Domestic use of Water and Sanitation

A BEHAVIOURAL STUDY IN TWO SELECTED AREAS OF SRI LANKA

Sponsored by

World Health Organisation undertaken by the National Water Supply and Drainage Board, Ratmalana.

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By

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Short Term Consultant — Social Science

With A Foreword

By

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FOREWORD

It gives me great pleasure to commend this behavioural study successfully carried out on the beliefs and practices regarding water supply and sanitation during this period of the International Water Supply and Sanitation Decade 1981-1990. The Study commenced on 1st December, 1981 and was completed on 31st March, 1982.

This Study was promoted as a joint venture by UNICEF and World Health Organisation to ascertain the various social, cultural, economic and physical factors which influence domestic water use, hygiene and defecation practices traditionally handed down through generations, particularly in the rural setting among the lower income groups.

In achieving this objective, the services of Mr. H. I. Karunadasa of no mean ability in this type of study, who had extensive experience in planning, monitoring and evaluating case studies and research in the field of Sociology and Anthropology, were acquired by us.

You will gather on perusing this Study, the very illuminating findings extracted from communities in two districts, namely, Moneragala and Kalutara which Mr. Karunadasa has so meticulously compiled after a strenuous effort. He has carried out a splendid job, undergoing many hardships in accomplishing this task. We are very grateful and thankful to him for opening the field for detailed studies on the highlights of his findings.

This is the first attempt of its nature in our country and I commend this Study as a very valuable document for all whose interests lie in developing from it suitable assistance to the communities in our country. I have no doubt that the National Water Supply and Drainage Board and allied authorities will greatly benefit by this Study and it would enable them to utilise the findings to the best advantage in the furtherance of their objectives to provide safe drinking water and sanitation to all the people in our country.

Finally I would thank The Maharaja Organisation Limited, manufacturers of 'S-lon' water pipes and fittings for having kindly agreed to finance the cost of printing this study.

Sgd. **N. D. Peiris**

Chairman,

NATIONAL WATER SUPPLY & DRAINAGE BOARD

ACKNOWLEDGEMENT

The successful completion of this study within the stipulated four months period is due to the strenuous efforts of many, and amongst whom my great indebtedness, deeply felt feelings and gratitude are extended to Mr. N. D Peiris, the Chairman, National Water Supply and Drainage Board who looked into all aspects of the study from its early inception through consultancy meetings with the other members of the Consultancy Review Panel namely, Mr. R. H. P. Fernando, Senior Assistant Secretary, Ministry of Local Government, Housing and Construction, Dr. Mohan Rodrigo, Assistant Director (Environmental Health) Ministry of Health, Mr. Jack Sell, Chief Water Supply and Sanitation UNICEF, Mr. Percy Lao, W. H. O. Sanitary Engineer and Dr. N. Ratnapala, Professor and Head of Department of Sociology and Anthropology, University of Sri Jayawardenapura

I owe my special thanks to Dr K. H. Notaney, W. H. O Representative and his staff and Mrs. Hoda Badran UNICEF Representative and her staff in facilitating and fulfilling their share in the management of the study, and the staff of the Health Ministry comprising Mr. B. C. Perera, Secretary Health, Dr. Malinga Fernando, D. H S., Dr V. T De Silva, D. D (PHS) and Dr. T. Munasinghe A. D. (H. E. &. P.) for giving me the necessary release in time to undertake the study. I am grateful to Dr. C. H. Piyaratne, Regional Adviser, Health Education in SEARO, W H. O., New Delhi who during his short period of stay in Sri Lanka provided me valuable guidance in planning this study from its beginning. I tender my thanks to Mr. D. Konchady UNDP/WHO Project Manager and Dr. K. V. Raghava Rao, W. H. O. Hydrogeologist for their comments, suggestions and encouragements received at all stages of the study.

I am also thankful to Mr C. J. Goonatilake, Secretary N. W. S. D. B. who handled all administrative and secretarial work in respect of this study and Miss S. R. Dias, Assistant Secretary for covering up work during the absence of the Secretary.

During field work Mr. K. B. Boyagoda, Resident Engineer N. W S D. B., Moneragala and his staff contributed everything possible to make this study a success. I am greatly indebted to Mr. D. M. Seneviratne, H. E. Kalutara, and Mr. P. M. Jayasundara, H. E. Monaragala for assisting in conducting field studies and collecting data During the initial phase of the pilot survey the support received from the A C. L. G., Kalutara and his staff particularly Mrs Rani Rodrigo, C. C. O., Kalutara is greatfully acknowledged

Others whose assistance must not pass unnoticed are Mr. A. Punniyam who did a part of typing of this study and Mrs. C. Irangani Rupasinghe and Miss H. P. Sriyani, Health Education Bureau for kindly consenting to the typing of the balance and having done an excellent job of work in a very short period of time and Mr. Ranjith Abeyratne, University student for assisting in field work. I tender my thanks to the Principal and staff of Angunakolapelessa Maha Vidyalaya, and Sarvodaya Tanamalwila for providing facilities to stay at Thanamalwila and Angunakolapelessa.

Finally, it is with a deep sense of gratitude I mention the villagers of Angunakolapelessa and Diyahoranduwa who have been helpful and co-operative during field work.

H. I. Karunadasa.

Chapter I

I. Introduction

1·1 Purpose

The purpose of this study is to explore in depth the behaviour related to sanitation and domestic use of water of the low socio-economic groups of Sri Lankans living in two localities; one in a dry zone area in Monaragale District and the other in a wet zone locality in Kalutara District. It need not be emphasized that a study of this nature has been a long felt need. The significance becomes more enhanced with the repeated stresses of such a need in seminars and workshops held in this country at national and international levels. This challenge which remained unanswered for a long period is met by this study to the fullest extent possible

It could reasonably be assumed that the findings of this study would be applicable to other areas of similar characteristics. It is expected that this study would meet some of the requirements of those who were craving for the knowledge of behavioural aspects of sanitation and the domestic use of water for the development of programmes for the purposes of expansion of sanitation and water supply services

1·2 History of survey methodology — and assessment of sanitary standards

With the introduction of the Health Unit system in 1926, and subsequently the Health Unit Guide wherein guidelines were provided the sanitarians were required to carry out a survey to assess the sanitary standards of their assigned areas.

Ever since this time, various types of surveys have been carried out by the Public Health Authorities of the Department of Health Services. Most of these surveys were exclusively confined to elicit data on the sanitary standards of premises and immediate environment. No emphasis was concentrated on the necessity of behavioural studies since the approach to solve most of health problems was different from what it is today In case of sanitation prosecutions were instituted when persuation failed. The process of prosecution was discouraged with the realisation of the importance of education in changing human behaviour as means of improving sanitation.

