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T A N Z A N I A

HESAWA

HEALTH DEPARTMENT

SCHOOL HEALTH AND SANITATION PACKAGE

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DEVELOPED BY: DR. E.S. MWASHA.
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(Revised Edition with Short term Evaluation Results)

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HEALTH DEPARTMENT

SCHOOL HEALTH AND SANITATION PACKAGE

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4. Mr. Deogratius Maganya (Laboratory Technician)

I also wish to thank the District Medical Officers of Mwanza and Ukerewe districts for their support and encouragement while we were in their districts.

Special thanks go to the teaching staff at Luchelele and Hamuyebe Primary Schools for their hospitality.

Lastly, but not least, I would like to thank my Secretary Mrs. Martha Wilson for typing and compiling this report.

INTRODUCTORY REMARKS ON THE SCHOOL HEALTH AND SANITATION PACKAGE:
(By Dr.E.S.Mwasha, Health Advisor)

The primary objective of the school health and sanitation package is not to examine school children and treat them for various health problems. The objective is to facilitate effective community participation whereby the villagers can come together to discuss their felt needs and work out possible solutions by and for themselves. Community participation is crucial in all rural sanitation activities because without it there is very little that a programme like HESAWA can do to improve rural environmental conditions. The problem that community workers face is that very often rural communities are very passive, and if they are called for a meeting to discuss,say, sanitation problems in their village, only a few will turn up and those few may show very little interest in the problem. The question is, how do we get these people interested so that they can come together in large numbers to discuss their problems actively? The primary objective of the school health and sanitation package is to try and solve this problem. The "trick" used in the package is to highlight a sensitive issue or problem that will touch their feelings and then ask them to come together to discuss it. In this case the issue is the health of their children. Since well over 80% of the health problems affecting their children are related to water and sanitation, it is obvious that they will find themselves discussing the underlying causes and possible solutions for problems related to water and sanitation. Our experience in Hamuyebe village and elsewhere shows that this approach works very well, and it is worth trying it in other villages where HESAWA is operating.
Examining children and reporting to their parents so that they can take appropriate action is a secondary prevention activity. The act does not only please the villagers, but it also gives us creditability for more public health activities in the village. Furthermore, the statistics obtained from screening the children will be very valuable for evaluating the impact of water and sanitation on the health of school children, at least.

For example, the prevalence of parasitic worms in Hamuyebe Primary school was 42%. It would be useful to know what it will be, say, five years from now when HESAWA will have effected some improvement in water and sanitation conditions in this village. If we do not collect such base line data for impact indicators from now, it will be very difficult to evaluate the impact of this programme on health in the future.

Occasionally, during community meetings, the villagers may come up with a felt need that is not in line with the HESAWA programme. For example, the villagers in Hamuyebe came up with a request for a diary cattle project as a solution for the nutritional problems discussed by them. They also asked for the possibility to have their sick children treated. The facilitators made it clear to the villagers that these requests were not in line with HESAWA policy and therefore, other sources of help should be sought through their district authorities. As far as treating the sick children is concerned, the village government in Hamuyebe believes that over 75% of those children have already been treated through their parents' initiative. In short, such requests must be dealt with in an honest manner and if possible we should assist the villagers to identify other institutions that might be able to help. In fact, this is where collaboration among development agencies becomes very important.

I have spent much time working on this package because I am convinced that there can be no environmental sanitation in rural areas without community participation.

HESAWA Zonal Office, Mwanza.
26 March, 1992.

PROPOSED STRATEGY FOR IMPLEMENTING THE HESAWA SANITATION AND SCHOOL HEALTH PROGRAMME.

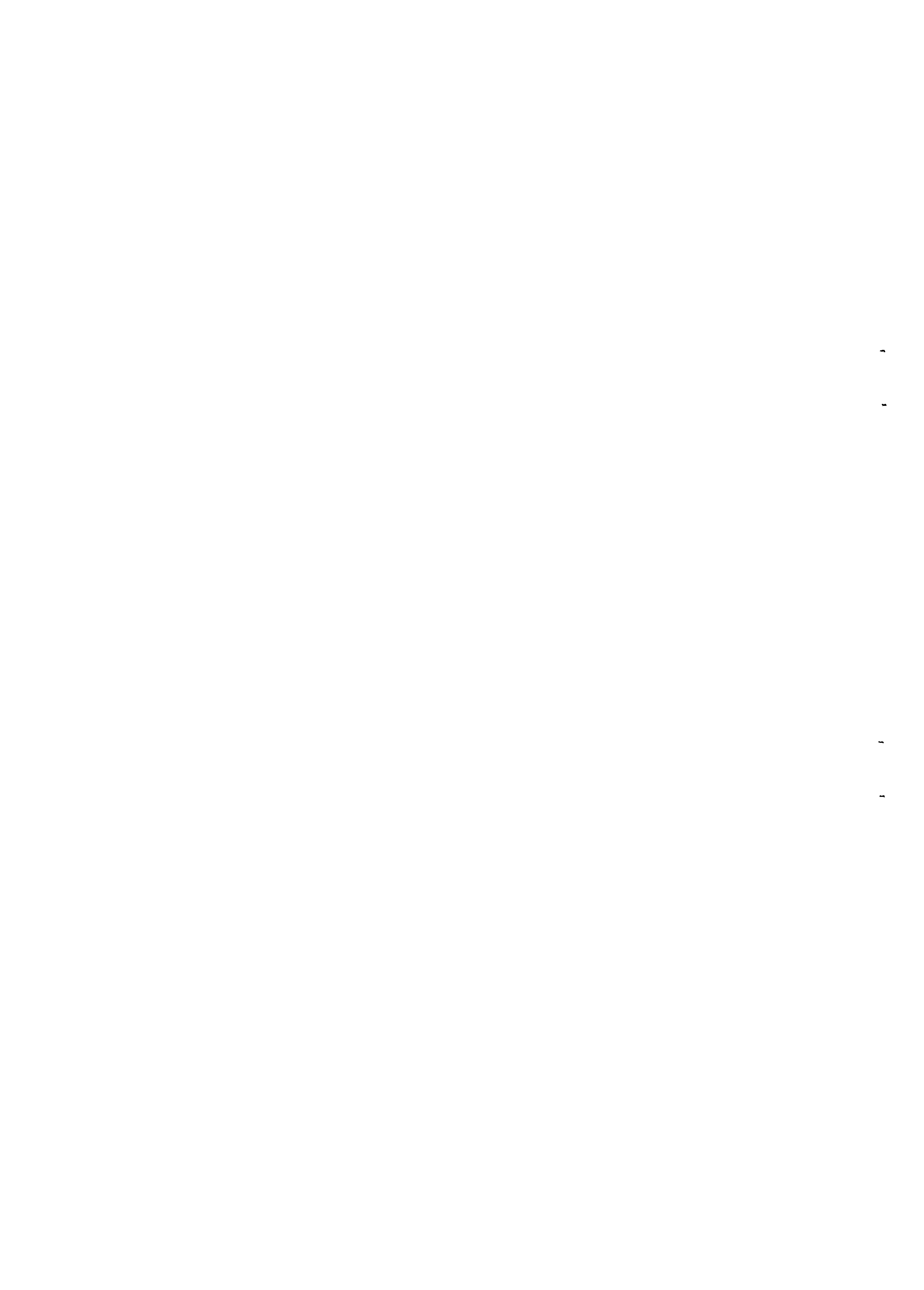
CONCEPT PAPER

INTRODUCTION:

Construction of household and institutional latrines has been the major Sanitation activity for the HESAWA health department until recently when it was felt that Sanitation is much broader than latrine construction alone. Even so, latrine construction still constitutes an important component of the sanitation strategy. The new policy for household and institutional latrines is now based on:-

- Improvement of existing structures.
- Designing of appropriate models of latrines using appropriate technology (To be outlined by the HESAWA Sanitary Engineer)
- Facilitating construction of latrines as follows:-
  - = Pay full cost for school latrines on condition that schools accept full responsibility for upkeep and maintenance.
  - = Pay 50% of the actual cost for dispensary latrines on condition that dispensaries accept full responsibility for upkeep and maintenance.
  - = No subsidies for household latrines. However, a revolving fund for construction of latrine slabs is made available to the villagers on condition that each villager pays the actual cost of the slab before receiving it.

Besides construction of household and institutional latrines, the HESAWA School Health and Sanitation programme aims at facilitating school children and villagers. at large, to achieve the following objectives:



1. To learn and practice better methods of dealing with waste disposal and drainage.

2. To learn and practice better methods of protecting their domestic water supply from source to the house.

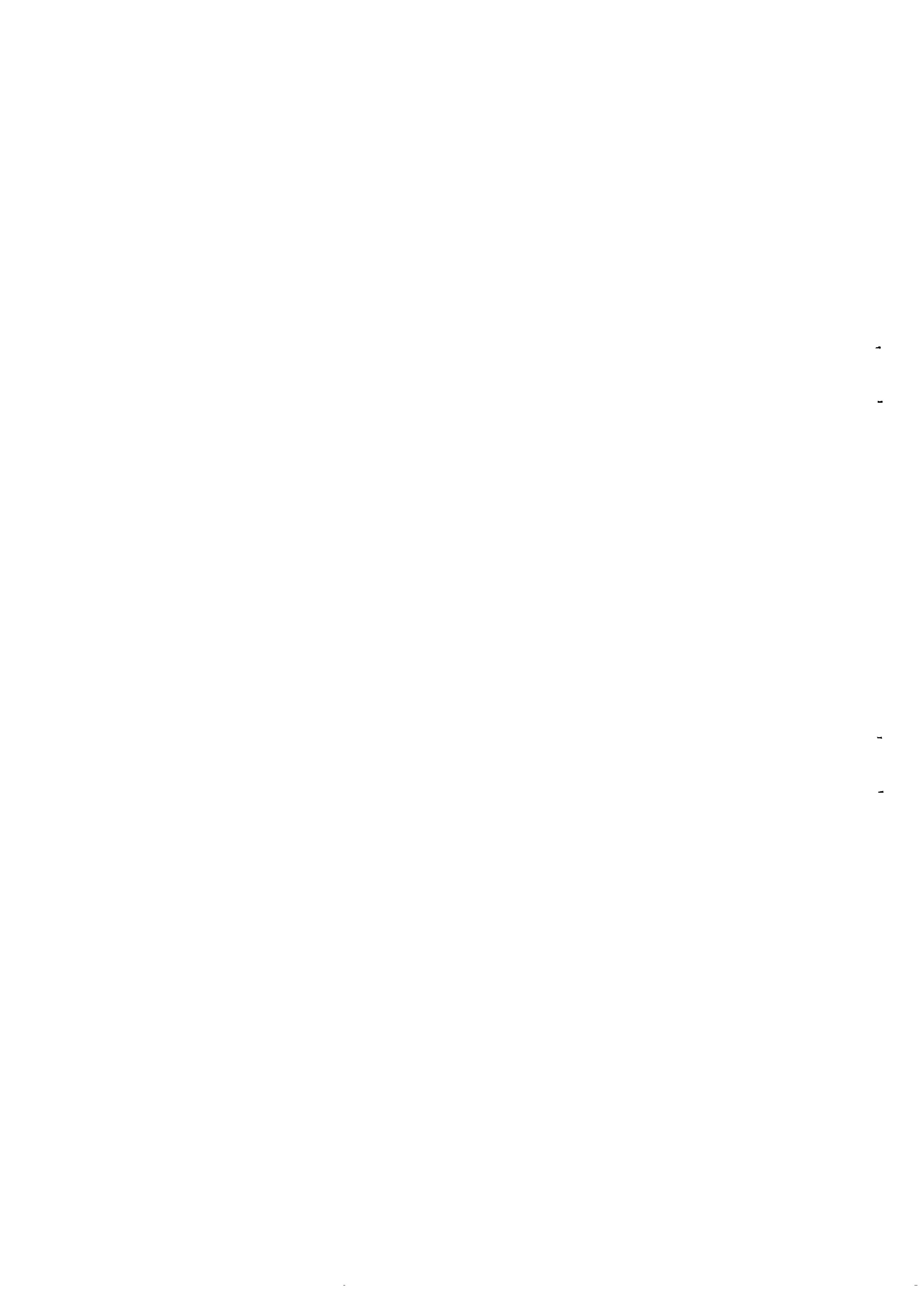
3. To acquire better personal hygienic behaviour.

4. To learn and practice effective ways of controlling vector-borne diseases that affect them.

THE BASIC CONCEPTS

The fist pre-requisite for implementing this programme is community participation which is characterized by the bottom-up planning approach. This approach must be respected at all times even if it means making very slow progress, because this is the only way one can build up a sustainable, replicable and cost-effective programme.

