled data to illustrate various constraints on washing behaviour and, furthermore, attempted to relate such data to utilization patterns of washing slabs. The basic question underlying these efforts was to see whether any of the following factors could influence negatively the use of washing slabs:

working position
techniques used for washing and drying
water use
location
privacy needs
conflict with other activities
division of labour

Throughout the villages I have visited there are big similarities in the traditional techniques for washing. Washing is mostly done in a low, bowl-shaped metallic basin or a similar plastic vessel that is placed on the ground. Buckets and other vessels may be added according to availability to facilitate simultaneous rinsing or soaking of clothes. Local or Ugandan imported soap is used as a detergent. The **working position** most commonly observed is to stand in an upright position with straight legs and bend the back so that the hands reach the vessel. While this looks uncomfortable it is a working position employed for many other household chores as well. Many people also sit down on a stone or small stool while washing. In several villages there exist special washing sites next to water sources of various kinds. They may consist of a stone or a stub or simply be an area where to place one's basin. For drying clothes are usually appended to trees or bushes in the vicinity of the place where one has been washing. If the site is clean they may be spread on the ground. Many homesteads have put up lines in the yard to serve this purpose. Although the working positions employed in traditional washing are rather different than that required at washing slabs that was not felt to be a major problem by any of the informants

questioned (except concerning washing slabs of an older type in Magu district, cf next section). A related problem that was often mentioned, was the lining up to wait for one's turn at a washing slab. This may cause a disturbance for the women already washing as they may feel that they have to hurry. When washing in a traditional way I have seen that women frequently pause to stretch their back or to temporarily engage in **other activities**. Women in several villages have suggested to have more than one washing slab at each site.

Elderly people I spoke to claimed generally that the **washing habits have changed** since they were young. The major element of change appears to be that people nowadays have more clothes. "When I was young", a 70-years-old woman told me, "I had only two pieces of clothing. When could I wash them? I had to go to the pond at night when nobody could see me naked." Some women also mentioned that when they were young they had not been allowed to go on their own to the water sources for the extended periods of time needed for washing.

One factor that revealed a certain influence on the washing behaviour was the **household size** and age composition. A woman in a family with infants and small children but without children in school ages appears less likely to wash outside of her home. The reason is the **conflict with the needs to attend to the children.** The size of the household also has an importance for how often people have to wash. Throughout the regions, Saturdays are commonly devoted to washing. However if the household is big there is often need to wash several times a week. In my sample of households 38 % reported that they wash once a week, another 38 % wash twice a week, and 24 % wash three times a week (see figure 1). The district with the greatest divergence from this pattern was Bukoba Rural, where it was common to wash more at the same time rather than several times a week. In my sample of households from that district 57 % washed once a week despite the fact that the households I encountered there where much larger than elsewhere. A probable reason for this is the relatively higher economic level of many households in the district which in this connection could mean that they have more clothes and hence more easily can postpone washing.

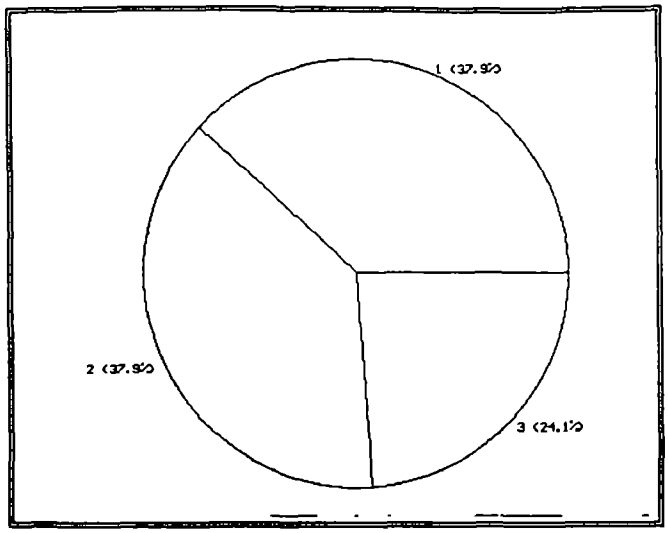

Figure 1. The number of times per week that households wash clothes.

Throughout the Lake Zone washing is an activity which is the responsibility of the adult women in the households. However, that does not mean that they are the only people washing clothes in their households. On the contrary, children of both sexes are expected to help in washing and sons will be expected to continue doing so until their marriage. Even married men prefer to wash their underwear on their own, usually in connection with bathing. Nevertheless, the bulk of the washing in a household tends to be the task of the mother or one of the married women. Children and boys, to a larger extent than women and girls, **combine the task of washing their clothes with attending to their personal hygiene**. This means that the sites they choose for washing purposes, frequently will be of another type than that used by their mothers. However, where other persons then the women perform washing for the household, they are usually not expected to wash more than their own clothes whereas the adult women of the household are responsible for the clothes of all members. The distribution of the responsibility for washing as it appeared in my sample of households is given in figure 2.

It was suggested to me by several people in the HESAWA programme that villagers in some areas may resent sharing washing slabs with others. To protect their **privacy** and/or to make sure that dirt of others do not enter into one's own laundry, it was said, people would refrain from using the washing slab. While I have attempted to examine this issue in both direct and indirect ways, I have not come across any firm support for it. It may well be that the requests for several washing slabs at each site represents, in hidden form, such sentiments. A further possible indication in that direction is the fact that nowhere where I saw washing slabs in use was there more than one person at a time who was washing. However, on the whole it does not appear as if privacy needs have any influence on the use of washing slabs. An exception is that underwear is usually washed individually by the person it belongs to while carrying out personal hygiene.

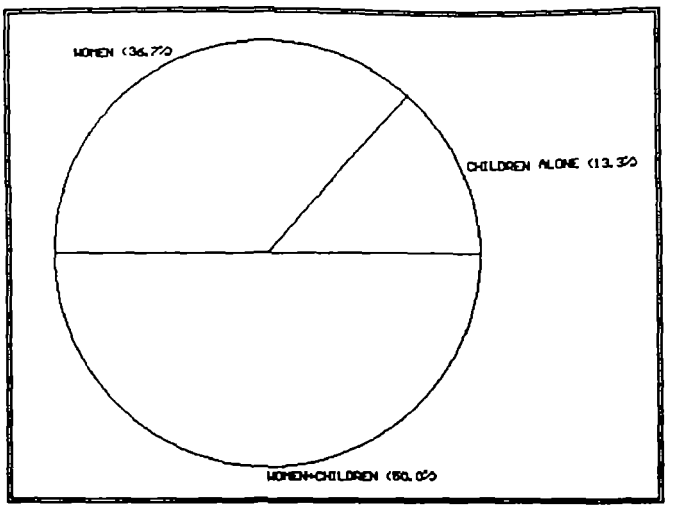

Figure 2. The distribution of the responsibility for washing of clothes on different household members.