1·3 The need for education

This shift to education which required a behavioural diagnosis as its base for scientific development of health education and other programmes for the successful implementation of service programmes did not receive that much of favourable attention although programmes were implemented over the last three decades

1·4 The Morbidity pattern and behaviour

It was repeatedly stressed that nearly sixty per cent of those who seek O.P.D. treatment suffer from diseases of preventible nature which are reported mostly due to poor environmental conditions including polluted water supplies.[1] These causes are deeply rooted in the environment and it is said that without a basic change in the environment a major reduction in these diseases cannot be expected.[2] A close examination of morbidity statistics indicates an uncharged position of illnesses due to preventable causes for the last five years. This was particularly so in the context of the rural sector where the behaviour is still congenial to morbid conditions. Without suitably modifying behaviour favorable to maintain a good standard of health and to the programmes planned to bring about that change it is doubted whether the implementation of any programmes in the rural sector will yield the desirable results. This study which is designed to determine the behaviour pertaining to domestic use of water and sanitation practices is a progressive step to plan programmes effectively at a time when health for all is planned to achieve by 2000 AD and sanitation and safe water by

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1 Administration of Reports of D. H. S. Colombo.

2 Health Manpower study. W. H. O., SEARO, Nov. 1975.

1990. The fact that morbidity was not reduced to that appreciable degree suggests more concentrated efforts and new strategies to be invested in future programmes if the country wishes to achieve the already set goals for this water and Sanitation Decade.

1.5. Historical Background

Historical sources indicate that the ancient Buddhist monasteries were provided with facilities of water and sanitation. Ruins of Anuradhapura, Polonnaruwa, Mihintale and particularly the ruins preserved at the Folk Museum Anuradhapura show squatting plates and urinals made of stones of different designs. These evidences reflect a well disciplined sanitary behaviour of Buddhist monks. How far the influence of this monastic behaviour penetrated into the outside life of ancient Sri Lankans remains to be explored. Mahawamsa, the great chronicle of Sri Lanka has reference where King Pandukabaya (377—307 BC) provided sanitary facilities to the city of Anuradhapura by detailing five hundred chandalas (labourers of low social status) to clean sewers and five hundred each to clean the city and bury the dead. The great physician King Buddhadasa (388—416 AD) and his son King Upatissa (416, 458 AD) apportioned monies from royal treasury for public health work. The two good references from Knox in 17th century and Dr. Henry Marshal in 1846 state that dysentery was one of the commonest diseases in Sri Lanka

1.6. The Morbidity Trend

The scanty historical reference particularly in respect of bowel infections could be projected on to the present morbidity trend to a certain extent could be doubted to have been existing continuously over long years of history to the present day.

1.7. The Present Need

This condition was so far not successfully arrested and it could be hypothesized that an unchanged behavioural pattern favourable to this morbid condition would have accompanied and will continue to occur unless the social structure is penetrated at suitable points in a planned way to influence the related behaviour. It is therefore, highly opportune for the planners to accommodate a study of this nature with a panel of experts representing disciplines, of Sociology, Anthropology, Public Health, Water Supply and Sanitary Engineering and Management to provide technical and academic guidence at every stage of the study. This step not only enhanced the quality consistence but also assisted in the efficient management of the study within the stipulated period

1.8. The Study

The sampled villages were briefly described highlighting the needed and relevant areas related to the study.

In designing the methodology views of Anthropologists, Sociologists and members of the Consultancy Review Panel were obtained. Emphasis was also laid on terms of reference, objectives and intended behavioural outcomes.

Sanitation practices and the associated beliefs were explored in depth. Analysis of beliefs and the associated behaviour pertaining to sanitation were further elaborated to facilitate in identifying and developing, educational strategies.

The behaviour related to domestic use of water and the associated beliefs were also explored in depth. As in the case of sanitation the beliefs were further analysed to ease the reader in getting a better understanding of related behaviours. The prevalent beliefs of sanitation and domestic use of water in the selected two communities was separately provided.

Chapter II

2. The Methodology

2.1. General Objective

To organise and conduct an anthropoligical investigation of rural families of the low socio-economic strata and identify behavioral factors which influence the domestic use of water and sanitation practices

2.2 Specific Objectives

2 2.1. To plan and conduct a pilot investigation in Monaragala and Kalutara to elicit basic information related to behaviour pertaining to domestic use of water and sanitation practices.

2.2.2 Based on the pilot investigation findings and information collected by reviewing literature and contacting, knowledgeable persons to compile a preliminary list of behavioural factors pertaining to domestic use of water and sanitation practices

2.2.3 Utilising the field observation schedule developed for the purpose to explore in depth and identify the factors and their relations which are mostly responsible for behaviour pertaining to domestic use of water and defaecation practices.

2.2.4. On the basis of study findings to develop a set of guidelines which would serve as bases for researchers and others to undertake further research in respect of domestic water use and defaecation practices

2.3. Methodology

The methodology of this study includes four major areas as follows :

2.3.1. Review of literature relevant to domestic use of water and sanitation practices (defecation practices) and compile a preliminary list of factors

2.3.2. To interview national experts and others (in the field of Anthropology, Sociology, Public Health, Sanitary Engineering, Health Education and Administration) and to collect and compile a list of information of relevant subject area.

2.3.3. A pilot study will be conducted to collect behavioural data (crude profile) from the Districts of Monaragala and Kalutara This study data are utilised to match data and information collected by reviewing literature and interviewing national specialists of relevant subject areas The participant and non participant methods of observation which will be based on a broad based observation schedule will be utilised to collect information of the pilot study

2.3.4. Living in the sample villages and utilising the highly flexible broad based observation schedule developed for the purpose of participant and non participant observation, study in depth the behaviour related to domestic use of water and defecation practices and the life of rural families of the low socio-economic strata of Monaragala and Kalutara The participant and non participant methods of observation will be used for the period of over five weeks in the selected area of each District to collect the relevant information.

2.4 Sampling

2.4.1. List of A.G.A. Divisions of Kalutara and Monaragala were prepared An A.G.A. Division from each District was selected by drawing a lot In the case of Kalutara District A.G.A. areas which have urban characteristics have been eliminated — In the case of Kalutara District A.G A. area Matugama was selected while Tanamalwila A.G.A. Division was selected from Monaragala District

2.4.2. A list of Grama Sewaka Divisions was prepared. Since it was found that all Grama Sewaka Divisions are synonymous with socio-economic characteristics no G.S. Division was eliminated. From the list of Grama Sewaka Divisions one Grama Sewaka Division was selected by drawing a lot.