The second pre-requisite is the problem-based learning (PBL) approach for adult education. It is now common knowledge that adults learn better and more effectively when they are solving a real life problem rather than when they are learning for the sake of acquiring new ideas to improve their general knowledge. All regional and district TOTs in the programme area have been exposed to the PBL and LePSA techniques for adult education. More detailed workshops will continue to be implemented at district and sub-district levels with the ultimate goal to enable VHWs to use this approach whenever they are giving health education to villagers.



Another important pre-requisite for implementing this programme is inter-sectoral collaboration. It is unrealistic to believe that the health department alone can implement an effective School health and Sanitation programme. The departments that are required to participate in the school health programme are listed in the school health guidelines produced by the Ministry of Health in 1988. These guidelines were discussed in detail by Regional Education Officers, Regional Medical Officers and District Education Officers for the lake Zone in a workshop held at Musoma in April 1991. Copies of the guidelines have been distributed to the above officers and to all regional and district TOTs in the lake zone.

IMPLEMENTATION STEPS:

The School health programme will be used as a means of entering into communities as shown in the following steps of implementation.

STEP 1:

District TOTs in collaboration with respective local sub district TOTs & VHWs organize a meeting with the teaching staff of the school in question to discuss the possibilities and advantages of doing a proper clinical screening of all children in their school in order to identify children with special problems. When the teachers have agreed in principle, the head teacher is asked to introduce the medical team to the village government to discuss the issue again in order to obtain their approval and support. The importance of calling a parents' meeting to discuss whatever medical problems that will be found amoung the school children will be emphasized to the village government at this point.

STEP 2

Once the idea has been accepted by the village committee, the ToTs in collaboration with other relevant medical staff (eg. Lab technicians etc.) appointed by the DMO will go ahead and screen the children for the following:

- Urine for parasites (including Schistosomiasis)
- Stool for parasites
- Blood slides for parasites (Malaria)
- Haemoglobin
- Weight, height, & upper-arm circumference.
- Short history including:
  - Eating habits
  - Episodes of diarrhoea during the last 7 days etc.
- General clinical examination to record any obvious clinical abnormalities including skin diseases, Respiratory & Cardiovascular abnormalities, abdominal masses etc. etc.

STEP 3:

After doing a statistical analysis of the findings, the village government is briefed on the findings and asked to call a meeting for all parents to discuss these medical problems that are affecting their children. At the parents' meeting each parent will be given a personal report for his/her child(ren) with appropriate medical advice. This meeting will also be attended by the teaching staff of the school and if possible a representative from the district education office. Using the problem based learning (PBL) approach, parents will then be facilitated through the process of identifying underlying causes of the main problems affecting their children. This process will continue until they have come up with appropriate possible solutions for the problems as well as a plan of action for implementing their solutions.

It is obvious that most of the diseases that will be revealed by the medical examination will be related to water, sanitation, personal hygiene and vectors.
TOTs will be equipped with the necessary learning materials to convey all important facts regarding the health problems under discussion. For example, if schistosomiasis is a problem, the Villagers will be taught the life-cycle of schistosomiasis to enable them to work out by themselves a suitable prevention strategy. The school health training package outlined in the next section, coupled with appropriate visual aids, will be used to convey necessary and appropriate information to the villagers. It may be necessary to hold several meetings before the villagers can come up with an appropriate plan of action. Sub district TOTs and VHWs will be trained to facilitate these meetings until a clear plan of action has been worked out and agreed upon by the villagers.

STEP 4:

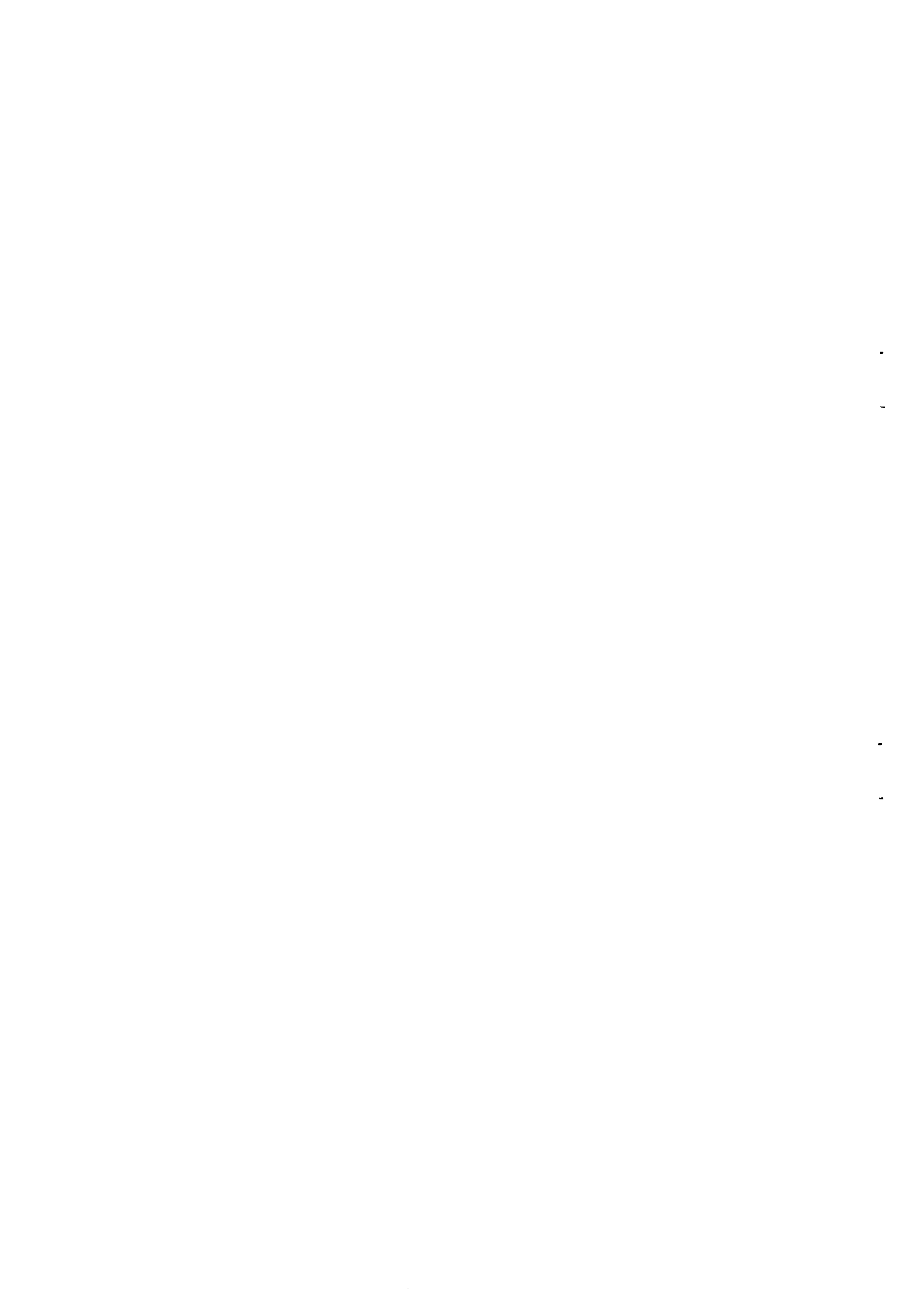
The actions to be taken to solve the problem(s) are now discussed once again with the village committee and an agreement is reached about who is going to do what and when. This meeting will be conducted by district TOTs in collaboration with respective Sub-district TOTs and the VHWs. The roles of the VHWs and the village Committee in implementing and evaluating the agreed solutions will be stated clearly during these meetings and a copy of the agreed minutes should be available to the village government and the TOTs involved.
If there are no VHWs in the village, the Village government will be briefed on what role VHWs could play in implementing their plan and the committee will be facilitated and encouraged to consider the possibility of identifying suitable villagers for training as VHWs.

STEP 5:

Actual implementation of the village programme starts at this point. At the same time health education in the village primary School(s) will be intensified, stressing local health problems that were identified earlier during steps 2 & 3 above. An outline of the curriculum is shown in the next section but a more detailed curriculum will be developed by each district team and the teachers to meet local needs. Divisional or ward workshops to develop the detailed curriculum and to discuss other practical issues related to this exercise will have to be worked out by the district school health programme committee when all the schools in a given division or ward have gone through the medical examination process.

STEP 6:

Short term evaluation for the primary school(s) education part of the project will be done through pre- and post-tests to give an impression of the amount of knowledge gained by the pupils during the health education sessions. After one year the first long term evaluation will be carried out by repeating steps 1-4 above. The progress made so far will be analyzed carefully and presented to the villagers in a clear manner. At the same time new problems and weak areas of implementation will be identified and discussed with the parents and village committee. This will then lead to formulation of new objectives and a second plan of action. This process will be repeated every year until the villagers are satisfied that their school health and sanitation problems have been reduced to an acceptable level.



SCHOOL HEALTH AND SANITATION PACKAGE.

DETAILED IMPLEMENTATION PROCEDURE.

STAGE 1 Discuss the concept paper with the District School health Programme Committee.

STAGE 2 District/Sub district TOTs in collaboration with District School health programme(SHP) coordinator discuss the concept paper with the teaching staff of the selected School. Allow the teachers to comment on the ideas contained in the concept paper and take note of important ideas generated during this meeting.

STAGE 3 The health team together with the Head teacher make an appointment to discuss the programme with the local village committee. Village Health Workers (VHWs) from this village should participate in this meeting. This meeting should stress the Community participation and prevention aspects of the programme. The importance of the parents' meeting to work out a prevention strategy for their children will therefore be explained in great details because the success of this programme will depend, by and large, on the quality of this meeting. The role of the VHWs in this programme should be clarified.

STAGE 4 Make an appointment with the Head teacher to specify actual days for implementing the activities in his/her School, and make sure you have the following staff & equipment for the work.

Technical Staff

1. Clinician - one medical Assistant or RMA
2. Lab Technician or a trained microscopist
3. Trained Nurse.
4. Nursing Asst. or Health assistant.

Non technical staff

1. For weighing - one person
2. For measuring height - one person
3. For registering - one person
4. For assisting the lab technician - two persons

Equipment

1. Rim of duplicating paper or rough paper.
2. 7 pens & 2 rulers
3. 3 marker pens to write on slides & test tubes
4. Waterproof brown adhesive tape for marking slides and test tubes.
5. Slides - 400
6. Test tubes - 200 (10cc)
7. Spirit 500 mls.
8. Cotton wool - one roll
9. Prickers - 200
10. Applicators - 100
11. Gloves - 4 pairs
12. Anti septic - 100cc
13. Microscope - 1
14. Hand centrifuge - 1
15. Filter paper No 1 - two pieces
16. Tallqist chart for Hb. estimation.
17. Test tube rack for 100 tubes.
18. Tape measure
19. Pair of scissors
20. Weighing scale

With the above equipment and staff about 100 to 150 pupils can be examined for the following each day:

1. Height,
2. Weight,
3. Upper arm circumference,
4. Haemoglobin,
5. Blood Slide (to be stained & examined at the health centre/hospital later),
6. Stool for immediate microscopic examination.
7. Urine for immediate microscopic examination.
8. Clinical examination which should include answering one or two specific questions eg. episodes of diarrhoea in the last month, eating habits etc.
9. Quick physical examination for obvious clinical abnormalities.

NB. The non-technical staff listed in stage 4 could be teachers from the School, senior pupils or the driver.