A more complex issue is that of **water use**. In traditional washing carried out at one's home, very small amounts of water are needed. A major problem both in Magu, Kwimba and Bunda districts is the limited water supply, and several informants said that the best way to economize with water was to wash at home. In that way the water use issue is related to the **selection of location** for washing. The Sukuma people which is one of the groups inhabiting these districts, have traditionally divided water sources into different types,[20] based above all on the quality of the water. The best water sources are to be used for drinking and cooking, the second best for washing purposes, the third best for the animals and for those families in which someone has recently died. Even today, in both Magu and Kwimba districts, when the users of a water source begin to experience that the supply of water is not sufficient it is very common to reach agreements on a neighbourhood basis not to use that water for washing purposes. Sometimes, but not always, such agreements are written down as part of the bylaws for that water source. Both in Magu and Kwimba such agreements have been reached also concerning shallow wells where washing slabs have been constructed. At one washing slab in Kwimba, women were drawing water from a distant pond to wash at the washing slab next to the shallow well. This problem could be amended if surveys were exclusively carried out during the dry-season, when the groundwater-table is at its lowest levels. As it is now, this is not always the case. If local users were consulted before the construction of a washing slab began, they could provide information on which water sources that are used for washing and which that are not. Such

[20] Cf J-O. Drangert, 1991. "Enough Water during most of the Year" or "Water Scarcity during Part of the Year" - A Description of the Same Problem, but, leading to different Solutions. The case of Household water control in Rural Sukumaland in Tanzania. Unpublished paper. Department of Water and Environmental Studies, University of Linkoping, Sweden.

information, I found, was not always available to the Village Government. (See also the section below "Washing sites and water sources".)

Even at water sources that have a sufficient water supply for washing purposes one can often find direct prohibitions for washing in the vicinity of the source. The reasons for this are a little bit different in the different districts I have visited, but they all relate to real **or felt dangers for the environmental hygiene**. Wells and water sources affected by such prohibitions also include many where washing slabs have been constructed. The clearest articulation of such feelings were in Bunda district. Several of the shallow well caretakers that I met with stated that they on no condition would allow anyone to wash in the vicinity of "their" shallow well. At least in Bunda and in Magu, this problem could easily be avoided if people in the neighbourhood were consulted prior to the construction of a washing slab. It seems reasonable to recommend a minimum distance of 50 metres between washing slab and water source but, again, this would have to be worked out in agreement between caretakers, craftsmen and technicians, and the users. A major task in the participatory mapping exercises that we convened was to provide information on where it was allowed and not allowed to carry out washing of clothes. These maps were of immense value and a selection of them are reproduced at the end of the report. It would seem that some simple mapping technique such as the one used in this study easily could serve to involve local people in the planning process. However, if this is done, it is essential that facilitators make sure to have women partaking in the exercises.

Comments on the sanitary dangers of washing slabs were made to me in several villages in Magu district. It was pointed out that when washing children's diapers, some women would simply throw the excrements next to the slab. This is probably a reflection of the widely held belief that children's excrements are harmless. A special problem concerning environmental hygiene exists in the villages of the Bukoba Rural district where domestic water is supplied through gravity schemes. In these villages it is held that soap-water is detrimental to the bananas and since domestic points almost invariably are built close to the banana plantations, there is a general prohibition on washing close to the domestic point.

According to agricultural expertise that I have consulted,[21] there are good reasons to believe that the women in the Bukoba Rural district who told me this are correct in their supposition. Soap contains large amounts of Potassium which is known to have a negative influence on the ability of organisms to absorb Magnesium. Lack of Magnesium in plants may cause damage to the roots. It is also interesting to observe that the ban on soap water in banana plantations was unknown to all the locally employed male members of the

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[21] Personal communication with Dr Chris Bosh of the Tanzania/Netherlands Farming Systems Research project in Bukoba. The finding that soap water was locally regarded as detrimental to bananas has proved to be an important piece of information for the continued research on the farming systems in Bukoba, see Appendix 3.

agricultural research team I consulted. This seems to be yet another example pointing to the need to anchor firmly all HESAWA activities related to washing among the local female users.

Summing up, it seems that the major aspects of washing habits that influence the use of washing slabs are, as it were, situated outside of the household. While many people would like to use washing slabs they are unable to do so because these have been built at water sources where local regulations stipulate either a restriction of water-use, or where washing is prohibited to prevent environmental pollution. However, there is nothing inherent in the traditional techniques employed for washing that prevents these to be located to washing slabs.

The different designs of washing slabs

Throughout this study attention has been paid to several aspects related to the actual design of the washing slabs. I was interested to know both how the different designs were experienced by the people using them and by those that were building them. during field work I was also became acutely aware of that the different designs varied considerably with respect to sanitary effects. From the perspective of users, it appears that the design of washing slabs is of lesser importance than its location, as discussed in the previou section. Washing slabs of all the different designs described below are being used. However, where people have seen several types, they generally prefer the ones that allow for an upright working position.

In the districts visited I have encountered washing slabs of 5 different types constructed within the HESAWA programme. The table below summarizes the features distinguishing the different types. The comments in Table 1 below are both those of villagers, technicians and craftsmen, and my own observations.

In addition to the types mentioned in table, I have seen 2 washing slabs constructed outside of the hesawa programme. In Rubale village there is a 4 x 2 metre slab, approximately 80 centimetres high that was constructed during the 50's with a sophisticated drainage system. Since the water scheme to which that slab belonged is no longer in operation, but has been replaced by a gravity scheme within the hesawa programme, that slab is no longer in use. Many elderly villagers that I spoke to, said that they were interested in the type and could well think of constructing similar types closer to the new domestic points. (That, however, appears to be out of the question due to the special problems imposed by the vicinity of banana plantations.) In a guest house in Bunda town a washing slab similar to that in Old Rubale but somewhat smaller has been built on the premises.

Table 1. The five types of washing slabs studied.

Type of washing slab	Negative comments	Positive comments
1. Circular block of cement, 50-80 centimetres high, ø 80-100 centimetres. Design originated in magu district but is no longer constructed.	Working position uncomfortable; to high to sit down while washing but also to low to facilitate an upright position. Has no runoff, waste water soaks surrounding ground.	Easy to construct, can be made by a ring of concrete that is filled with stones and topped with a cement surface
2. Table-like with two basins casted in cement. the washing surface is 200 x 80 centimetres, usually about a metre high and with a slightly elevated brim. This is the type now built in magu. it may be said to be an uncompleted type 3.	The majority of existing washing slabs lack outlets from the basins. Waste water and rain water will remain. Those that have outlets lack proper runoff, the waste water seeps out and hit the ground and feet of the person washing. After a few person have washed the site becomes soaked and muddy.	Facilitates a comfortable upright working position
3. Table with two basins casted in cement. working surface is 200 x 80 centimetres, usually about a metre above the ground. the brim is elevated. waste water is led off in a pipe from each basin into a cement drain. This type exists in kwimba. the design was copied from a NORAD project in Kigoma. See sketch in Appendix 7.	Pipes can get stuck by cloth or debris. The washing slabs of this type requires higher input of labour to construct. In some cases they remain incomplete, resembling a type 2 washing slab.	Facilitates a comfortable upright working position Provides a clean washing site, very much in favour among villagers acquainted with the type.
4. Table without basins, with slightly elevated brims. openings at each corner serve as outlets for waste water. working surface approx 1 x 2 metres, 0.6 - 1 metre above the ground. This type dominates in the bukoba rural district.	The absence of basin means that washers have to bring their own vessels from home. Most washing slabs of this type are too low for adult users. Few washing slabs of this type have horizontal surfaces which means that all waste water passes out through one of the corners.	
5. Circular block of cement, resembling type 1 but much larger. ø approx. 1 metre and at least one metre high. Some washing slabs of this type exist in the bunda district.	Lacks proper runoff, waste water assembles at base of the washing slab.	Facilitates a comfortable working position. Can be built rather fast.