Sooriara was selected from A.G.A. Tanamalwila Division while Meegama-Dewagode was selected from A.G.A. Matugama Division

2.4.3. A list of villages from the selected Grama Sewaka area was prepared and villages having higher economic positions were eliminated Using the following criteria one village was selected.

2.4.3.1. Occupational status and total income of families.

2.4.3.2. Educational status

2.4.3.3. No. of families receiving state subsidy.

From the G.S. Sooriara, the village Angunakolapelessa was selected while from Meegama — Dewagoda — the village Diyahoranduwa was selected.

2.4.4. 25 families were selected from a cluster of families consisting of about 40 to 50 families on the basis of the following. Houses were selected as they were visited from the point of entry.

2.4.4.1. 8 to 16 families (houses) where neither a latrine nor a well was available.

2 4.4.2. 8 to 10 families (houses) where a latrine was available but no well was available.

2.4.4.3. 5 families (houses) where a well was available but no latrine was available.

In the case of Monaragala District criteria I and II were only considered since it was not possible to get houses to suit the criteria No. 3, so the entire sample had to be drawn from criteria No. I and II. In the case Diyahoranduwa the three criteria were taken into consideration.

2.5. **Development of field observation schedule for observation of behaviour — deeper analysis**

The field observation schedule which was developed by four stages is given below :

2.5.1. Review of literature

2.5.2. Consultation with national experts

2.5.3. Pilot study findings and experiences

2.5.4. Experiences of field investigations.

The preliminary list of observation areas was developed at the completion of first two stages. During the pilot investigation the schedule got further expanded and finally during field investigation stages more and more behavioural areas got into the schedule. The field observation schedule not only served as a set of guidelines but also assisted in planning for observation of behaviour and keeping notes.

2.6. **Survey of beliefs.**

The preliminary list of beliefs collected during the pilot investigation was further tested in order to obtain the degree of prevalence of such beliefs. The primary purpose of this survey was to identify the priority areas based on magnitude and importance to health to facilitate advance planning for deeper exploration

2.7. **Field investigation and data collection**

After few days of experiences with the community and establishing the necessary support through a programme of field and School Health Education behaviour expected to be observed was planned and while moving with the community the behaviour was observed. Discussions pertinent to the behaviour were held with villagers in the village and in ex-V.H's tea boutique. Each days collection of data was written in detail after field work and maintained. Notes were made in shortened form subsequent to the observation and in the absence of villagers

2.8. **Analysis and interpretation**

Each days collection of data was analysed according to broad categories. Separate sheets were maintained to note specific behaviours and once that was over after the study this was further analysed for the purpose of interpretation. These sheets were maintained in the field itself. This step was taken to avoid any behaviour getting missed in the note. The possibilities of getting missed were there because in keeping detailed notes the recall method was used. If any area was missing this was taken note of and on the subsequent days field visit the necessary observation was made and notes taken into the sheet of paper.

The information under broad categories was thoroughly examined before leaving the study area.

Local terms were clarified and meaning given wherever such terms were used.

Definitions of terms were also given to facilitate understanding and the context under which such definitions were used.

Refer Appendix 1 for more details on methodology.

Chapter III

3. Angunakolapelessa Village – Monaragala District

3.1. Geography of Area

Angunakolapelessa village is located about 8 miles from the main road between Tanamalwila and Hambegamuwa in Monaragala District. It is one of the eight villages of Sooriara Grama Sewaka area in Tanamalwila A.G.A. Division. It is bounded by three G.S. areas, west by G.S. Hambegamuwa east by G. S. Sittarama north by Balaharuwa G.S. and South by Hambantota District. It is a typical traditional Sinhalese village with houses scattered around two tanks and along the main road. The Sooriara runs through the village.

3.2. Housing

Of a total of 42 inhabited houses with a population of about 255 only 9 houses have tiled roofs with permanent walls while the rest of the houses have wattle and daubed walls with thatched roofs. Almost all these wattle and daubed structures which are to a greater extent confined to a small room and a kitchen are ill ventilated.

3.3. Soil

The soils in the area consist of red-brown earths in the low country terrain and alluvial soil of variable texture. Although this soil is ideal for paddy cultivation, severe scarcity of water does not permit villagers to make the optimal use of soil. The drought period is about 9 months each year (January to September) which allows only one crop annually. Before the rain comes with the North-East Monsoon in mid-October or early November the soil is very dry with dust and in many places cracked. This is more prominent in the months of August and September which are the driest months of the year

During the last five years the village has been subjected to more or less severe droughts. During this period there has not been enough water to fill the tank to its normal level and as a result, the entire land has been left unused.

3.4. Population

According to the latest census conducted in 1981 there were 40 households with 42 families living in Angunakolapelessa. The population was 286 with an average family size of about 7.

According to ex-Village Headman in 1960 there were 15 houses with a population of about 130. The expansion of the village population took place with the incoming of adjoining Sooriara inhabitants most of whom were their relations. According to him except for few families who have come from outside and settled down in the area for commercial activities the rest are all related to each other.

3.5. History of the Village

The village is about 125 years old according to older people in the village. From the same source it was reported that only some 5 families lived in the village about 50 years ago. It was found that each family had about 5 acres each and an unlimited amount of crown land for chena cultivation. At that time, they had severe problems, the most urgent one being the protection against wild elephants. Very often their crops were damaged by wild animals. About 20 years ago there was not even a cart track connected to the nearest tarred road at Tanamalwila which is about 8 miles away. The nearest hospital was at Tanamalwila some 8 miles away from their village

3.6. Education

According to older people about 25 years ago they had to go out of village for their primary education. Secondary education was available at Tanamalwila and Hambegamuwa, a traditional ancient village (Puranagama). The present Angunakolapelessa Maha Vidyalaya was constructed about 23 years ago and now this vidyalaya provides education up to G.C.E. Advanced level Grade. The college is located close to Tanamalwila Hambegamuwa main Road. The average educational level of the sample was grade 5.

3.7. Production

Most of the work in the village is concentrated on chena cultivation. Paddy is cultivated when water in Mahawewa and Angunakolapelessa tanks have reached sufficient level to provide water. Other means of

livelihood include animal husbandry, garden cultivation, and casual labouring. The cash crops both in chena and home garden include ground nuts, chillies, plantains, pumpkins cotton, mustard, Indian corn and kurakkan. The owners of paddy lands take to both paddy cultivation and chena cultivation during October and November period when they get sufficient water in village tanks

The local co-operative is the nucleus to provide subsidized food to villagers The food items are available at fixed rates at the Co-operative The private retail trade is very much limited. There are three tea boutiques which are combined with provision boutiques. The most demanded items at private retail provision shops include spices, dry fish, betel, coconuts and coconut oil soap, keresene, salt, sugar and bread. Almost all these items are brought from outside

There are two big mudalalis (wholesale and retail merchant) who buy chena products and handle the entire trade of the area

3.8. Economic life

According to Grama Sevaka Officer Sooriara, except for 11 families all families are below the income group of Rs. 300/- per month so, all these below Rs. 300/- income group receive the state subsidy. The 11 families are all Government servants. It was noted that they are also engaged in chena cultivation during the season

As mentioned earlier their only source of income is from chena products. If rain fails no chena work is undertaken and this means a hand to month life of below subsistance level. If they get rain at the appropriate time of the year it was found that they could manage without being heavily indebted to the local merchants.