SCREENING PROCEDURE:

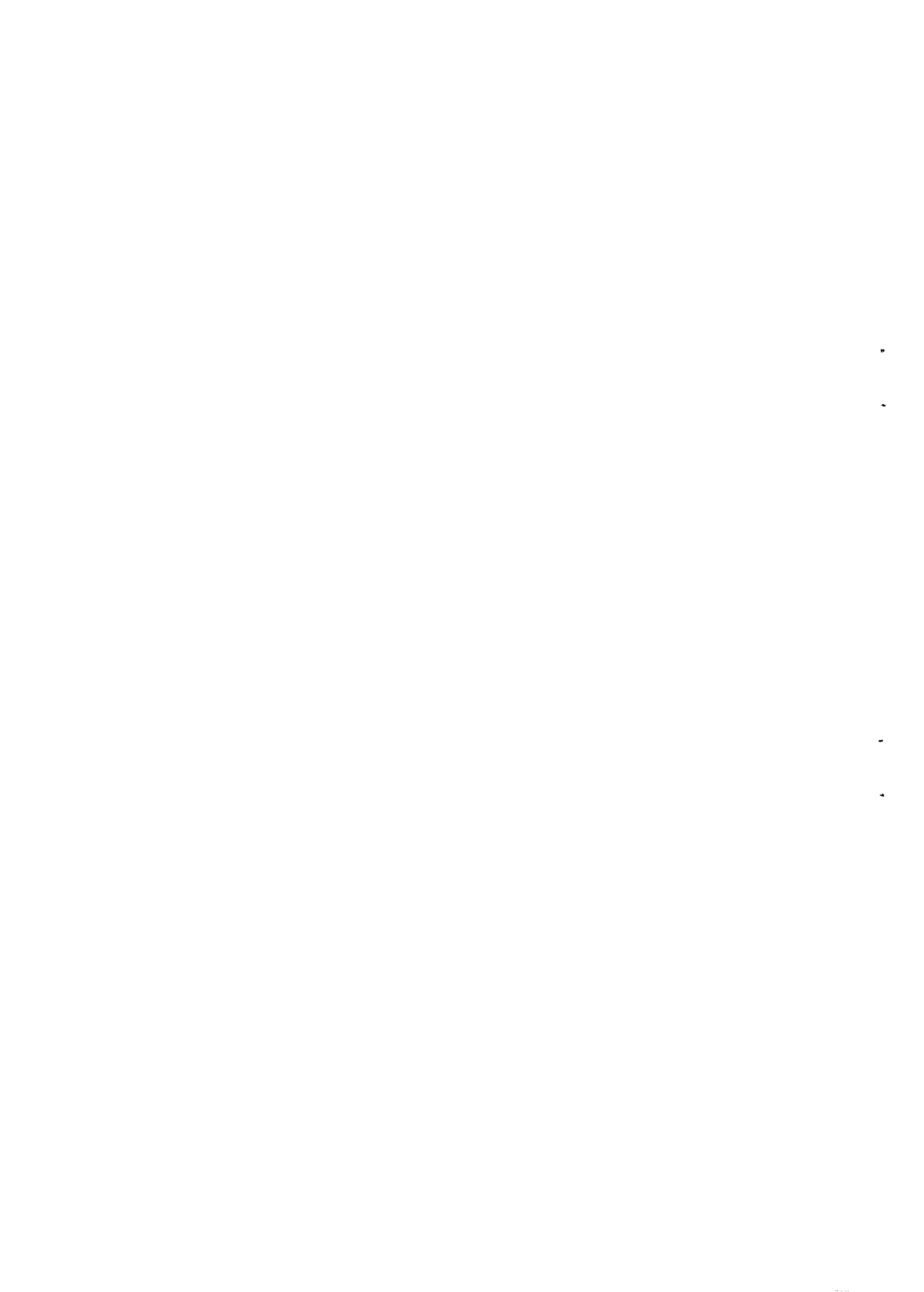
Ask the teachers to give a serial number to each pupil from Std I - VII. This serial number should appear at the top right hand corner of the pupil's clinical form (about 10cm x 15cm). The teacher should also record the name, age, sex and class of each pupil on this form. Each pupil will then carry the clinical form through the following steps.

Step I Collection of stool specimens.

Collection of stool specimens from 100-150 pupils each day is done by one of the non-technical staff. Prior to this day, the head-teacher will have asked the first batch of children on the roster to bring a small amount of stool specimen in an empty match box. The non-technical staff will record the serial number of the pupil on the match box and hand it to the Lab. Technician/Microscopist for immediate examination. The Lab.Technician will record his findings on a separate urine & stool examination form which will be handed over to the clinician for compilation at the end of the day. The Lab.technician will be assisted by the Nursing Asst. who will be taught how to smear three different specimens on one slide and label them correctly using a fine marker pen.

STEP II Measuring Height:

Using a tape measure, an appropriate wall in a class room is calibrated in centimeters with a black or red marker pen. Calibration between 100cm to 180 cm from the floor is usually enough. One of the non-technical staff is appointed to take the height of each pupil and record it on his/her clinical form. The actual measuring is done by asking the pupil to stand erect with his back against the calibrated wall looking straight forward. A ruler is firmly pressed on his/her scalp in such a way that it forms a right angle (90 degrees) with the wall. A triangle square from the School would do much better than a ruler.



Step III. Taking the Weight.

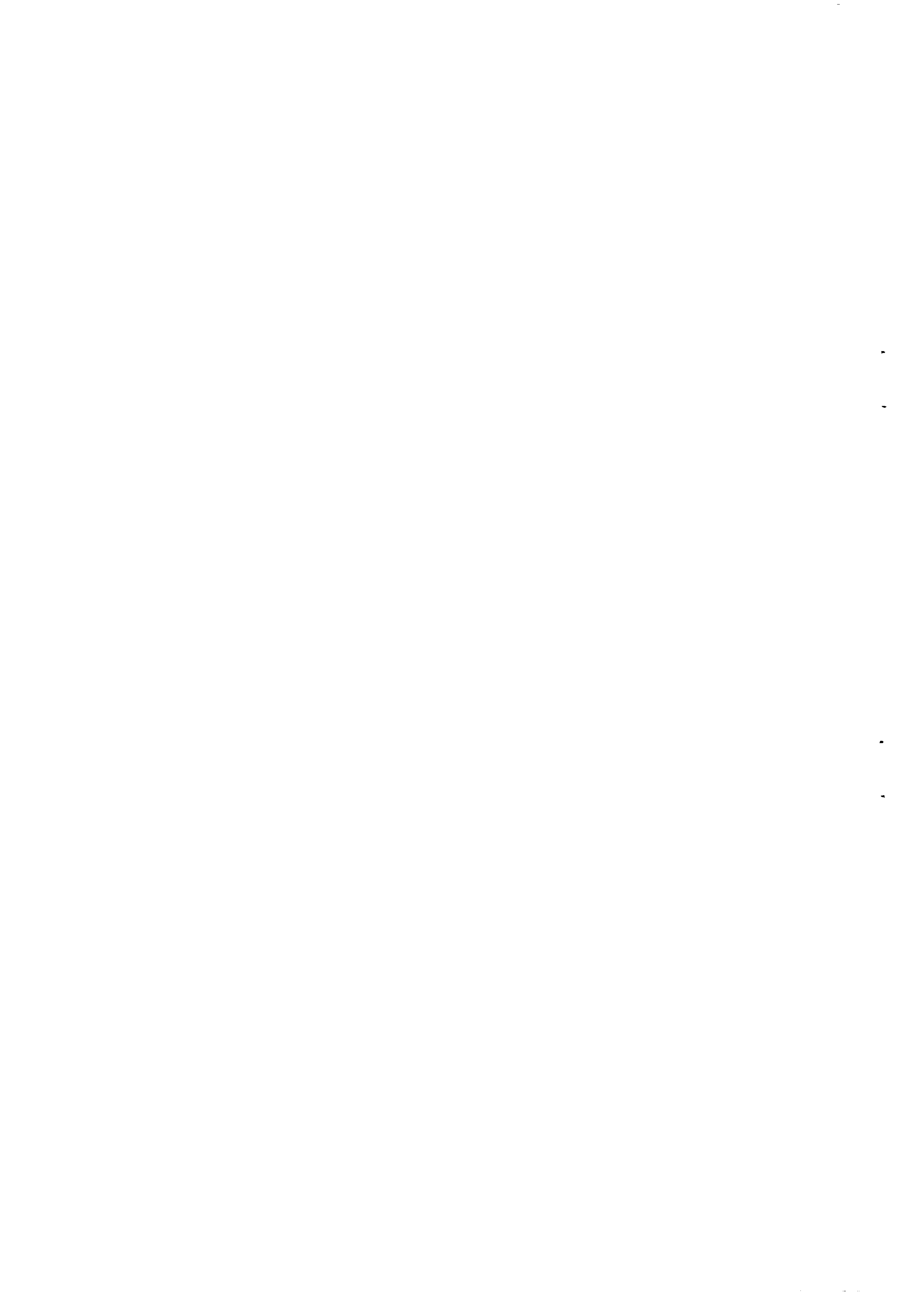
The same non technical staff or another staff should take each pupils weight in Kgs. and record it accordingly.

Step IV. Measuring Arm Circumference.

Using a tape measure or even better, the special Shakir Strip for measuring arm circumference, one trained non-technical staff measures the upper arm circumference of each pupil in centimeters and records it on the clinical sheet. The pupil is then given a test tube (10cc) labelled with the number on his/her clinical form and asked to fill the tube with her/his own urine ready for the next step. It is important to label the test tubes at this stage to avoid the possibility of children exchanging their urine specimens before coming to the laboratory.

Step V. Taking Blood Slide & Urine Specimens:

This step brings the pupil to the laboratory where the following procedure is followed:
One of the non technical staff collects all the urine specimen on test tube racks and centrifuges them for about one minute each using a hand centrifuge machine. S/he then pours the urine in a bucket and leaves the tubes with the sediment on the test tube racks. In the meantime, the Nurse/Nurse assistant. takes a blood slide(thick smear), labels it with the pupils number, estimates haemoglobin by the tallqist method and records it on the pupil's clinical form. The pupil moves on to the next step for clinical examination.



NB. When the technician has examined the stool specimens for all the children to be examined on that day (usually about 100 children for the staff listed in stage 4), he goes back to the urine sediments for microscopic examination. He records his findings on a separate laboratory form with Urine and stool results. The dried Blood slides are preserved for staining & examination in the district hospital, immediately after completing field activities.

Step VI. Short History and Clinical Examination.

After the laboratory step each pupil moves to the clinical examination step with his/her clinical form which contains the following information - class, age, sex weight, height, arm circumference. & Haemoglobin. At this step the clinician takes a short clinical history, conducts a quick clinical examination and records all positive findings on the clinical form which remains, with him after the examination. At the end of the day the clinician compiles all the results in a format similar to the one shown in Form A (App.2). Before leaving the School the next batch of 100 pupils is asked to bring stool the next morning when steps I-VI will be repeated. This process will continue until all the children have been examined.

Step VII. Data Analysis and Report Writing.

Data analysis and report writing for each individual pupil, as well as for the entire School as a community, will be done by the clinician in charge in collaboration with the District School Health programme Coordinator. The top five problems affecting the School children will be listed ready for the parents meeting to be held not later than 7 days after completion of examinations in a given school.

STEP VIII. Parents' Meeting

This is a crucial event in this programme. The village Chairman and his village government should be made to understand the importance of this meeting right from the beginning and should see to it that every parent attends. If possible other villagers who have no children in that school should also be encouraged to attend.

The first activity during this meeting will be to present a written medical report to each parent. This report should list the health problems affecting the child and should also state clearly what action the parent should take to solve his/her child's problem as soon as possible. Medical ethics should be observed when communicating individual reports to parents. Parents whose children had no medical problem shouldbe congratulated and encouraged to maintain their children's good health.