Discussion of the different types of washing slabs

One type of washing slab was very strongly condemned by users and constructors alike. in the table above it is referred to as No 1, or "the old Magu type". The design is said to have been abandoned on the expressed demand of the women trying to use it and I met several women who had experience of both types and quite explicitly explained that they preferred the type with two basins.

Type No 4, the flat table design chiefly found in Bukoba, is curious. While I did find several women washing at the sites where washing slabs of this type had been built, only one of them were using the washing slab itself, while the others preferred to use their plastic basins that they had placed on the ground next to the washing slab. The reason is, as mentioned in the table above, that most washing slabs of this type have an insufficient height to allow for an upright working position. Women therefore prefer to perform washing on the ground where they can either sit down or stand with straight legs and bent back. Children in the area, however, appeared to find the washing slabs suitable for their washing tasks or to sit on while waiting for their mothers to complete the washing elsewhere.

Type No 5 appears to be used wherever they have been constructed in villages in Bunda district but it appears doubtful whether further washing slabs of this type will at all be built.[22] The resistance against potentially polluting activities near water sources is quite compact in the three villages that I have had the chance to visit in this district. at the district council this resistance has been duly noted, and at presently there are no plans to construct any more washing slabs, not even those that are already budgeted for.

The only type of washing slab that I have found to be completely satisfactory both from the users perspective and from the perspective of environmental hygiene, is the type now built in Kwimba district in at least two villages—No 4 in the table. The only difficulty with it is that it is slightly more complicated to construct than the other types, there is a risk that washing slabs of this type remain incomplete and that the drainage is actually never constructed. This observation was made by the users themselves, who also added that it would be good to have the washing slab equipped with some kind of plug for the holes in the basins. Nevertheless, even if the design of this washing slab leaves little else to be wished for, the problem of its location remains. Several washing slabs in the Kwimba villages that I visited had been located to shallow wells were washing was not carried out due to the scarcity of water.

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[22] It was sometimes difficult to see whether or not a washing slab was used or not. The easiest way I found was to simply taste a straw of grass from beneath the washing slab. Even if rain had removed all stains of soap, the taste of it would still remain.

Washing sites and water sources

One should note that, throughout the programme area, there are sites close to water sources that traditionally have been used for washing purposes. Often such sites look insignificant and would hardly be detectable unless they were pointed out. Although such sites are frequently used, they often, but not always, give a tidy impression, in particular when compared to the muddy ground surrounding many washing slabs. It is unfortunate that the programme has not made use of the sites that already exist for washing when constructing washing slabs. The concept of **washing site** need also to be introduced to the HESAWA programme in another sense: it is essential that no further washing slabs without a proper drainage are built. It is to a large extent the fact that washing slabs have been seen as polluting which have led to the sometimes low rates of utilization.

Traditional washing sites are of many types. One can often see spots next to water sources where the grass is short due to frequent walking. Sometimes a stone or a dead tree may serve as working surface. A particular vivid illustration of these washing sites was given by a young girl carrying laundry on her head. As we encountered her I asked were she was going. Having heard from others of our visit to her village, and the purpose of our stay, she replied: "to the washing slab that God has brought". We followed her and it turned out to be a stone next to an unimproved traditional water source. One may suspect that from a hygienic and cost-efficency point of view it could often be preferable to have a drainage added to such sites rather than to construct an entirely new washing slab.

It should be observed that the rules or bylaws against washing mentioned above are not just something that applies to recently constructed water sources. Even for unimproved traditional water sources such rules are sometimes in effect. Among the Sukuma groups in Mwanza and Mara regions there is one type of water source which is subjected to particular attention. In Kisukuma it is called (phonetically) *ruinsirukuro* and villagers generally resist to have them improved. These wells are believed to be connected to the ancestral spirits and often a set of rules for their usage and maintenance is strictly enforced. I was told that, for some wells of this type, it is not possible form men to clean them. If they do, the well may dry up. For similar reason villagers are often hesitant to have constructions in or nearby such water sources. A belief of similar kind exists among the Haya groups in Kagera. Some traditional water sources are said to host spirits that may reveal themselves in the shape of different animals, e.g. as serpents or leopards. A HESAWA technician told me how they had once been requested to catch a snake an keep it safely while improving a traditional well. Once the construction work was over the snake was placed inside it.

It is important to keep in mind that although this study has only touched superfically upon the cultural beliefs related to water use, such ideas exist and sometimes play a role in how people respond to the introduction of HESAWA activities.

The planning process and the backlog in production

Whether or not each new or rehabilitated water source should be provided with a washing slab has been subjected to debate within Hesawa. In the Budget Manual for the Fiscal Year 1989/90 this is said to be desirable. In the Budget Manual for the next fiscal year this is not said explicitly. It is only in the Budget Manual for the current Fiscal Year (1991/92) that it is explicitly stated that washing slabs should be constructed on the expressed demand from villagers only.

One should also be aware that the persons on the district level who are in touch with the villagers, are not always the same persons as those that have read the Budget Manual and who finalize the district Hesawa budget proposals.[23] There is therefore a certain inertia in built into how new directions in budgeting reach out to the villages. In every district I have come across villages in which plans have been made for washing slabs that they never intended to construct. The sole reason why such plans had been made was the desire expressed in the 1989/90 Budget Manual for a washing slab to be built whenever a new water source had been constructed or rehabilitated by Hesawa. In every village where I enquired as to why they had planned for washing slabs they did not intend to build, the answer was similar: we were told to! The enormous backlog of washing slabs should be seen in this perspective. For the future, it is essential that all affected staff on the district level are informed of major changes in the budget manuals. Judging from my discussions with different district officials and a careful study of approved budgets for the past three fiscal years, the change of policy for washing slabs has not yet penetrated the districts.

In these senses the and poor production accomplishments can be said to be an artificial problem, caused by a top-down approach that bears little resemblance with the HESAWA goals of acting like a catalyst to further local participation in development planning and implementation.[24] On the contrary, by demanding that villagers plan for activities for which they have no desire one could easily in the long run create an unfortunate split between the rhetoric and the reality of the HESAWA concept.

It is also important to remember that washing slabs are an activity within HESAWA that have been planned for by men in order for women to use. It would appear more rational to have women to plan for the facilities that in the majority of cases are going to be used by them.

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[23] Commenting upon the bad performance rate in Bukoba Rural with 1 out of the 40 planned washing slabs constructed, the Maendeleo department have inserted the following comment in the Annual Review for 90/91: "The construction of Washing slabs depends on the agreement between villagers and the agency".

[24] Brief on the Hesawa Programme. Zonal Office 1991.

Recommendations

1. The problems of the washing slabs within the Hesawa programme are indicative of more deeply situated difficulties in achieving the popular participation that is one of the programme's objectives. In particular it is essential to have resident users of both sexes involved in the planning of facilities that they are going to benefit from. A very simple way of doing that is to introduce some of the techniques known as Participatory Rural Appraisal. When these techniques were used for this study, valuable insights were generated (see Appendix 8).