This indicates that rain is very closely associated with their income and the standard of living

If they get sufficient rain they will be at self-sufficiency level and also could manage to settle their debts to the local merchant.

If they get little rain which is not sufficient the chena products will be affected and they will not be able to maintain a self-sufficiency level. They keep on taking food and other essential items from the local merchant on loan basis and with understanding to resettle the loan with chena products.

If they do not get rain they fell below subsistence level. They will be compelled to keep on buying their essential food items and other things from the local merchants on loan basis with the understanding of resettling the loan with chena products at next season (Reference Diagrams, Annex, 9 i, ii, iii).

3.9. Social Organisations

No organised social life was observed during the entire period of study (Jan. to Feb). It was reported that there are five social organisations in the area

(1) Rural Development Society

(2) School Development Council

(3) Death Donation Society

(4) Sports club — (attached to school)

(5) Sarvodaya Youth's Club

It was found that the R.D.S. meetings were not well attended and it is inactive. School Development Council and Sarvodaya 'Young Hanla' (Youth club) are active and staff of Angunakolapelessa Maha Vidyalaya is keen in organising social welfare work through Sarvodaya. Sports club is also attached to the School. Sports officer, Tanamalwila, visits the club to train the youths in sports activities. It was not possible to get chena cultivators participation during chena cultivation period, therefore organised social activities cannot successfully be launched during the chena cultivation period. Even the attendance of elderly children in Maha Vidyalaya is affected during this period

3.10. Health Status

3.10.1 Existing facilities

Angunakolapelessa village belongs to the Public Health Inspector Range of Wellawaya in the Medical Officer of Health Area of Monaragala in Superintendent of Health Services Monaragala. The P H.I.'s Office is located in Wellawaya which is about 30 miles from Angunakolapelessa. Medical facilities are available from Tanamalwila Rural. Hospital which is about 8 miles away and Hambegamuwa CD and M.H. which is about 6 miles from the area.

No private medical physicians are available other than the Registered Medical Practitioners who man the two rural medical institutions. Traditional

and auyrvedic practitioners are available in the area. They could be classified into 3 major groups

(i) General Physicians (called Sarvanga Veddu) 3 persons

(ii) Fracture and boil specialists, (Kedun-Bindun Veddu) 4 persons

(iii) Snake-bite specialists 2 (sarpa veddu)

In addition to these 9 traditional and ayurvedic practitioners there were 3 exorcists who visit houses on requests for exocery activities.

3.11 Use of Medical facilities

When this aspect was discussed during field visits it was pointed out that the villagers were unable to visit Hospital at such a long distance. The situation was very much aggravated when they did not find any transport to visit the hospital either at Tanamalwila or Hambegamuwa. Under these circumstances they were compelled to first visit the local native or ayurvedic physicians and in case if they did not find any improvement to Tanamalwila Rural Hospital. This situation was substantiated by the comments of the Registered Medical Practitioner Tanamalwila who when interviewed said that patients from distant areas were brought when the disease was at the advance stage and very often they had to transport such patients to Badulla General Hospital.

3.12 Morbidity Pattern

No accurate data are available with R. M. P. Tanamalwila or Hambegamuwa to determine the morbidity pattern according to illnesses statistically. The morbidity pattern illustrated below was based on the subjective judgements of the R. M. P. concerned. O.P.D. attendance is given in Appendix 15.

The mostly prevalent diseases according to R.M. PP in the area are as follows :

1. Diarrhoea
2 Malaria
3. Respiratory infections
4 Hookworm
5. Roundworm
6. Fevers
7 Infective Hepatitis

Except for No 3 and 6 the rest are water related diseases. There is, therefore a close relationship to the availability of water and rainfall in the area The R.M. PP indicated that the season for diarrhoea starts somewhere in late July or early August and lasts up till December and January

The most driest period of the year is in July and August. Few showers are expected in September. If these few showers failed the month of September would be the worst. According to them (R.M. PP) the peak of diarrhoea is reached in September. If rain is experienced there is a tendency for this trend to diminish and remains at a low level until December. All water sources (tanks, ara wells and V.C. well) available to them are exposed to the risk of contamination. When water is abundantly available this risk would become lesser while it would be very high when limited quantities of water are available for drinking and other domestic uses and as the rainy season approaches there is a probability for the same condition to prevail as more pollution is inevitable due to surface water entering water sources. Another behaviour that contributes to the causation and spread of diarrhoea is associated with chena activities. Elderly members of the family commence clearing of the jungle in August in anticipation of rain somewhere in October. They do not carry water when the chena is far away about 5 to 6 miles. During chena work under such extreme dry conditions they require more water for drinking. They have no alternative other than depending on available polluted water in ara[1] wells and in Kems[2] in jungles (The distance to chena from the village ranges from 2 miles to 8 miles). This drinking habit of polluted water is one of the causative factors for the increase of diarrhoea during the period.

The attendance of upper class children of Angunakolapelessa Maha Vidyalaya was very poor in the months of August, September and October, while August being the poorest—according to school authorities This may be attributed to the following

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1 'An ara' is a canal of water.

2 'Kem' — is collection of water in large stone cavities.