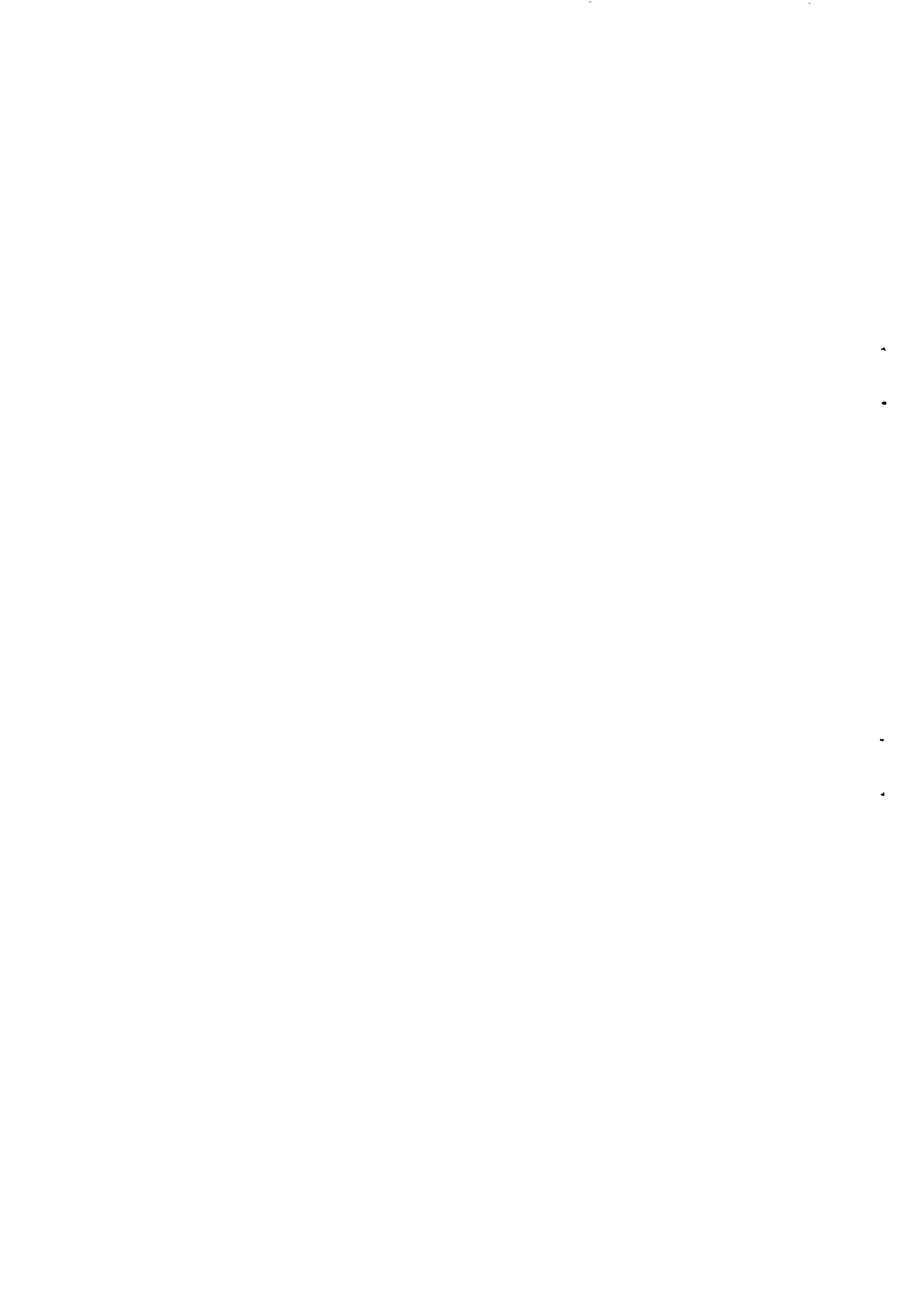
Having done this, the district medical team which should include the DMO if possible, will now go over the top five medical problems effecting the children and discuss them in detail with the parents. The Problem based learning(PBL) and LePSA techniques which are familiar to all HESAWA TOTs in the lake zone should be used. The Medical team will act as facilitators rather than lecturers. At the end of this meeting parents should have a fairly good understanding of the following (see DARE Process-App.7):

1. Cause(s) of each of the top 3 to 5 problems in the school.
2. Underlying causes of each problem.
3. Possible solutions for each problem.
4. Agreement on what they will do to solve the problem.

During this meeting the parents will be facilitated by the health team, under the chairmanship of the village chairman, until they have worked out a detailed plan of action specifying what is going to be done, who is going to do what and when. The plan of action should include a detailed village base-line survey based on Form Hs 1 (App.4). Which should be filled up by selected Standard VII pupils after appropriate training by the health team. One or two pupils should be allocated to each Balozi and should be supervised by VHWs and the teachers. A copy of the parents' plan of action should be given to the sub-district TOTs and to the District School health programme Coordinator. Regular meetings for parents to review progress of their plans will be organized by the village health and Social Welfare Committee in collaboration with their VHWs and Sub-district TOTs.

STAGE 5 - Health Education for Pupils

Each district will work out a detailed curriculum for teaching the school children about the top five problems affecting them. This curriculum will be worked out by the district & sub district health teams in collaboration with the head teachers/domestic science teachers in each ward /division. The district team should, therefore, aim at completing work in all schools in a given ward/division before moving on to another area. The important aspects of each identified medical problem will be dealt with at a level that can be understood by most pupils. Simple lay man's language should be used at all times when communicating medical information to pupils. The acceptable level ofperformance (ALP) will be determined by the teachers together with the district team. In order to do this the district and Sub district TOTs should prepare the original lesson plans for all the problems identified in the area and discuss them with respective head teachers and domestic science teachers who are the actual implementers of the curriculum.



Lesson plans should include the following aspects of each problem.

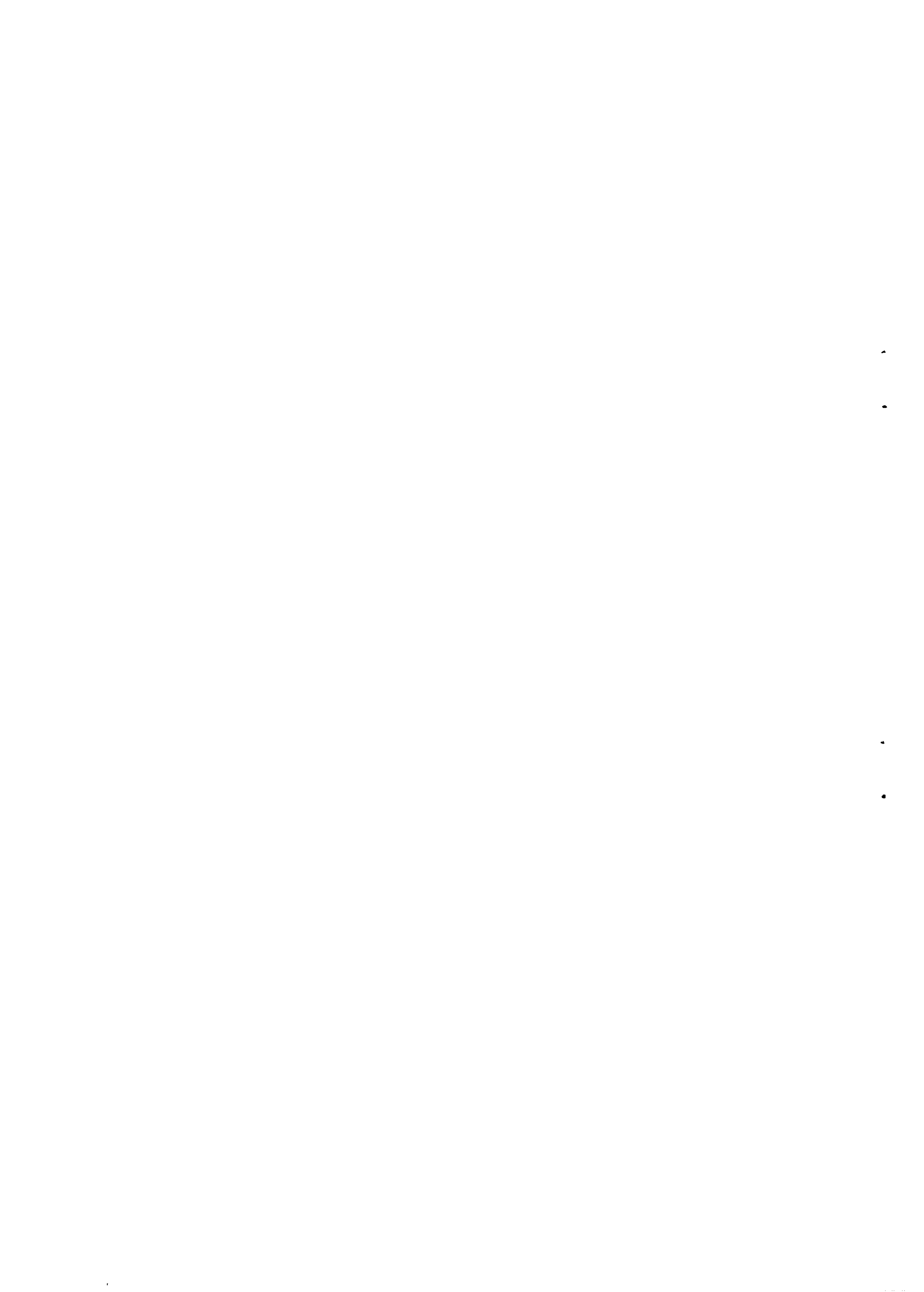
1. Definition of the problem including obvious clinical signs and symptoms. Short/long term dangers related to the problem should be stated clearly.
2. Cause(s) of the problem.
3. Mode of transmission from one person to another including a simple out-line of life-cycle of involved parasite.
4. Emphasis on how one can prevent the problem/disease from affecting him/her.

STAGE 6: Evaluation.

Pupils will be exposed to pre- and post-tests to determine the quantity and quality of knowledge acquired during these health education sessions. It is hoped that the pupils will, in turn, transmit this knowledge to their parents and relatives and in the long run they will be the main implementors when they become parents themselves.

The attached forms Hs 1,2 and 3 (App.4,5,&6) will be completed by respective actors at different levels of implementation to provide the necessary data base for continuous evaluation.

As stated earlier, each village will be encouraged to discuss their progress regularly. At the end of the first year the whole exercise will be repeated from stage 1 through 5. The parents will be congratulated for any improvements achieved during the year and new problems will be identified and dealt with as before. This will lead to appropriate modification of their plans of action to be implemented in the following year. This process will be repeated until the villagers are satisfied that the problems in question have been reduced to an acceptable level.



PILOT STUDIES ON THE SCHOOL HEALTH & SANITATION PACKAGE.

Introduction:

In order to verify the practicability of the proposed procedure, the health advisor facilitated implementation of the whole procedure by, a team of health workers appointed by the Regional Medical Officer of Mwanza. The exercise was carried out in two villages namely, Luchelele and Hamuyebe in Mwanza and Ukerewe districts respectively. The RMO's team consisted of one Medical Assistant, one laboratory technician and one health officer. The team was strengthened at the district level by the respective district School health programme Coordinator. The team should also have been strengthened further at the village level by involving respective village health workers but this was not possible in both villages because Hamuyebe village had not selected VHWs for training, whereas in Luchelele the VHWs were out of the village during the exercise.

Implementation Schedule.

Prior to the actual implementation of this exercise, a copy of the concept paper prepared by the health Advisor was given to the RMO and to the respective district Medical Officers. After lengthy discussions, the following working schedule was compiled and adhered to.

[illegible]/8/91 - [illegible]

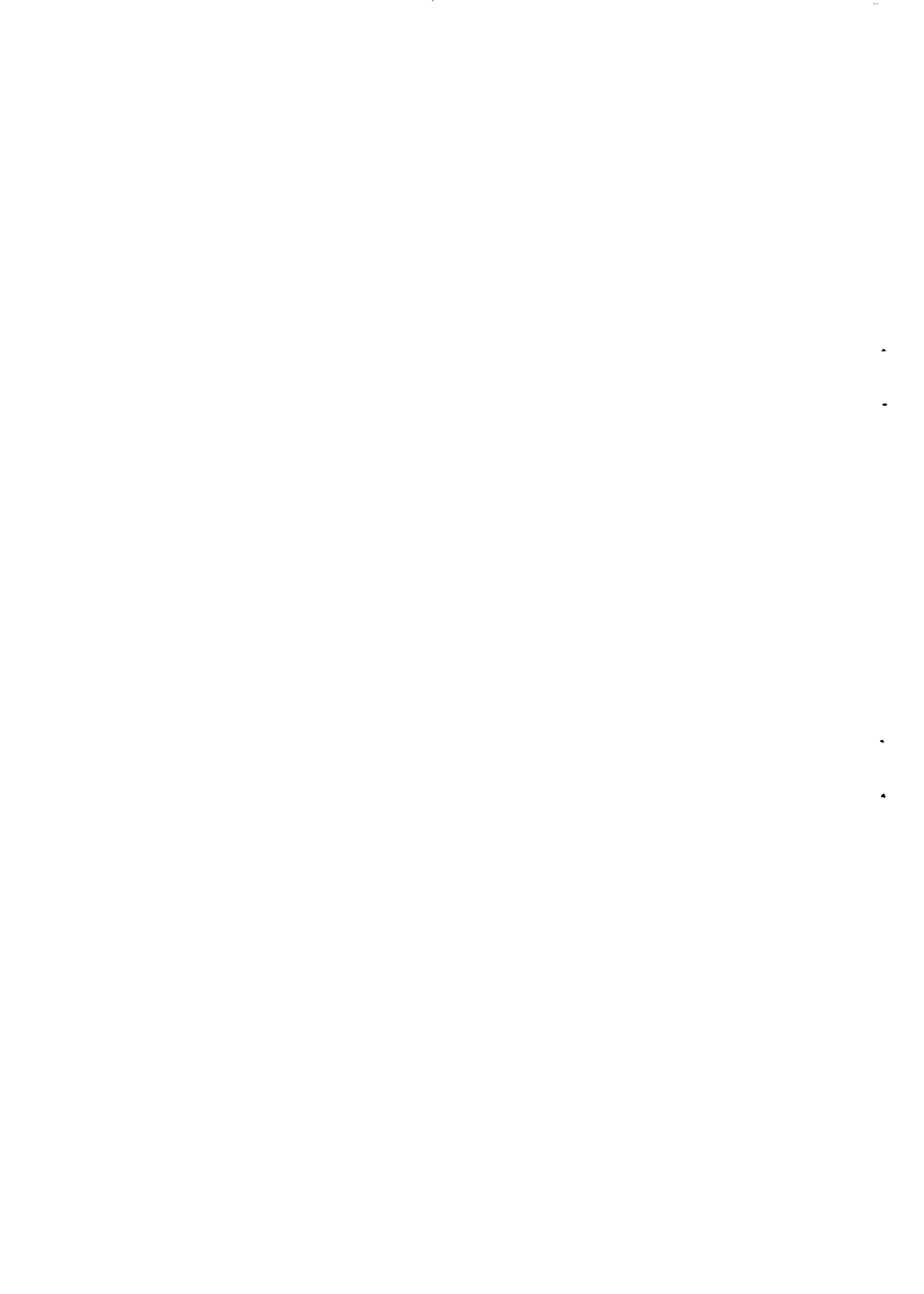
7-9/8/91 - Examination of children in Luchelele Primary School.