2. The Hesawa programme as a whole must adopt a more flexible attitude towards the washing slabs. It is not something that "villagers should be instructed to accept" but something that women should be able to request according to **their** desire. It is not sufficient to change the formulations in the Budget Manual to accomplish this change of attitude.

3. The location of washing slabs to be built needs much consideration. The only way to ensure that washing slabs can be built at locations where they will actually be used is to involve the sub-village level in the decision making. That has not been the case so far. Cf recommendation 1.

4. It is imperative that washing slabs do not contribute to the pollution of water sources or in other ways become a threat to the environmental hygiene. The concept of **washing sites** needs to be introduced into the programme. A washing site, when requested by users, should be constructed at a safe distance from the water source from which water is to be drawn. It should consist of a drainage (similar to that used for leading of waste water from shallow wells), and a washing slab with at least two basins. Pipes of sufficient calibre should serve to connect the basins with the drainage. This will probably require some new modifications of the Budget Manual. One should also consider whether it could not sometimes be sufficient to provide places now used for washing with a drainage, without constructing a washing slab.

5. The prevailing opinion in the Bukoba Rural district that washing slabs destroy the roots of the banana trees must be respected. Until safe sites can be agreed upon, no washing slabs must be constructed in the vicinity of banana cultivations.

6. In districts where an attitude of suspicion and scepticism towards washing slabs prevails, e.g. Bunda, washing slabs should be constructed on a demonstration and trial basis only.

7. Technicians and craftsmen from all the Hesawa districts should be given to possibility to visit washing slabs of the type now existing in some Kwimba villages. Prior to such a visit the local HESAWA staff must check the washing slabs so that no debris is left inside the wastewater pipes.

8. If or when further washing slabs are to be constructed a simple check-list needs to be consulted prior to the initiation of construction work. The check-list need not be very elaborate but could have the following, tentative, appearance:

A. Check with at least two households next to water source where the washing slab is planned. Where do they wash? Is washing allowed next to the water source? If not, is there another water source in the neighbourhood where people do wash?

B. Select the location for the washing site. Under no conditions can washing slabs be allowed closer to the washing site than 10 meters, two, three or four times that distance is preferable. In general they should be built downhill in relation to the water source. Discuss the choice of site with local users, i.e. women.

C. Before construction work commences, plan for the drainage. Make shure that the ground next to the washing site is sloping so that wastewater will run off easily.

Appendix 1

The sample of households

This appendix provides a description of the sample of households to which I have referred throughout the report. Throughout the three regions 48 housholds were sampled using a non-random sampling strategy geared at selecting "typical" households. In the analyses, 18 of those households were removed from the sample, either because the interviews had not been conducted during satisfactory conditions, or because socioeconomic parameters of the households made them in some sense too extreme to rely upon. The remaining sample is of sufficient size to illustrate trends and patterns of relations between variables *within itself*. However, it does not necessarily mean that any such findings are valid for the Lake Zone as a whole or any of the larger populations from which the sample was drawn.

While the sample in general is to small to allow for any correlation analyses to be performed I have done chi square testing on so me of the variables that are mentioned in teh text. The only such test which yielded a statistically significant value was the cross-tabulation of the person repsonsible for washing in the household and whether or not washing is done at home:

	WASHES AT HOME		
WHO WASHES	+	-	Total
CHILDREN ALONE	2	1	3
WOMEN ALONE	7	4	11
WOMEN+CHILDREN	11	5	16
Total	20	10	30

Chi square = 0.08
Degrees of freedom = 2
p value = 0.96237386

The analysis suggests that when women wash together with children, they are more likely to do so at home. When, on the other hand, women alone are resposible for washing they are more motivated to perform the washing outside of their home. The fact that this also seems to be the case with children must be disregarded as the sample of households where children alone are responsible is too small. However, on empirical grounds it would appear justified as children were frequent users of the washing slabs in Bukoba Rural and often were found washing in streams and ponds in the other districts.

Appendix 2

Terms of Reference

STUDY ON WASHING SLABS IN THE HESAWA PROGRAMME

In the HESAWA programme one activity in connection with the construction of village water supplies has been to provide washing slabs close to wells and domestic water points. However, the village response to this activity has so far generally been poor and the slabs constructed in the programme area have in many cases remained little used. Since the construction of water slabs is considered as an important means to facilitate washing and minimize household transportation needs of water, it was agreed during the Annual Review, 1990, that a study should be undertaken to assess the village demand for washing slabs with special attention to the women's attitudes towards this activity.

The study shall be carried out by a competent social scientist, preferably a social anthropologist or sociologist. The tasks of the social scientist shall include the following:

Main duties:

To examine the attitudes to washing slabs that prevails both in areas where these have been constructed and in areas where they planned to be built. It is important that the collection of attitudes is framed in a broad way, including also more general issues relating to personal hygiene, and cultural ideas of water use.

The study shall also comprise detailed observations of washing behaviour and provide data on the division of washing tasks between different household members. The study shall also pay attention to the programme objectives relating to gender issues. It is important that this part of the study illustrates both ordinary methods of washing as well as those at the washing slabs.

The study shall rely on a mixed methodology comprising select informant interviewing, focus group discussion, field observations and time management analysis. It shall also make use of written reports and project documentation. The study shall result in a report and suggest guidelines for the future implementation of the activity.

Specific duties:

In consultation with the programme management, regions, and districts, select three areas of study, one in each of the three regions covered by HESAWA.

In each study area thus selected visit villages representing different responses to the washing slabs.

In each village, consult with proper representatives of the village government, village health workers and villagers/

At each site, convene focus group discussions with participation of the categories mentioned.

At each site, study household activities related to washing and discuss the issue with household members in informal interviews.

To have the selection of informants represent different age/gender categories.

The interviews should pay attention the a range of water handling issues such as personal hygiene, sanitary practices, cultural ideas of water and other topics related to the field.

Compare traditional ways of washing with those developed at the washing slabs with respect to women's attitudes towards slabs of different designs and with respect to time management aspects.

Analyze the pattern of decision making regarding the construction and use of washing slabs, and identify bottle-necks in the implementation of the activity at district and village levels.

The total time required for the study is 4 weeks, of which at least 3 are to be spent in the field.

A full report of the study results and recommendations is to be submitted to the programme management and the Development Studies Unit/SIDA within six weeks after the completion of the study.

Appendix 3

Correspondence

BUKOBA, 5/2/91

Dr Helander,
c/o BOX 604
MWANZA

Dear Dr Helander,

It is a pity we couldn't talk when you were in Bukoba. Thanks for your letter of January 31st.

In answer to your question about the prohibition of use of soap in the kibanja area I must confess that I was slightly surprised that in some 3 years I have been working in the district I never heard anything about it. I asked several male members of my team, all Hayas, about it and they thought it rather ridiculous that soap should not be disposed of in the kibanja. One female member of the team was however very outspoken and said that they use to do their washing in the little streams around their village. If rainfall is excessive and sufficient water can be catched washing can be done in the homestead but the soapwater is disposed of in the 'kibuga' (the path leading to the house). If soapwater is disposed of in between the bananas it is 'believed' that the bananas are poisoned, the roots drying up.