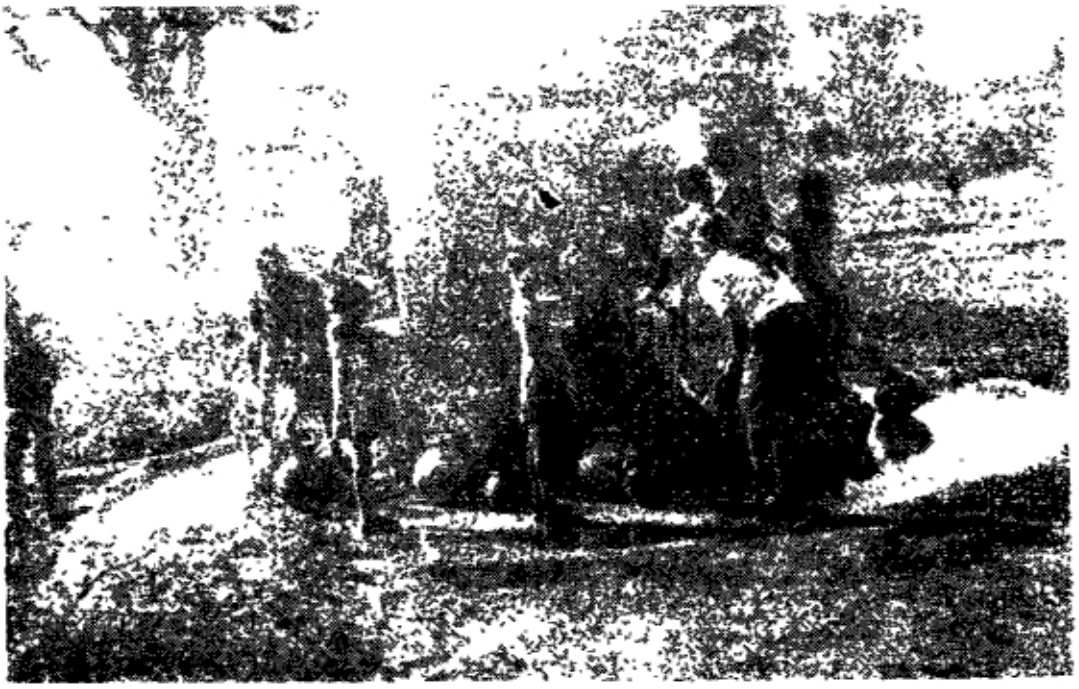
1. Recurrent attacks of diarrhoea during the period

2. Upper class children specially males assist their parents in Chena work.

School children when interviewed and requested to raise their hands if they had an attack of diarrhoea they all raised their hands and said "yes we had diarrhoea in August". Some repeated saying that even their parents had attacks of diarrhoea in the months of August and September.

As rain comes in October Malaria makes a beginning at late October. According to R.M. PP and villagers' worst months for Malaria were December and January. This is the peak of Malaria and thereafter it subsides and disappears temporarily from them towards the end of March.

According to R.M PP nearly hundred per cent of the child population suffer from hookworm and roundworm infestations. They affirm that almost all adults suffer from hookworm. This can be substantiated by the fact that nearly seventy five per cent (75%) of the population are used to open defaecation habits. (More details in later chapters). March to June are the months for respiratory infections. Even this situation can be attributed to poor housing and environmental conditions.



Village girls at Angunakolapelessa V. C. well in the morning.

Chapter IV

4. Diyahoranduwa Village – Kalutara District

4.1. Geography of area

Diyahoranduwa is located about 7 miles from the main road between Alutgama and 5th Mile post through Meegama and Ladduwa in Kalutara District. It is one of the six villages of Grama Sewaka, Meegama - Andawala area in Matugama A.G.A. Division. It is bounded east by G.S. Walagedara west by Indigastuduwa, South by Bentara Ganga or river and north by Bondupitiya Grama Sewaka areas respectively. It is a typical rural Sinhalese village with a population of about 595 (according to the 1981 census)

4.2. Housing

Of a total of about 105 houses nearly 20 houses have tiled roofs with permanent structures. The other houses are wattle and daubed temporary structures with cadjan-thatched roofs. All these temporary structures are ill-ventilated and had on an average one bed room, kitchen and a verandah Houses are located closed to each other on blocs of lands ranging from 15 to 40 perches. Some of these blocs have been encroached by the people about 30 years ago while the rest were given over to them by the Government. Those encroached blocs were also subsequently handed over to the same people. These residents who received blocs from Government enjoyed about 20 perch blocs while those who have encroached received what they have enclosed up to a maximum of 40 perches

4.3. Soil

The soil in the residental area consists of hard cabook while low lying area is rich in alluvial black soil ideal for paddy cultivation The low lying areas are utilised for paddy cultivation. Some areas remained abandoned due to water management difficulties. The area gets heavy rain during south west monsoon in May to August, and conventional rain in April and September and some rain during north- east monsoon.

4.4. History of the Village

The village Diyahoranduwa is about 50 years old. It was about 50 years ago a crown land which was encroached by the residents close by for the purpose of putting up a hut and living. About 25 years ago the Government, under the village expansion scheme allocated 20 perch blocks to the villagers. Those, who have enjoyed a slightly bigger extend of land continued to enjoy the same bloc of land with a permit issued by the Government.

4 5 Transport and Communication

The village is accessible through Aluthgama-5th Mile post road through Meegama and Ladduwa. This road extends from Alutgama—Matugama Road at Warapitiya and runs through Ladduwa, Meegama and Ritiketiya up to the 5th mile post. The nearest town is Dharga town, thickly Muslim populated area which is about 3½ miles away. The daily papers are available through Alutgama and Dharga town. Nearly 15 per cent of the families have radios.

4.6. Population

According to the latest census in 1981 there were 105 houses in Diyahoranduwa. The population was about 595 with an average family size of about 5.6. In 25 years ago this village had only about 20 houses. The village expanded rapidly under the Governments village expansion scheme.

4.7. Education

The Grama Sewaka Division Meegama Andawala has three schools, namely, Meegama Maha Vidyalaya, Dewagoda Primary School and Andawale Vidyalaya. All these schools are within one mile distance to the village. Meegama Maha Vidyalaya is within about a quarter mile distance from the closest point of the village

4.8 Occupation

The villagers were engaged in different types of occupations which were mostly semi skilled jobs. Some of the occupations are bakers, carpenters, labourers, traders (on a very minor scale) and tappers. The Grama Sewaka Officer mentions that a considerable number of males particularly labourers are unemployed. In the area selected for the study there were 9 youths who have left school and are unemployed. There were

some youths who were under employed They find jobs at Bentota and Alutgama Tourist Hotels as labourers during the tourist season and during the rest of the period they remain at home without having any employment

4 9. **Economic position**

Diyahoranduwa is well known for its poverty in the neighbouring villages. This village was the oldest settlement which no one now mentions as a settlement. According to the Grama Sewaka Officer except for 18 houses the rest were all enjoying the state subsidy. The area selected for the study consists of 25 houses All these houses were receiving state sunsidy. This means that all these houses are grouped under Rs. 300/- income group. At the interviews it was discovered that their earnings were hardly sufficient to spend a day. What they emphasized very often was that they just 'manage' the day.

There were no improvements in their housing for the last 25 years. The Grama Sewaka Officer informed that some of the chief occupants have left the village for distant areas in search of jobs. They send money home for the subsistence of other members in the household.