12/8/91 - Present the proposal to the teachers of Hamuyebe Primary School and to the Hamuyebe village committee.

13-15/8/91 - Examination of children at Hamuyebe Primary School.

21/8/91 - Parents' meeting in Hamuyebe village.

23/8/91 - Parents' meeting in Luchelele village.



Observations made at different stages.

1. All the teachers were very positive about the whole concept and they all promised to participate actively in the exercise.

2. The head-teachers were happy to introduce us to the village government officials and they played an active role in explaining the ideas to these officials.

3. The village chairman visited the team at the school every day while the pupils were being examined.

4. The Schools provided lunch for the health team.

5. The teachers carried out the non-technical procedures with pleasure.

Recording procedure:

Every evening after the field work, the Medical Assistant was facilitated by the health advisor to compile daily examination results according to the format shown on "Form A" (App.2) . Blood slide results were filled in as soon as the lab technician made them available. After entering all data on "Form A" the team came together to analyze the results and to prepare individual reports by filling in "Form B" (App.3). At the same time the main health problems affecting the children were identified and ranked according to prevalence. The group brain-stormed on the underlying causes of the main problems and prepared facilitator's notes and the agenda for the parents' meeting.

The Parents' meeting at Hamuyebe:

The parents' meeting was held at the primary School on 21/8/91 as Scheduled and it was attended by 115 parents (50% mothers). The meeting was opened by the village Chairman at 10.40 am and closed at 3.15 pm.

The following attended:

- Members of the village Committee
- Members of the School Committee
- All teachers
- District School Health Programme Coordinator
- One district TOT
- District Education Officer (Adult Education)
- The School Children attended the first part of the meeting to receive results with their parents.

RESULTS FOR HAMUYEBE PRIMARY SCHOOL:

Total number of Children examined = 260.

List of main problems.

1. Unsatisfactory Nutritional status of the children
   - Lack of breakfast before going to School = 90%
   - Dislike for green vegetables (estimated) = 100%

2. Anaemia - Hb below 65% = 66%
   Hb between 65 - 75% = 34%

3. Worms - Schistosoma mansoni = 22%
   - Schistosoma haematobium = 2%

   Other intestinal worms = 18%
   (Total parasitic Worms) = 42%

4. Diarrhoea (at least once) during last 4 weeks = 28%

5. Other medical problems
   - Tropical splenomegally Syndrome = 9%
   - Malaria parasites in blood = 8%
   - Other minor problems eg. fungal infections = 6%

These findings were presented to the participants immediately after distributing the written medical reports. The role of the health team in this meeting was limited to providing technical information to the parents when and if necessary in order to keep the discussion going in the right direction. Their role was, therefore, that of facilitators rather than teachers.

Observations regarding the parents' meeting at Hamuyebe.

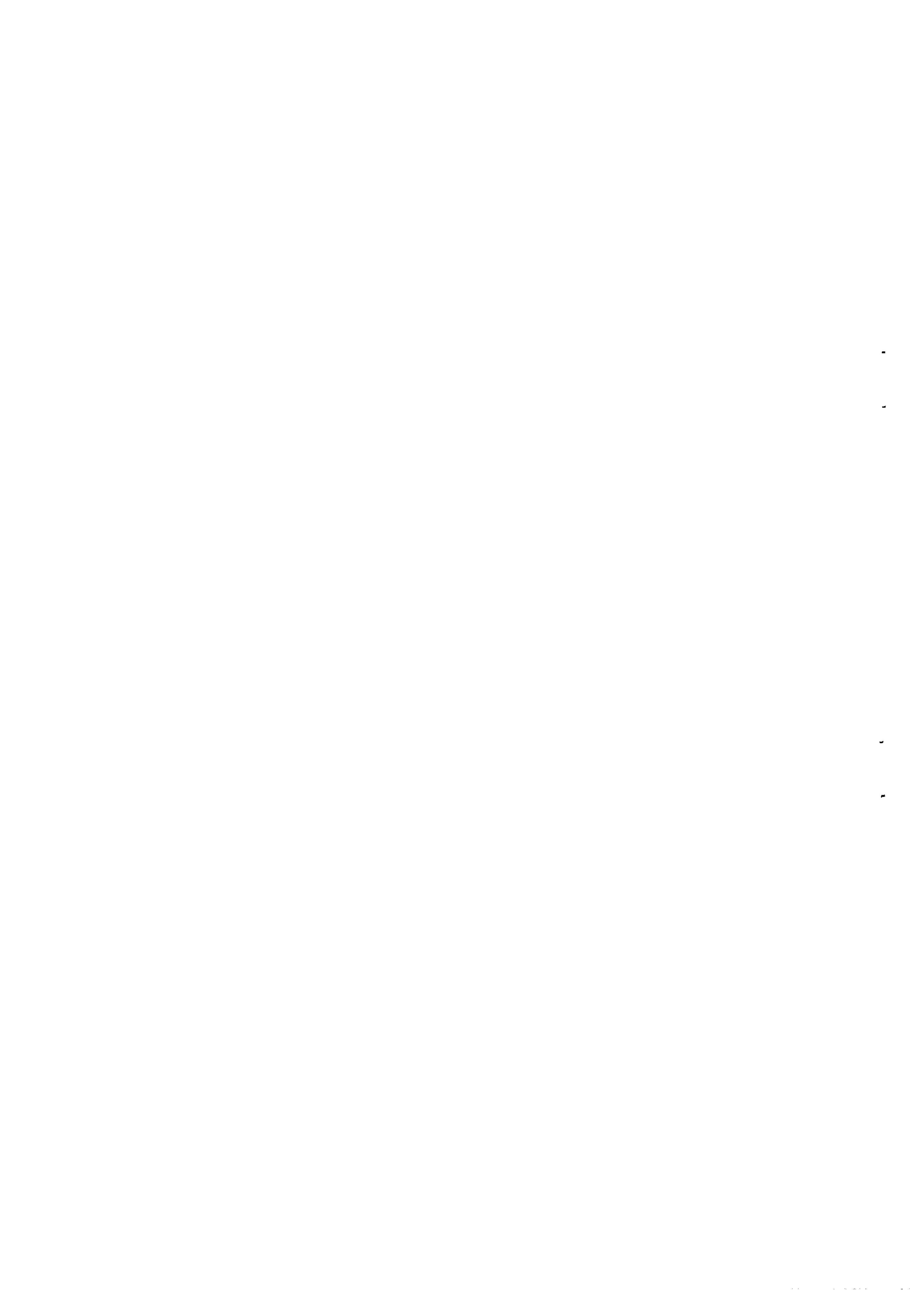
1. Most parents came to the meeting on time and stayed on to the end.

2. Parents were anxious to know the health status of their children.

3. Parents were very keen to find out the underlying causes of the main health problems in the School.

4. Facilitation of the meeting by the health team was made very easy by the fact that all parents were highly motivated and participated very actively in the discussions which led to the identification of the underlying causes of the main problems.

5. At the end of the meeting most of the parents looked very satisfied with the plan of action that they had just worked out and agreed to implement it with immediate effect for the sake of their children and their families as a whole.



6. The participants were confident that their plan would be implemented successfully. They confidently asked the health team to go back to the village on 21/10/91 by which time they believed encouraging achievements will have been made by the villagers.

7. The parents identified the following as the main underlying causes for the health problems listed.

Problem	Underlying cause
i. **Unsatisfactory nutritional Status of the children**	**1. Lack of breakfast** **2. Lack of meals at School** **3. Dislike for green vegetables** 4. Shortage of milk in the village.
ii. Anaemia	1. Poor nutrition 2. Schistosomiasis 3. Dislike for green vegetables
iii. Parasitic Worms	1. Lack of house-hold latrines 2. Lack of public latrines on the beach where villagers spend many hours fishing, washing etc.
iv. High prevalence of diarrhoea	1. Poor environmental Sanitation 2. Contaminated water drunk without boiling. 3. Lack of drying rack for eating utensils.

PLAN OF ACTION FOR HAMUYEBE VILLAGE:

The parents came up with the following resolutions as an attempt to solve their problems.

	Parents' Resolution	Implementor	When
1.	Parents should start a special fund for the School so that their children can get a meal at School everyday.	School committe & parents	Immediately
2.	The School Children should start to work on vegetable gardens at school to produce some of their food.	School Committee & Teachers	Immediately
3.	Every house-hold in the village should have a small vegetable garden and should develop the habit of using green vegetables as part of their meals.	Village Committee	Immediately
4.	HESAWA should be requested to facilitate acquisition of diary cattle for the School and villagers in order to [illegible] in the village.	Village Committee & District Authorities	As soon as possible
5.	Every household in the Village must build and use a latrine. The Village government should make by-Laws to that effect.	Village committee	Start Immediately

Parents' Resolution	Implementor	When
6. The village government should organize construction of public latrines along the beach so that fishermen and other can use them	Village Committee	Start Immediately
7. The habit of bathing in the lake should be discouraged and HESAWA should be asked to build more wells in the village to provide alternative sources of water.	Village committee	Start Immediately
8. Families should boil drinking water. use a dish rack and a rubbish pit in order to prevent diarrhoeal diseases in the village.	Parents & Village Committee	Start Immediately
9. The health team should come back to the village after two months to see what will have been achieved by than.	District Health Team	21/10/91

The Parents' meeting at Luchelele

This meeting was held at Luchelele Primary School as scheduled and it was attended by 105 parents.

The meeting was officially opened by the Village Chairman who asked the Chairman of the School Committee to chair it on his behalf. This meeting went on for five hours and all parents were actively involved in the discussion right to the end. About 50% of the participants were mothers. Parents' reactions and enthusiasm was very similar to what was observed at Hamuyebe.

After handing over written medical reports and advise to individual parents (see format of the report-form B - App.3) the following findings were presented to the participants.

RESULTS FOR LUCHELELE PRIMARY SCHOOL

Total number of children examined = 230

List of main Problems

1. lack of breakfast before going to school = 95%

2. Anaemia - Hb between 60-70% = 61%
   - Hb below 60% = 39%
3. Worms - Schistosoma haematobium = 20%
   - Schistosoma Mansoni = 10%
   - Other intestinal worms = 16%

4. Diarrhoea (at least once) during last four weeks 34%

5. Other medical problems.
   - Tropical splenomegally syndrome = 15%
   - Malaria parasites in blood = 7%
   - Fungal & other minor infections = 15%

PLAN OF ACTION FOR LUCHELELE VILLAGE:

These medical problems are very similar to the ones found in Hamuyebe Primary School. After going through the process of identifying the underlying causes the participants came up with very similar resolutions to those listed for Hamuyebe village.