The explanation is rather simple. Soap contains considerable quantities of cations (either Sodium or Potassium). We have fair indications that the soil problems in the area are, apart from widespread Nitrogen deficiency, mainly imbalances in cations. High quantities of Potassium hamper the uptake of Magnesium leading to Mg-deficiency of which [illegible] of roots is a symptom. The fragile balance between [illegible] can easily be distorted. Na may play an important role as well. According to some of my colleagues and some soil scientists in other institutions, the proof I have to date is insufficient to underpin the statements on the cation imbalance. At present we are working hard to get proof and to see how these problems are spread in the area. Apart from the information you supplied me with, the lack of consistent results in fertilizer trials and the sometimes found yield reduction after applying Potassium fertilizer, and the [illegible] use [illegible] their kibanja, can all be explained by the fragile cation imbalance.

I hope this is a satisfactory answer [illegible] consulting me I would [illegible] me details on the [illegible] mentioned [illegible] report.

Sincerely,

Chris BOSCH

Appendix 4

Field agenda and list of questions

In each village:

Outline and map the water sources available. If local maps already exist, use them. Indicate seasonality.

Add to maps the position of places where laundry can be washed, including washing slabs. Indicate seasonality.

Have key informants (men/women) describe the quality and difference between the available sources.

What is good about the water from handpump/lake/ITWS etc? What can it be used for? What else is good about it?

Make one or several walks through the village together with informants and note all water related activities and installations such as washing of clothes and dishes, drawing of water, rainwater tanks washing slabs etc. Ask questions about everything you see. Take your time.

What is that good for? Why is it located here? Why does she wash her clothes there? Etc.

In some villages:

Make charts of seasonal farm and herding activities. Discuss optimal periods for implementation of HESAWA activities.

Visit sites where washing of clothes is performed (homes/lake/rivers/washing slabs/other). Observe how washing is done. Discuss different ways of washing. If at a WS discuss the construction of it and possible alternatives of design and location.

Spend a longer period of time at a site of each available type of washing facility. Measure the amount of water used by a selection of the women. If applicable, measure the slab. Take the weight of dry and soaked clothes. Note how clothes and/or water is transported.

Speak to people who constructed the washing slabs.

Why did you build it? How did you decide where to put it? Did you construct anything else in connection to the washing slab? Was the material sufficient?

Are washing slabs important and if so why? How do women (people) feel about the washing slabs? Is the washing slab used a lot? If not, why do you think

that is so? Where do people prefer to wash their clothes? Why? Would there be any alternative design or location of the slabs than the one used so far? In the future, will this village have more washing slabs constructed?

Discuss the issue of washing habits with representatives of village governments and persons engaged in HESAWA activities.

Are washing slabs important and if so why? How do women (people) feel about the washing slabs? Is the washing slab used a lot? If not, why do you think that is so? Where do people prefer to wash their clothes? Why? Would there be any alternative design or location of the slabs than the one used so far? In the future, will this village have more washing slabs constructed?

In households:

Whenever in someone's home, observe water storage facilities. Note also details such as whether the containers have their lids on, exactly how water is drawn from them while you are present, etc. Take note of any water related activity, even drying laundry.

Talk to elderly people about how washing used to be done in the old times.

Try to collect songs and proverbs that relate to washing habits.

Carry out interviews with household members. Select housholds according to h-p sampling procedures. Let the number of women be at least twice the amount of men.

See the separate lists of questions. This study will not require rigidly quantifiable data. Hence, the lists are more intended to serve as a reminder for the study team than to provide basis for statistics. Let respondents elaborate on issues they are intrested in. Be prepaired to follow up with questions about particular things they mention.

List of Questions to Household Members

Identification

1. Name of subvillage:.....
   Name of village:.....
   Name of ward:.....
   Name of division:.....
   Name of district:.....
   Name of region:.....

2. Name of respondent:
   Sex: M F
   Age:

3. Number of household members

	Men	Women
Over 50 years:	.....	
25 - 50 years:	.....	
15 - 25 years:	.....	
6 - 15 years	.....	
2 - 6 years	.....	
0 - 2 years :	.....	
Total :	.....	

Water management

4. Where does your family usually get its water? Is there another source, too? And another? (Include seasonal ponds, rivers, lake etc.)
   1 .....
   2 .....
   3 .....
   4 .....
5. What is the distance to these water sources? (In metres or minutes).
6. What is good about the different water sources? What else is good about it? (What can it be used for?)

	Distance	Quaility of water and what it is used for
1	.....	.....
2	.....	.....
3	.....	.....
4	.....	.....

7. Where did you get your water during last week?.....

.....

8. Which household member(s) usually bring(s) the water?

1.....2.....3.....4.....

9. Does she/he/you go alone or accompanied by someone when fetching the water?.....

10. How often is water fetched?.....

Washing habits

11. Who usually washes the clothes for the household?
.....
12. Is there someone in the household who prefers to wash all or some of his/her clothes alone?

.....
13. Where does your household usually wash the clothes? What is good about washing at that place/those places?
1.....
.....
2.....
.....
3.....
.....
14. (If washing is not done at home:) Do you (the person washing) go alone to that place?
.....
Do you do other things except washing when you go to that place?.....
15. (If washing slab has not been mentioned:) Is there a washing slab in this village? Do you use it? Why?.....

.....

.....

.....
16. What do people in this village think about the washing slab?
.....
17. How often do you (the person washing) have to wash the clothes?.....
18. Where do you hang the clothes for drying?.....
19. How would you like to improve your circumstances of washing?

Appendix 5

Day by day

Month	Date	Activity
January	11	Flight Stockholm - Nairobi
	12	In Nairobi
	13	Flight Nairboi - Mwanza, arrival in Mwanza and presentation at HESAWA zonal office
	14	Reading reports and files
	15	Field trip to Magu, meeting with HDA and TOT
	16-17	Preparation of field study
	18	Field trip to Magu villages together with HDD and HPA
	19	In Mwanza
	20-24	Field work in Magu district
	25	In Mwanza
	26	Departure to Bukoba
	27	Arrival in Bukoba, meeting with HRC, HRA, HDC, DPO
	28-31	Field work in Bukoba Rural district
February	1-2	In Mwanza
	3	Departure to Ngudo
	3-4	Field work in Kwimba district
	5	In Mwanza (CCM-day)
	6-7	Departure to Bunda, fieldwork in Bunda district
	8-12	In Mwanza, consultations with HESAWA staff, preparation of brief
	13	Flight Mwanza - Nairobi
	14	Flight Nairobi - Stockholm