Unlike in Angunakolapelessa they do not have any lands to be used for cultivation purposes. The only land they owned was the land they were occupying and the extent of which was confined to about 20 perches which have to be shared by all the members

4 10 **Social Organisations**

The following social organisations were found in this area

1. Rural Development Society
2. Community Council
3. Sarvodaya Youth Club
4. Welfare and Religions Society

Of all the organisations the Rural Development Society was the active one in the village. At the time of this study the society was in full swing in constructing a community hall to enable them to conduct their meetings and other welfare activities of the village.

The Community Council and the Sarvodaya Youth Club were not found active These societies were formed but neither meetings nor any work has been done up to the time of the study. A preschool which was organised to take place at the early inception of its formation did not take off the ground.

The Welfare and Religious Society is said to be active during Wesak Season (i.e. in May) where they organise various forms of religious activities in the village.

4.11 **Health States**

The village Diyahoranduwa belongs to the area of Medical Officer of Health Matugama in the Superintendent of Health Division of Kalutara.

Medical facilities are available from Dharga town R.H. which is about 3 miles away from the village and Ittapane R.H. which is about 2 miles on the other side of the Ittapane river a branch of Bentota River Private medical consultation is available at Alutgama Town which is about 6 miles away. No traditional or ayurvedic practitioners are available in the village, however, there are native physicians in adjoining villages of Meegama, Ladduwa and Dewagoda These physicians are very often consulted for illnesses like boils, fractures and snake bites. For all other illnesses they visit Dharga Town Hospital and Alutgama for private medical consultation

4 12 **Use of Medical facilities**

During discussions it was found that mos of the villagers were reported to be avoiding Dharga Town Hospital. Most of the villagers used to visit Alutgama for private medical consultation and Ittepane Hospital for services provided by the Department of Health Services. In case of illness perceived to be requiring urgent medical attention patients are removed to Provincial Hospital Kalutara

4 13 **Morbidity pattern**

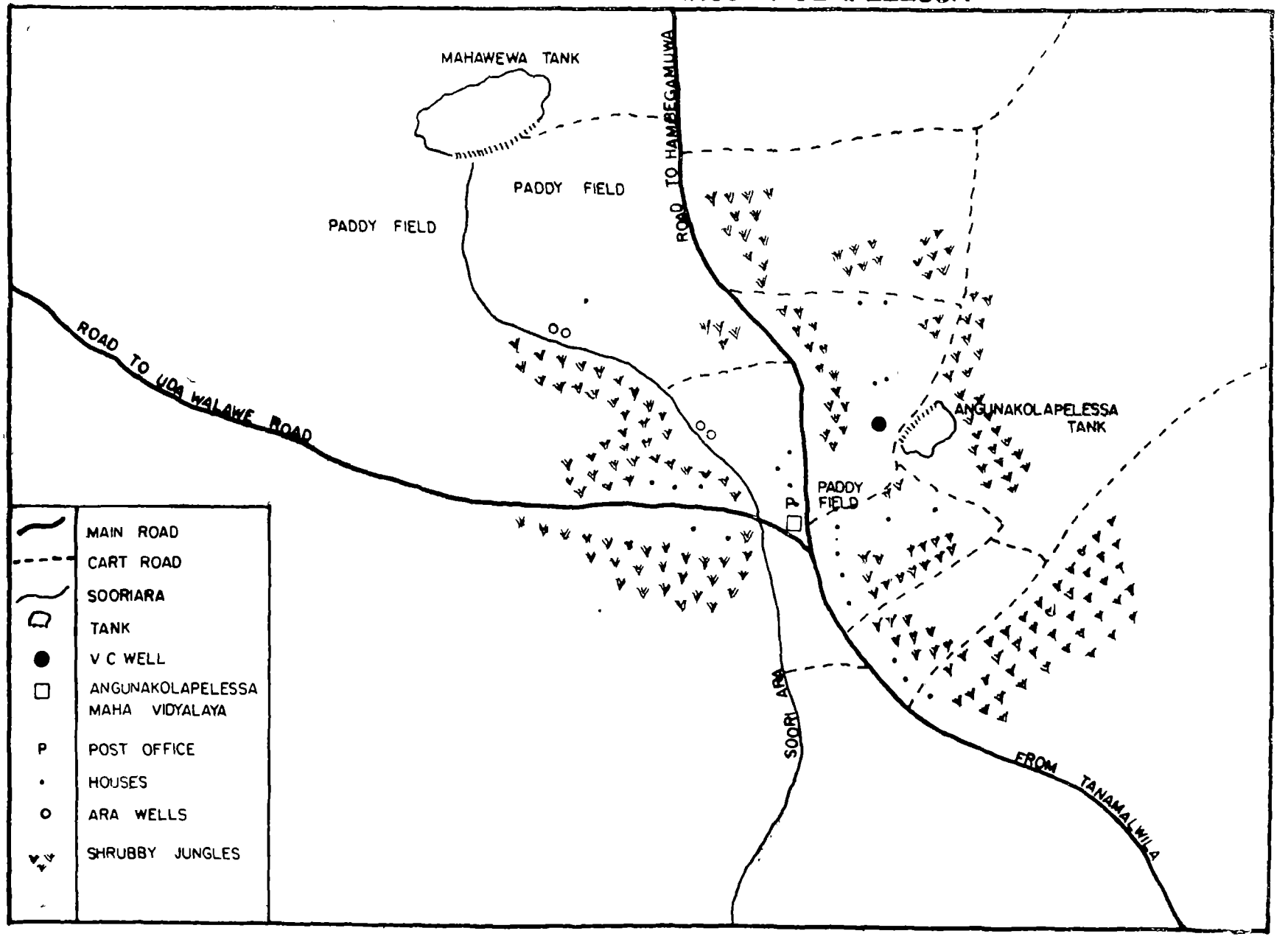
No statistics were available separately for villages in the Government Hospital During visits to houses and interviews with mothers and leaders in the village the following diseases were said to be prevailing in the area.