Parents Resolution	Implementor	When
1. The School Committee should convene another meeting for parents to discuss the possibilities of providing one meal for the children in school.	Chairman of School Committee	Immediately
2. Develop vegetable gardens in the School	Head teacher	Start Immediately
3. Each house hold to start planting vegetables for the whole family to eat regularly.	Parents & Village Committee	Start Immediately
4. Construction & use of latrines is compulsory for every household	Parents & Village Committee	Start Immediately
5. Village government to organize construction of public latrines along the lake shore so that fishermen and others can use them during working hours.	Village Committee	Start Immediately

Parents Resolution	Implementor	When
6. Parents should buy simple shoes for their children to wear at school.	Parents & School Committee	Start Immediately
7. Sanitation regulations should be observed by all house-holds. - Drying racks for utensils - Rubbish pits - Boiling of drinking water	Parents Village Committee	Start Immediately
8. In view of the fact that the local dispensary at Luchelele has a big shortage of drugs, HESAWA is requested to provide medicines for those children who were found to have various infections, especially for those with Schistosomiasis	Medical team	As soon as possible
9. Provide first aid kit for the school	Medical team	Immediately if possible
10. Medical team invited back to the village to witness implementation of these resolutions by the parents after two months.	Medical team	23/10/91

SHORT TERM EVALUATION:

Both parents' meetings requested the health team to go back to their villages to review progress of their action plans after two months. On 30th and 31st October 1991 the health team, accompanied by the programme advisor, Mr. Pelle Brandstrom visited both villages and the following observations were made:-

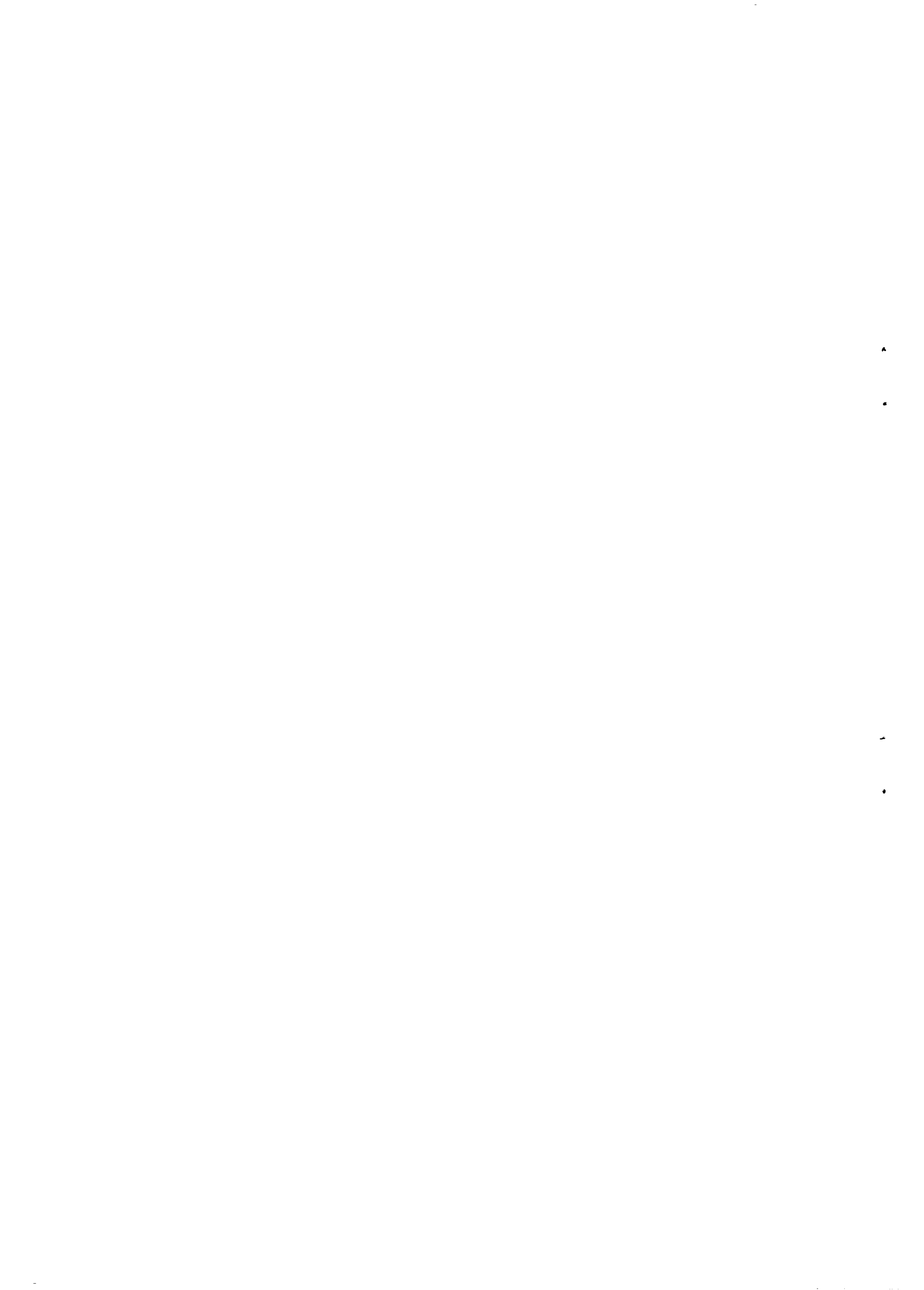
HAMUYEBE VILLAGE:

1. The village Committee was happy to welcome the team back to Hamuyebe. An official statement from the village government is attached (App. 1)

2. Children were already getting a meal at School twice a week (Mondays and Thursdays). Parents will start to contribute to this programme from January 1992 and the children will start to get a meal every day.

3. The School children had developed impressive vegetable gardens near the lake. Vegetables included spinach, salad, tomatoes, cabbage, carrots, and onions.

4. Only a few villagers had started to develop Vegetables gardens around their homes due to the dry weather. some villagers had started to work on small vegetable gardens near the lake.



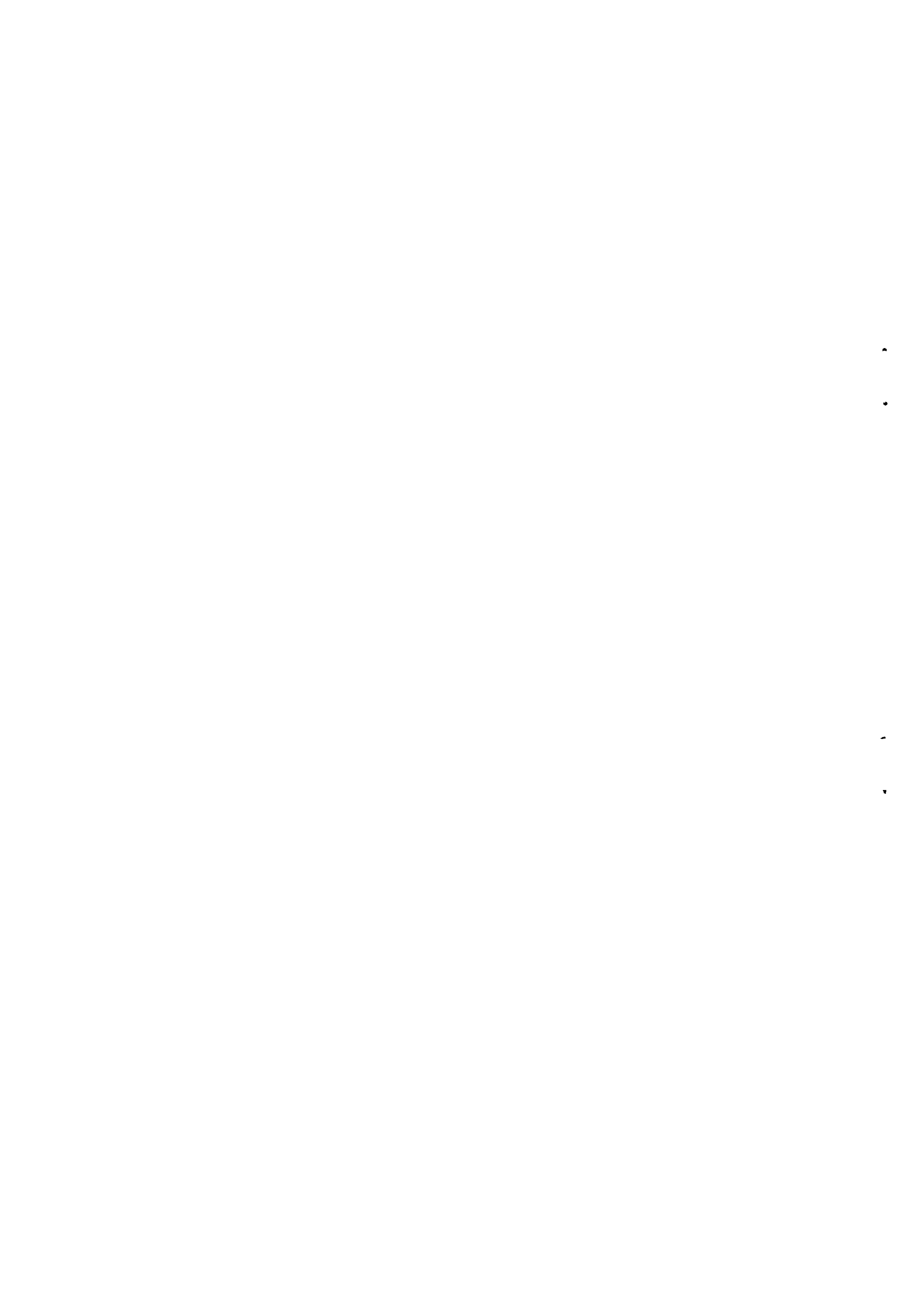
5. The village secretary reported that 340 new household latrines had been constructed by the villagers during the two months of implementation. Although there was no base-line data established at the beginning, the visiting team was convinced that the report was quite accurate because a random visit to a few households revealed quite a number of completely new latrines. It was noted, however, that most latrine superstructures were quite temporary although the pits were of reasonable depths.

6. Construction of two public latrines on the beach had already been effected and inspection of these latrines by the health team revealed that they were being used regularly by many villagers.

7. Few new dish racks were noted but it was difficult to certify whether villagers boiled their drinking water as resolved by the parents meeting.

8. The habit of bathing in the lake had not changed because the villagers do not have alternative sources of water.

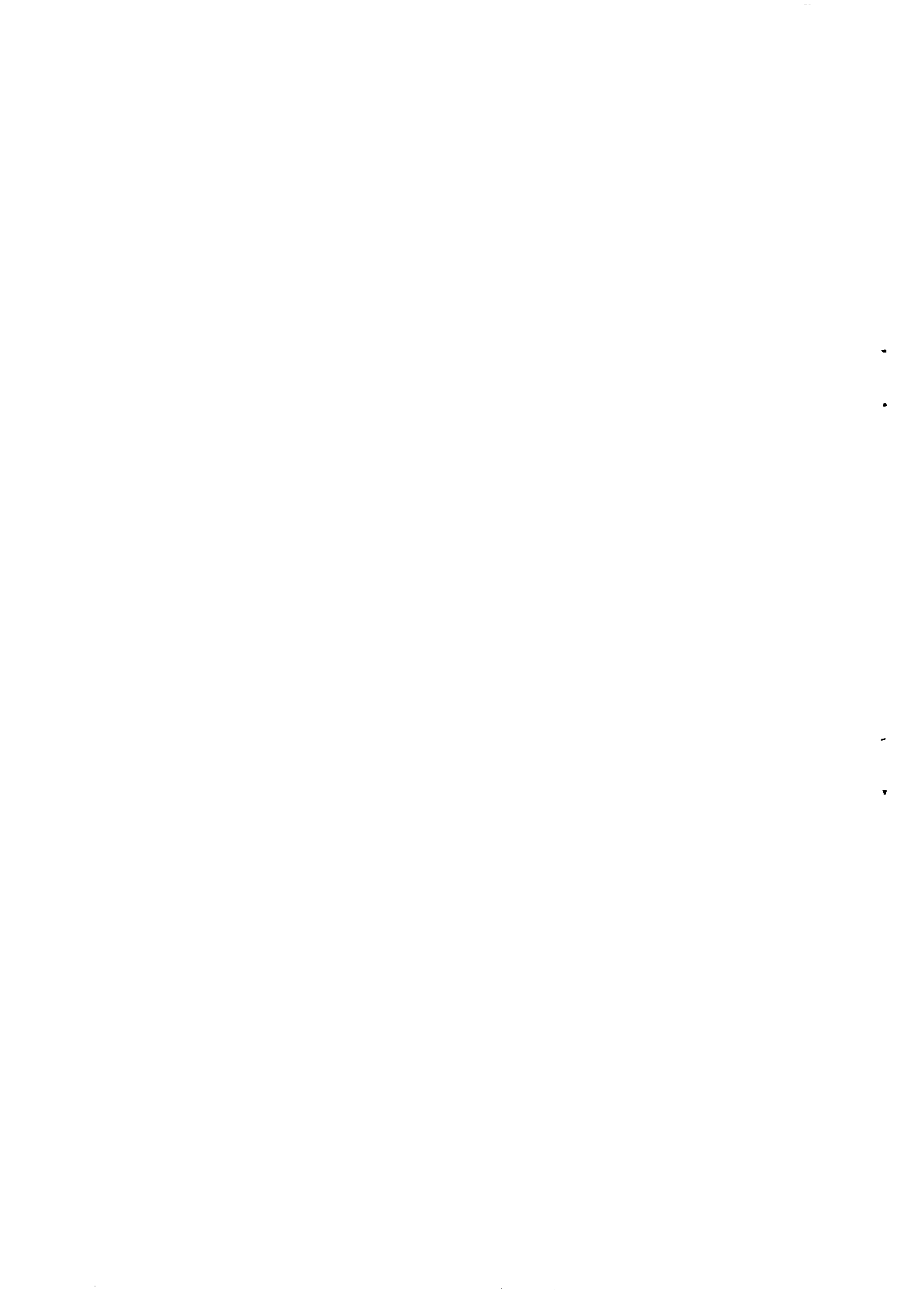
9. The village Secretary felt that well over 50% of the children found to have various health problem during the medical check up had been taken to various [illegible] effectively treated. It would be interesting to prove this scientifically by re-examining the pupils 3-6 months after the first examination.