Appendix 6

Persons contacted*

M. Mtui	Hesawa Deputy Director, Zonal Office
Dr Pelle Brandström	Hesawa Programme Advisor, Zonal Office
Dr E. S. Mwasha	Health Advisor, Zonal Office
Salieth Hassan	Trainer of Trainers, Magu district
Mbakile Nuur	District Promotion Officer, Magu District
Thomas Mtandu	Adminstrative Officer, Zonal Office
Sven Olof Vallerāng	Regional Hesawa Advisor, Mwanza Region
Adam Dongwe	Hesawa District Coordinator, Magu District
Deusdedit Kilimabuganga	Planning Officer, Magu District Council
Jafta Lucas Madaha	Maji Technician, Magu District
Joseph Bundala	Mandeleo Technician, Magu District
John Sangole	Hesawa Technician, Magu District
S. G. Masura	District Health Officer, Magu District
Mr. Nyakwaka	Chairman, Chabula Village
Ester Susuma	Community Development Assistant, Kongoro Ward
Jacksoni Hegeji	Fundi, Group Leader, Chabula Village
Jefta Maige	Fundi, Group Leader, Chabula Village
S. M. Mchemje	Secretary, Kongolo Village
Jackson Masangawo	Village Health Worker, Kongolo Village
Nuhu Ramik	Village Health Worker, Kongolo Village
William Mdemi	Chairman, Ihayabuyago Village
Semeo Mduka	Secretary, Ihayabuyago Village
Rose Simsa	Group Leader and Village Health Worker, Ihayabuyago Village
Bahati Cheremenge	Fundi, Ihayabuyago Village
Fuki Rutandora	Village Health Worker, Ihayabuyago Village
Venerenda Simukama	Groupleader, Ihayabuyago Village
Jeremiah Bogosh	Chairman, Nyashigwe Village
Samuel Luzunya	Village Health Worker, Nyaswhigwe Village

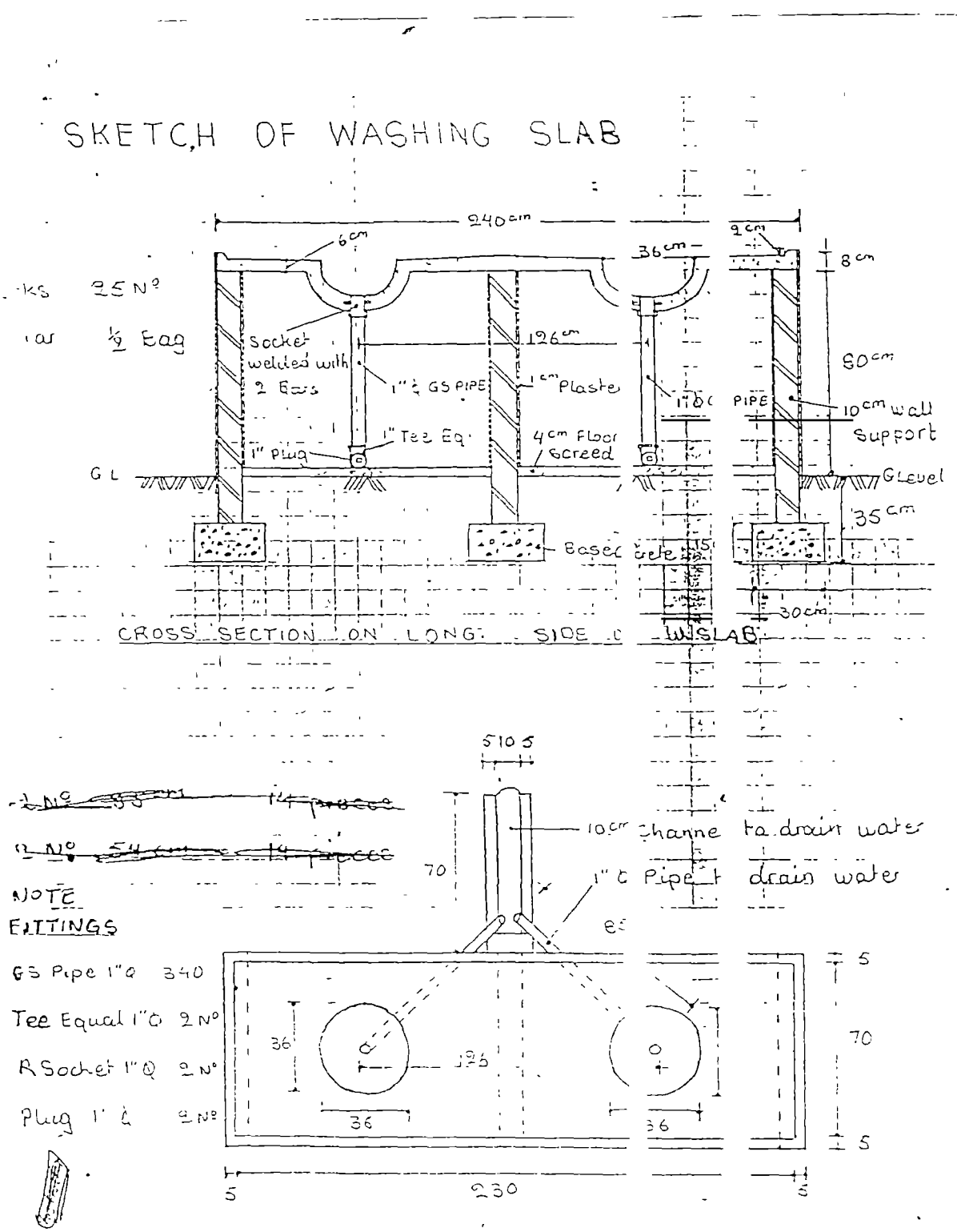
* This list is by necessity incomplete. On the village level only those are mentioned that took active part in the particiapatory mapping , other PRA activities, or in other ways acted to facilitate the study.

Immanuel Buguba	Chairman, Ihushi Village
Mebea Bulambo	Chairman, Isangijo Village
Rafael Rugata	Secretary, Isangijo Village
Tobias Ntini	Fundi, Isangijo Village
Stefan Muragwa	Fundi, Isangijo Village
Theresa Andrea	Village Health Worker, Matale Village
Filemony Karony	Secretary, Igekamoja Village
Euphrase Musabira	Community Development Assistant, Kisesa Ward
Mr. Nomorow	Schooiteacher, Igekamoja Village
Mary Pombe	Secretary, Nyangugwe Ward
Ali Mohammed	Regional Accountant, Kagera Region
George Mugenyi	Hesawa Regional Coordinator, Kagera Region
Roger Göthe	Hesawa Regional Advisor, Kagera Region
Ahmed Kisili	District Promotion Officer, Bukoba Rural
Charles Kiberenje	Hesawa District Coordinator, Bukoba Rural
Jonathan Rugaymukam	Ward Secretary, Izimbiya Ward
Winfrida Mugula	Community Development Assistant, Izimbiya Ward
A. S. K. Byejwe	District Executive Director, Bukoba Rural
J. L. B. Ndàrawa	Shallow Well in charge, Bukoba Rural
Amido Kyama	Secretary, Kyaitoke Village
Justiniyan Malko	Secretary, Nyakigando Village
Juhani Kawinga	Maji Technician, Bukoba Rural
Eliesa Kasabira	Assistant Hesawa Technician, Nyakigando Team
Abu Bakar	Chairman, Kijongo Village
Ahmada Abdallah	District Water Engineer, Bukoba Rural
Elita Julietta Kahembe	District Promotion Officer, Kwimba District
Simon Mazuka	Maendeleo Technician, Kwimba District
Tabu Salingu	Maji Technician, Kwimba District
Sebastian Masu	District Executive Director, Kwimba District
Karugwa Rugarabamu	District Water Engineer & Hesawa District Coordinator, Kwimba District
Swema Kelebu	Community Development Assistant, Kwimba