1. Diarrhoea — particularly infants and preschool children.
2. Respiratory infections
3. Helminth infestations
   - i Roundworm
   - ii Hookworm
4. Influenza
5. Infective Hepatitis

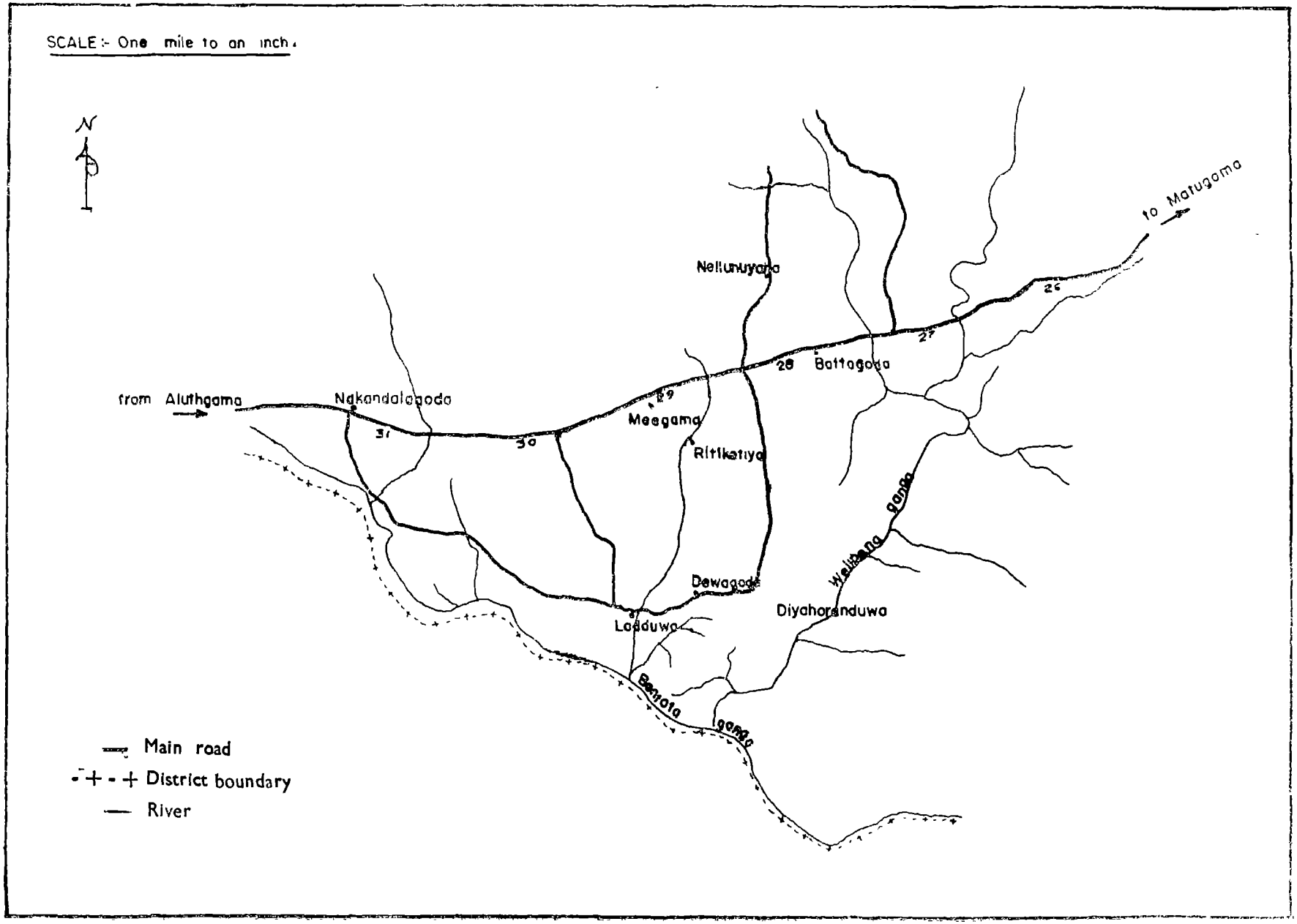
It was also found that mothers of this village were seeking worm treatment for their children once in every three months in Alutgama and Dharga Town.

As in the case, of dry zone. no seasonal pattern was noted.

SKETCH MAP - ANGUNAKOLAPELESSA



LOCATION MAP OF DIYAHORANDUWA



Chapter V

5. Sanitation Behaviour

5.1. Existing Sanitary facilities

Angunakolapelessa

Of the 25 houses observed during the period 9 houses (36%) had latrine accommodation while 16 (64%) houses did not have any latrine accommodation. All the 9 latrines are pit type of which 3 were not used and appeared to have been abandoned. One latrine is a permanent structure. Four latrines are wattle and daubed structures with no doors. An iluk frame had been used as the door.

Four latrines had temporary super structure built with cadjan and iluk This is just a temporary hut like structure only to provide protection for privacy. Except for the permanent latrine the rest were all just dug out pits covered with planks and squatting plates. In two latrines permanent squatting plates were used for the floor area Where planks were used a small hole was provided to be used as the aperture. Faecal pollution was seen in the floor area and the aperture in almost all temporary latrines Except for the permanent one the maintenance of other 5 were unsatisfactory.

These latrines are located within 30 to 100 feet away from the dwelling house. At the discussions it was noted that the villagers did not wish to construct latrines closer to their houses. Very often these latrines are located at the end of their land boundary.

5.2. Diyahoranduwa

25 houses have been observed. 10 houses (40%) had latrines while 15 houses (60%) did not have any latrine accommodation.

Of the 10 latrines 2 are water sealed and the rest are pit type latrines. One pit latrine was out of use and appeared to be abandoned. The two water-seal latrines are permanent while all pit latrines were wattle-daubed structures with temporary thatched roofs (cadjan).

The two water seal latrines were maintained satisfactorily Except for 2 pit type latrines sanitary standard of others was not maintained satisfactorily Since the size of the land is within the range of 20 to 40 perches and houses were quite adjacent to each other the latrines were located close to the living house.

5.3 Analyses of Observation and Discussion. Factors for having and not having latrines (Use and non-use)

In analysing the observation and discussion findings the following criteria were taken into consideration.

(*a*) Extent and nature of land where the dwelling house is located

(*b*) Feeling of necessity as an essential component of housing.

The first criterion covers broadly the size of land and its ownership along with the nature of housing. During field visits both in Dyahoranduwa (Kalutara District) and Angunakolapelessa (Monaragala District) the size of land where the living house was located appeared to be a striking feature in that the size of land and its ownership varied strikingly giving different degrees of variations as regards the use and non use of latrines. The second criterion evolved to cover the broader meaning of villagers' feelings towards the latrine. Both criteria were developed purely on the basis of findings to facilitate categorisation.

In association with these two criteria the position of use and non use or having and not having latrines was classified into four broader categories.

5 3.1 Those villagers who consider that latrine is an essential component of the house for the following reasons

(*a*) Health reasons
(*b*) Social reasons

5.3 2 Those villagers who do not consider that latrine is an essential component of the house.

5.3.3 Those villagers who consider that latrine is an essential component but unable to put up a latrine because of the following reasons.

(*a*) Economic reasons
(*b*) In rented out houses and has no claim over the land
(*c*) Encroached crown land

5.3.4 Those villagers who consider that latrine is an essential component but do not put up a latrine for the following reasons

(*a*) The habit of open defaecation
(*b*) Availability of rank, vegetation within premises and shrubs outside
(*c*) Use of a latrine is not seriously considered and felt.