LUCHELELE VILLAGE:

The results were not as encouraging as in Hamuyebe. The village government was less enthusiastic and there was no official statement from the village government. However, the following improvements were noted.

1. The School Committee which had failed to meet for several years had met to discuss the possibility of providing a meal for the children at School. The Head teacher reported that the children are already getting one meal at School every day.
2. The School had started to prepare the ground for small vegetable garden but due to water shortage nothing had been planted yet.
3. No households had started to develop vegetable gardens.
4. Only a few houses had new latrines. The village secretary told the team that construction of permanent latrines was extremely difficult at Luchelele due to the sandy soil. The HESAWA Sanitary Engineer has been asked to look into this problem and make appropriate recommendations.
5. Construction of public latrines along the beach had not been done and the village secretary told the health team that soil conditions on the beach were not suitable for pit latrine construction due to the sand.
6. The number of children wearing shoes in the School had not changed although the parents had resolved to buy simple shoes for their children.
7. Drying racks and Rubbish pits were not abundant and boiling of drinking water could not be assessed.



ADDITIONAL COMMENTS AND RECOMMENDATIONS.

Having gone through the whole exercises, I would now like to make the following additional comments and recommendations.

1. This School health and Sanitation package should be used as a means of entering into any village in the programme area.

2. The village health Committee should meet immediately after the parents' meeting to discuss details of implementing the parents' resolutions. This meeting should also be attended by, at least, one member of the district health team. At this stage, the Committees should also be trained on what role they are expected to play in this programme.

3. The village health committee in collaboration with the head teacher and a member of the district health team should work out appropriate means of filling out Form Hs I (App. 4) immediately after the parents' meeting. Suitable standard VII pupils could be trained and instructed to do this work under the supervision of VHWs and the teachers. This data base will be used for future evaluation of the programme.

4. Implementation should start in the existing pilot areas for HESAWA. These areas will later be used as teaching laboratories for the remaining parts of the districts.

A P P E N D I C E S

App. 1

RISALA YA WANAKIJIJI WA HAMUYEBE KWA NDG. MSHAURI MKUU WA HESAWA WA KANDA. TAREHE 31.10.1991.

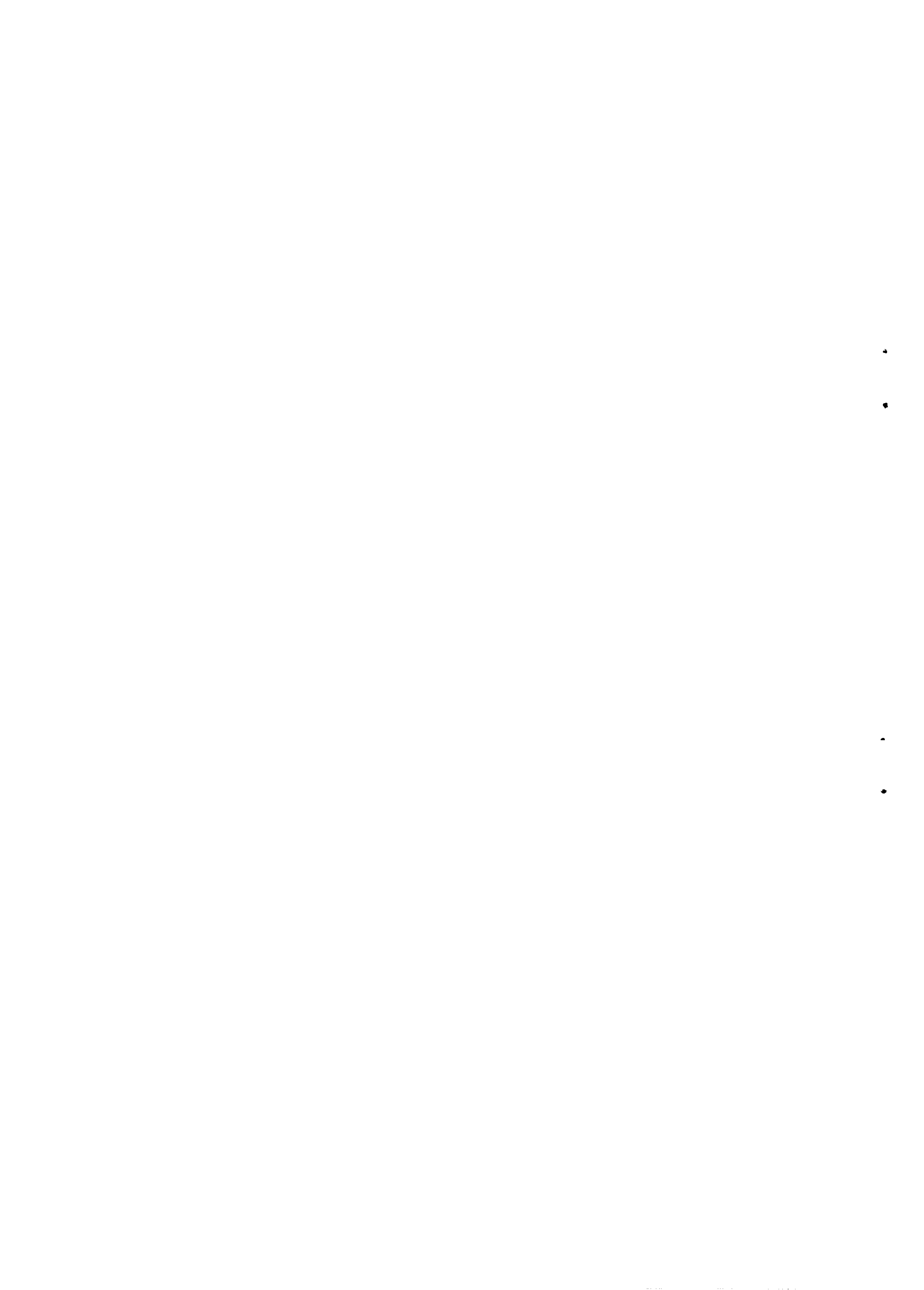
Ndugu, Mshauri Mkuu wa Hesawa wa Kanda

Sisi Wanakijiji wa Hamuyebe Wilaya ya Ukerewe tunayo furaha na heshima isiyo kifani kuwapokeeni kijijini kwetu. Ni tunu iliyoje kijiji chetu kuchaguliwa kati ya vijiji zaidi ya themanini katika Wilaya hii na kati ya maelfu vilivyoko Mkoani Mwanza. Hii ni bahati ya aina yake na hatukuitaraji kabisa. Kwa hali hiyo tunasema karibu sana.

Ndugu, ilikuwa ni tarehe 12/8/91 tulipofikiwa na Waganga toka Ofisi zenu za kanda na Mkoa kufanya shughuli ya Upimaji wa Afya za Watoto hapa kijijini. Ugumu wa kazi hiyo yenye tahadhari na uangalifu makini unaeleweka kwa kila mmoja wetu kwa sababu inagusa uhai wa Binadamu. Kwa mori na wito wa kazi yao wahusika (Team members) waliongozwa na Dr. E.S.Mwasha walifanya kazi hiyo kwa muda wa siku tatu yaani kufikia tarehe 14/8/1991 ikawa imemalizika na tayari watoto 260 walipimwa. Tunawapongeza sana kwa sababu moyo na upendo waliotuonyesha kwa siku hizo chache tulikuwa kama watu tuliofahamiana kipindi kirefu.

Walishauri kukutana na Wazazi na Uongozi wa ngazi zote za kijiji kwa jumla. Tarehe 21/8/1991 timu hiyo ikatoa matokeo ya mambo yanayotuathiri kama ifuatavyo:-

- Watoto hawapati lishe ya kutosha.
- 90% ya watoto wote hawapati staftahi (kifungua kinywa).
- 100% hatupendi mboga za majani kwa hali hiyo imesababisha watoto kuwa na upungufu wa damu. Kiasi cha 66% ya watoto wote walikuwa ya Hb 65% na 34% ya watoto wote walikuwa na asilimia ya HB kati ya 65-75%
- Waliopatikana na vijidudu (vimelea) vya kichocho cha tumboni 22%, kichocho cha mkojo 2%, minyoo mingine ya tumbo 18%. Jumla ya wenye vimelea hivyo ni 42%.
- Kuharisha pia kunatuathiri na matatizo mengine ya Ki-Afya.



NGUZO (VYANZO) VYA MATATIZO:-

Vyanzo hivyo ni pamoja na kutokuwa na lishe ya kutosha, kutotumia mboga za majani, vyoo vya nyumbani na vya jumuiya na kutokuwa na tabia ya usafi ikiwa ni pamoja na usafi wa mazingira, kutokunywa maji safi na salama pia hatuna chanja za kuanikia vyombo.

MAAZIMIO:-

1. Kila familia iwe na bustani ya mboga za majani na kujenga tabia ya kula mboga hizo.

2. Kila familia kuchimba vyoo na kuvitumia

3. Kuchimba vyoo vya jumuiya hasa sehemu za kandokando ya Ziwa ili wavuvi na wanakijiji wazitumie.

4. Kunywa maji safi na salama (yaliyochemshwa na kuchujwa).

5. Uchimbaji wa mashimo ya takataka na utangenezaji wa chaga za vyombo kila familia.

6. Shule ianzishe bustani za mboga na mpango wa kuwapatia watoto chakula wakiwa shuleni ifanyike.

UTEKELEZAJI:

Ingawaje ni kwa kipindi cha miezi miwili tu jitihada iliyofanyika ni kama ifuatavyo:-

Mara tu baada ya ushauri, shule ilikuwa ya kwanza kulima bustani ya mboga za majani kama mchicha, kabeji, vitunguu na nyanya, Hizo huuzwa kwa wanafunzi kwa bei ya chini pia wengineo wanaohitaji. Walimu walifuata njia hizo kwa kuomba sehemu za kulima kando ya ziwa, pia baadhi ya wanakijiji walianzisha zao bustani majumbani na baadhi ya wanafunzi wanazo zao binafsi.

Vyoo - Asilimia kubwa ya familia wana vyoo na wanavitumia na wengine ambao hawakuwa navyo wamechimba. Hii ni pamoja na kuwa na mashimo ya takataka.

- Maji safi na salama - Kadri ya 50% ya Wanafunzi sasa hivi wanakunywa maji haya aidha ushauri na kushawishi kunaendelea.

- Uchimbaji wa vyoo kando ya ziwa umefanyika katika baadhi ya sehemu na mkakati wa serikali ya kijiji kuhakiki haya bado unaendelea.

- Chakula shuleni - Mpango huu umefanyika kwa kiasi fulani kwa sababu kutokana na school fund sasa hivi watoto wanapata uji angalau kwa siku mbili Jumatatu na Alhamisi. Mpango wa wazazi kuchangia huu utekelezaji ni mpaka January 1991. Hii imetokana na baa la njaa lililokumba Wilaya hii kutokana na kuugua kwa mihogo (Cassava-milbags). Kwa hivyo wanakijiji wanajihami kwanza ili kupata vyakula vya kutosha.