S. S. Z. Lugira	District Community Development Officer, Bunda District
M. A. K. Magohe	Hesawa District Coordinator, Bunda District
L. P. Bulemo	District Executive Director, Bunda District
Magara Rutiginga	Maendeleo Technician, Bunda District
J. Panga	District Water Engineer, Bunda District

Appendix 7

Sketch of washing slab in Kwimba

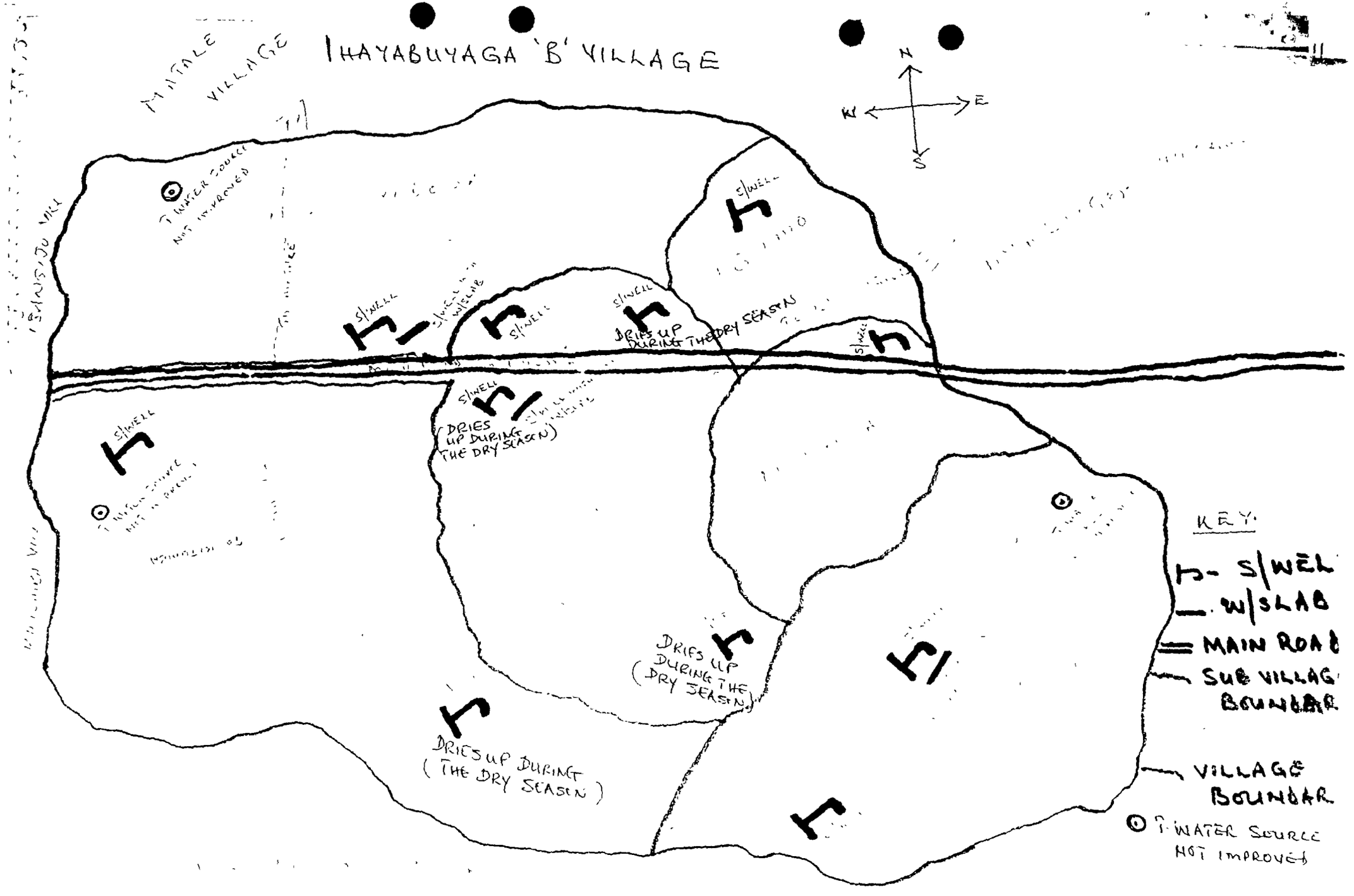


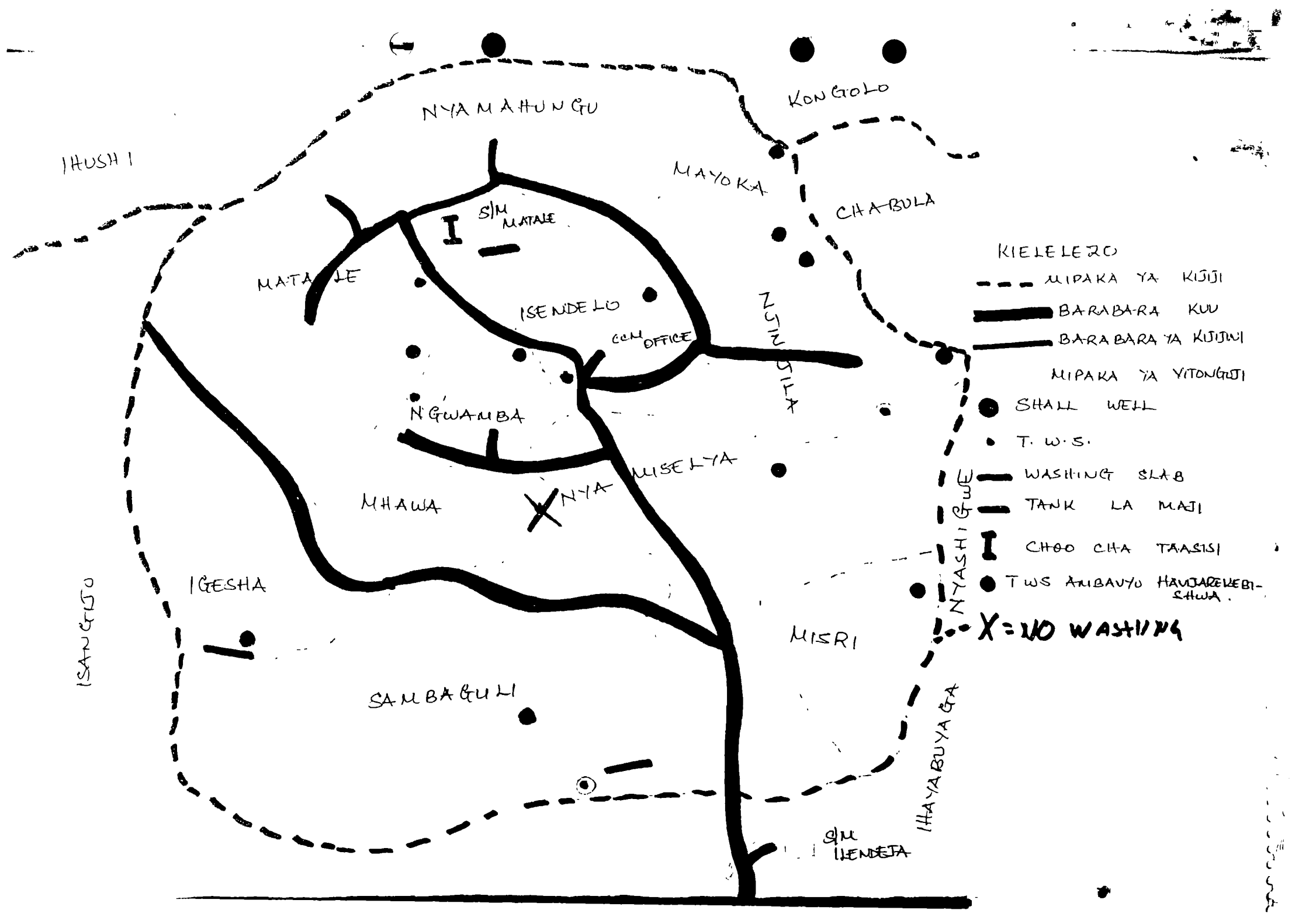
PLAN OF WASHING SLAB

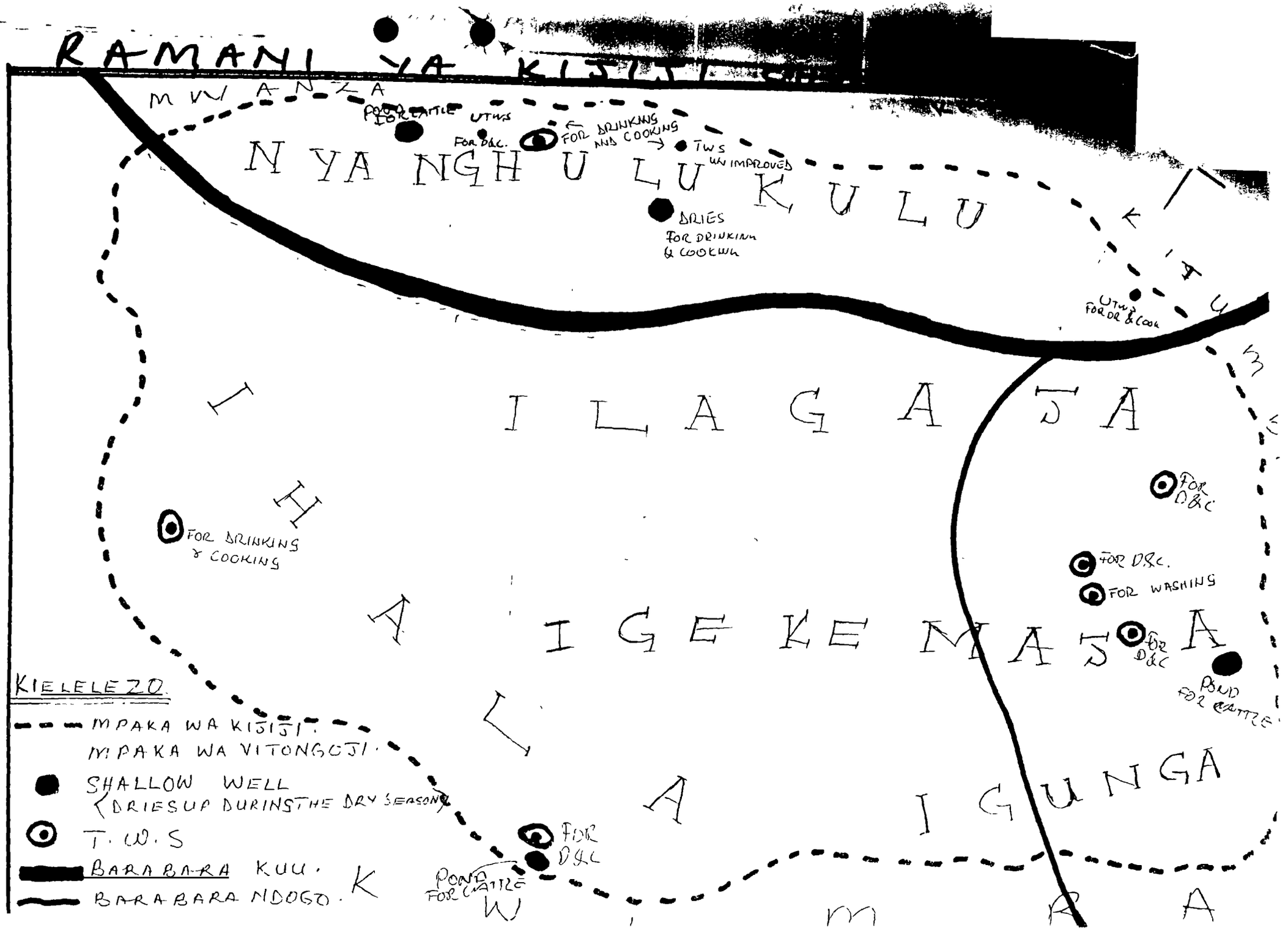
Scale 1 :

Appendix 8

A sample of maps of water sources, produced by villagers in Magu


MATALE VILLAGE
IHAYABUYAGA 'B' VILLAGE
N
W
E
S
T. WATER SOURCE NOT IMPROVED
S/WELL
DRIES UP DURING THE DRY SEASON
(DRIES UP DURING THE DRY SEASON)
DRIES UP DURING THE DRY SEASON)
DRIES UP DURING (THE DRY SEASON)
KEY:
S/WEL
W/SLAB
MAIN ROA
SUB VILLAG