MAOMBI:

Kutokana na mpango huu wa HESAWA tunaomba yafuatayo

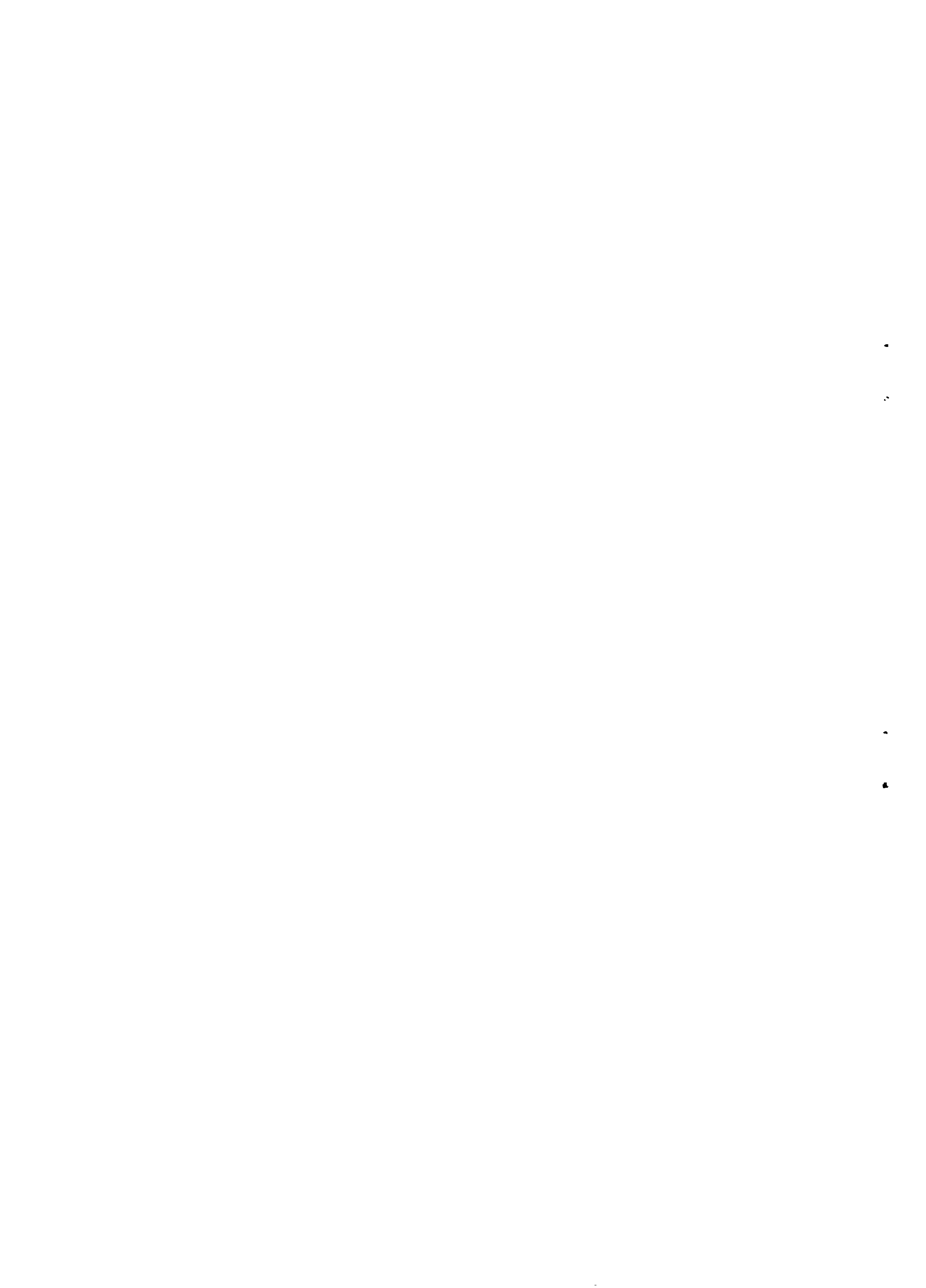
1. Ichimbe vyoo vya kudumu hapa shuleni pia kandokando ya Ziwa.

2. Tuletewe ng'ombe wa maziwa kwa wanakijiji pia walimu ili kupata ongezeko la maziwa kwa Wanafunzi na wanakijiji kwa jumla. Na kwa wale wote watakaopata ng'ombe hawa sharti mojawapo liwe ni kuchangia angalao lita moja kila siku kwa ajili ya wanafunzi shuleni.

3. Tuletewe vyombo bora vya kupikia uji shuleni. Tunashindwa kumudu ununuzi wa sufuria kwa sababu ni bei kubwa mno.

4. Matibabu kwa wale waliopatikana na magonjwa.

Ni sisi Wanakijiji wa Hamuyebe.



FORM A.

SCHOOL HEALTH AND SANITATION PROGRAMME

NO	NAME	STD	AGE	SEX	WT	HT	AC	HB	B/S	URINE	STOOL	DIARH.	B.F.	CLINICAL

MPANGO WA HESAWA KUHUSU USAFI WA MAZINGIRA NA AFYA YA WATOTO SHULENI

KANDA YA ZIWA.

TAARIFA YA DAKTARI KUHUSU AFYA YA MTOTO:

(Form B)

Jina la shule:.............................

Jina la Mtoto:............................. Namba........

Hali ya Lishe:

Vipimo vya Damu:

Vipimo vya Mkojo:

Vipimo vya Choo:

Matatizo mengine:

Ushauri wa Daktari:

Sahihi ya Daktari.......... Tarehe:..........

Form HS-1

~~TAARIFA YA WAHUDUMU WA AFYA VIJIJINI (VHW)~~

Taarifa ya kipindi cha Miezi Mitatu

Kipindi __________ Hadi ______

(Jaza nakala tatu kila baada ya miezi mitatu)

KATA ____________ TARAFA ____________ WILAYA ____________

Jina la Kijiji ____________

Jumla ya Wakazi ____________

Majina ya Wahudumu wa Afya 1. ____________

2. ____________

3. ____________

4. ____________

Kamati ya Afya – Ipo ☐ Haipo ☐

Kamati imekutana kipindi hiki Ndiyo ☐ Hapana ☐

Jina la Balozi	Jumla ya Kaya	Kaya zenye choo			Kaya zinazopata maji ya						Kaya ambazo hazina			
		Bora	Kibovu	Hakuna	Bomba	Kisima	Chemi-chemi	Mvua	Mto/ Bwawa	Nyingine	Shimo la taka	Mazingira safi	Kichanja	Bustani ya mboga

Nakala 1. Mwenyekiti wa Kijiji 2. HC – TOT 3. Nakala yako.

App. 5

TAARIFA YA SUB-DISTRICT TOTS

Kipindi ______________ Hadi ______________

(Jaza nakala tatu kila baada ya miezi mitatu)

Form Hs-2

Wilaya ______________

Tarafa ______________

Jina la Kata ______________

Jumla ya Wahudumu wote ______________

Jumla ya Vijiji ______________

Jumla ya Wahudumu waliohudhuria semina kipindi hiki ______________

Jumla ya Wanakijiji ______________

Kamati ya Afya (Kata) - Ipo ☐ Haipo ☐

Jumla ya Wahudumu (wapya waliofundishwa) ______________

Kamata ya Kata imekutana/Haikukutana kipindi hiki.

Jina la Kijiji	Jumla ya Mabalozi	Jumla ya Kaya	Kaya zenye choo			Kaya zinazopata maji ya						Kaya ambazo hazina			
			Bora	Kibovu	Hakuna	Bomba	Kisima	Chemi-chemi	Mvua	Mto/Bwawa	Nyingine	Shimo la taka	Mazingira safi	Kichanja	Bustani ya mboga

Nakala: 1. Medical Assistant incharge Health Centre 2. District Trainer of Trainers 3. Nakala yako

App. 6

Quarterly Report from DToTs to RHO

Form Hs-3

(RHO to forward one copy to ZHCO with comments)

Name of District ______________________

Population ______________________

Number of Wards ______________________

Number of Villages ______________________

Total number of Balozis ______________________

Total number of Households ______________________

Number of new VHWs trained this Quarter ___________

Total number of VHWs in the district ____________

Number of VHW who attended refresher courses this Quarter ________

Number of villages whose VHC met at least once this quarter _____

Number of Wards whose WDC met at least once this Quarter _________

Number of Households with :-
1. Well constructed and well kept latrines ______________________
2. Poorly constructed and poorly kept latrines __________________
3. No latrines at all _____________

Number of Households that get their water supply from:-

1. Pipe ________________
2. Well ________________
3. Spring ________________
4. Rain ________________
5. River/Dam ________________
6. Other ________________

Number of Households without:-

1. Rubbish pit ________________
2. [illegible]
3. Utensils rack ________________
4. Vegetable gardens ________________

Comments: ____

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The DARE process

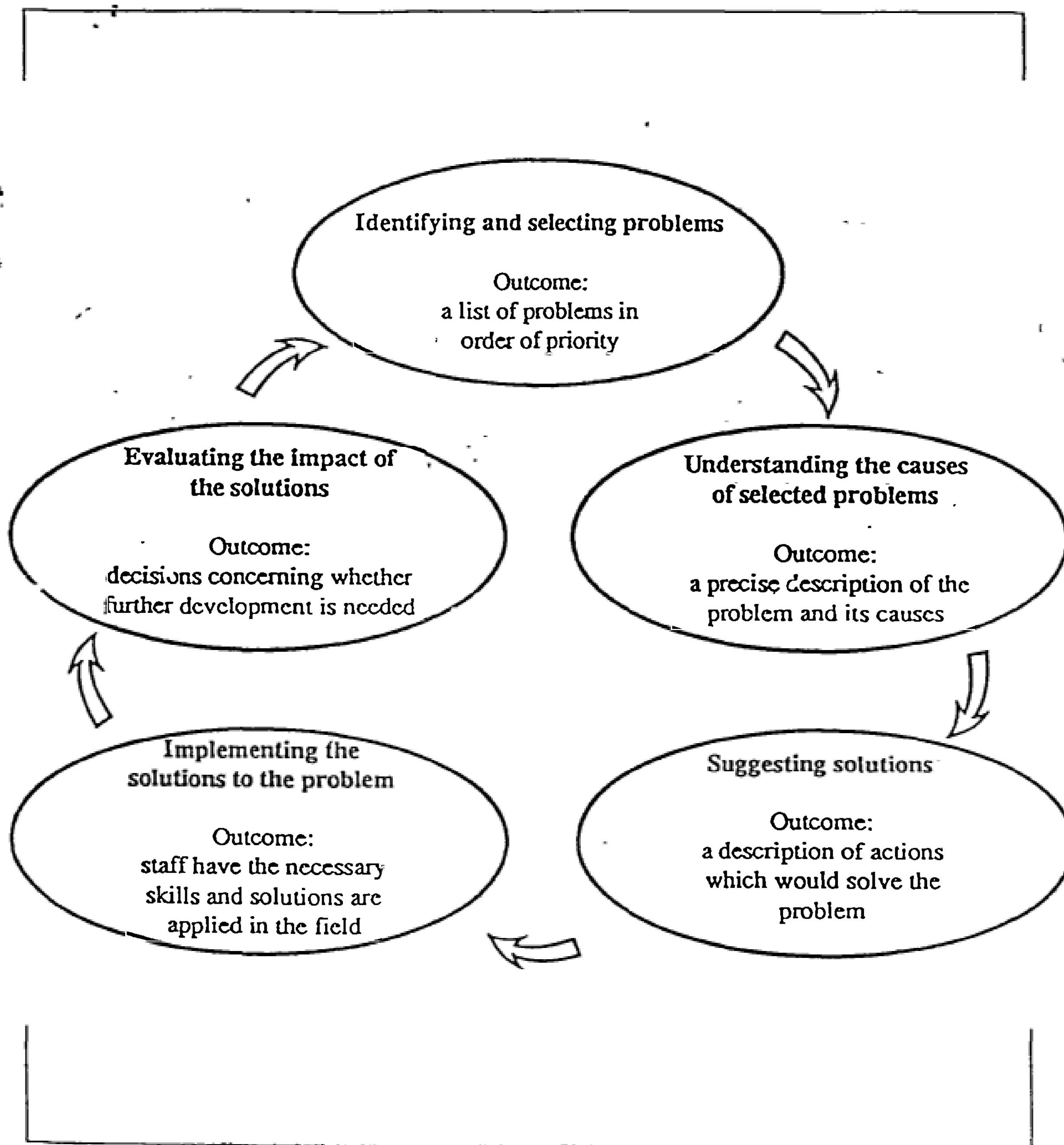

Figure 1

Obviously, in real life this "step-by-step" approach to solving problems cannot be followed precisely and rarely proceeds in such a structured way. However, it is presented in this way for clarity, and to make it easy to use. It is hoped that as the WHO programme on Strengthening District Health Systems develops, case studies of actual cycles of the DARE process will be collected and made available to those facing the problems in the field.