BOUNDAR
VILLAGE
BOUNDAR
T. WATER SOURCE
NOT IMPROVED


NYAMAHUNGU
KONGOLO
IHUSHI
MAYOKA
CHABULA
S/M MATALE
MATALE
ISENDELO
CCM OFFICE
ZUZU
N'GWAMBA
MISELYA
MHAWA
NYA
IGESHA
ISANGIJO
SAMBAGULI
MISRI
NYASHIGWE
IHAYABUYAGA
S/M ILENDETA
KIELELEZO
MIPAKA YA KIJIJI
BARABARA KUU
BARABARA YA KIJIJINI
MIPAKA YA YITONGOJI
SHALL WELL
T. W. S.
WASHING SLAB
TANK LA MAJI
CHOO CHA TAASISI
TWS AMBAYO HAWAJAREKEBISHWA.
X = NO WASHING


RAMANI YA KIJIJI
MWANZA
NYANGHULU KULU
ILAGAJA
IHALIGEKEMAJA
ALIGUNGA
KIELELEZO.
MPAKA WA KIJIJI.
MPAKA WA VITONGOJI.
SHALLOW WELL
DRIES UP DURINGTHE DRY SEASON
T.W.S
BARABARA KUU.
BARABARA NDOGO.
FOR CATTLE
FOR D&C.
FOR DRINKING NA COOKING
TWS
UN IMPROVED
DRIES
FOR DRINKING & COOKING
UTWS
FOR DR & COOK
FOR DRINKING & COOKING
FOR D&C
FOR D&C.
FOR WASHING
FOR D&C
BWD
FOR CATTLE
FOR D&C
POND FOR CATTLE