5.3.1 **Category No. 1**

The first category is the group that consideres that the latrine should be an essential component of housing. Taking into consideration the extent of land for each household and the nature of housing this category could further be classified into 3 Sub-groups.

(i) Extent of land per household was small. The house is moderate and wattle and daubed. There is a pit latrine with a temporary, super-structure or with a temporary roof.

Diyahoranduwa 10 latrines — 40%
Angunakolapelessa 2 latrines—8%

(ii) Extent of land was larger and the whole land was cleared for the cultivation of cash crops like cotton ground nuts, tomatoes, Indian corn etc. The house is wattle and daubed. The pit type temporary latrine was present. These latrines were mainly used by females. The males being the chena cultivators and spent most of the day out in the jungle during chena period used the jungle. No open defecation was noted within premises.

Definition

Extent of land in the case of Angunakolapelessa is less than an acre and Diyahoranduwa less than 30 perches. Such extent of land is termed-'Small'. The term 'large' is used for lands over and above an acre and up to a maximum of 3 acres.

The wattle and daubed house is limited to a room, a small verandah and a kitchen which is mostly ill ventilated. This house is very often located central to the garden plot. The latrine if available is located at a corner of the garden.

(iii) Extent of land is larger and was partly cleared. The uncleared portion was covered with rank, vegetation. The house is wattle and daubed. The pit type latrine was present. There were indications that some members used the rank vegetation area for defecation although the latrine was present.

Diyahoranduwa Nil
Angunakolapelessa 3 Latrines 12%

5.3.2 **Category No. 2**

This category covers fully the characteristics of non-users. The analyses are based on nature and size of land and housing. This category has four sub-groups.

Angunakolapelessa 6 — 24%
Diyahoranduwa 2 — 8%

(i) The extent of land is small (less than an acre) and the whole land was cleared for cultivation of cash crops. Houses are wattle and daubed and have no latrines. The pattern is that there are households with similar land size almost adjacent to each other. The shrubs were also seen in close proximity to the houses. They use shrubs for defecation.

(ii) Extent of land per household was large and cleared fully for cultivation. All houses are wattle and daubed and are similar in size There were no latrines. The shrubs were close by and those were used by them for defecation.

(iii) Extent of land per household was large and partly cleared. The rest was covered with rank vegetation. The house is wattle and daubed and similar in size. The rank vegetation part was used by the householders for defecation.

(iv) The extent of land is small— (Diyahoranduwa less than 30 perches and A'pelessa less than an acre) and all these lands were encroached crown lands. Houses are wattle and daubed and little smaller than the other houses described above. The shrubs are almost behind the house and householders use the shrubs for defecation.

5.3 3 **Category No. 3**

This category is similar to category 1. They consider that latrine is an essential component but did not put up one because they cannot claim the ownerships of land. This category can be classified into two sub-groups.

Angunakolapelessa	4 — 16%
Diyahoranduwa	4 — 16%

(i) Extent of land per household is small (Diyahoranduwa) and the house was rented out. The owner of land has not provided a latrine. The females use a nearby latrine whereas males go to 'bedda' (shrubs) for defecation.

(ii) In this group there were two patterns noted. One is that the land encroached by the villager is fairly large (more than one acre) whereas the other is just a small piece of land (from about 20 perches up to an acre but mostly about 20 to 30 perches) sufficient to have a house and a compound. Houses are wattle and daubed temporary structures with thatched roofs They used shrubs for defecation This shrub is mostly the uncleared portion of land close to their house.

5 3.4 **Category No. 4**

This category like the category 1 has expressed that latrine is an essential component. They have failed to construct a latrine for three reasons as indicated in D above. The striking feature was that they did not think it seriously due to the habit of open defecation and chena pattern of life.

Angunakolapelessa	8 — 32%
Diyahoranduwa	5 — 20%

(i) The extent of land is small and fully cleared. The house is wattle and daubed with thatched roof. No latrine accommodation was available The habit is to visit the shrub for defecation.

(ii) The extent of land is large and was partly cleared. The house is wattle and daubed with thatch roof No latrine was available. They use the nearby shrub for defecation. The uncleared portion of land was used by the females members of the household.

5.4. **Defecation Practices**

The behaviour as regards the defecation practices could broadly be classified into 6 groups. This classification was purely made on the basis of field observation and interviews. The behaviour of villagers of both Diyahoranduwa (Kalutara District) and Angunakolapelessa was taken together, however, differences of behaviour are highlighted to get a clear understanding of behaviour pertaining to these two areas as regards defecation practices.

The six major groups to classify and describe the defecation behaviour are as follows :

1. According to age
2. According to sex
3. According to the availability of latrines for use
4. According to the number of young females in the family — Family size and young females.
5. Availability of shrubs
6. Changing life patterns

5.4.1 **According to Age**

In these areas defecation practice differed according to age. The age group could be considered as follows:

(i) Infants
(ii) Pre-school children
(iii) Children
(iv) Adults

Infants

Infants defecation takes place at the lying posture. The usual habit of disposal seen was that they take the soiled linen and dispose faeces at the

site of the disposal of refuse of the premises which is always the backyard where refuse is collected and burnt. The stained linen was seen taken to the tank for washing. Fly breedings were also noted in the areas where disposal was done. This type of disposal continues until the infant can sit without support

5 4.2 Pre-school children

This period of pre-school children can be classified into two periods as (1) early pre-school period — from 1 year to 2 years and (2) late pre-school period from 2 years to 5 years

At the early pre-school period the child defecates with the assistance of the mother. During field visits it was noted that the mother was seen seated on a small stool in the compound and stretched her legs close to each other so as to provide seating accommodation for the child to sit on mothers feet and defecate. The child defecates on to the ground Once the defecation was over the child was taken out and washed with a tin of water —(containing about half a litre of water). No soap was seen used by the mother after washing. The feaces was then collected on to a dry leaf with a piece of coconut husk and disposed on to the disposal of refuse area

This process was seen both in Diyahoranduwa and in Angunakolapelessa. This was the early stage of socialisation where child learns to defecate on to the ground with the mother's protection. This process continues until the child can squate freely without any support.

At the late pre-school period to the childhood were seen defecating in the backyard. It was noted during field visits that there were faecal pollutions in the backyards which were not properly disposed. This faecal pollution was more prominently seen in Angunakolapelessa than in Diyahoranduwa where it was seen disposed immediately after defecation. The delay in disposal at Angunakolapelessa meant that the parents were not available at home to attend to the disposal. The usual daily routine was to keep such pre-school children at home at the care of an elderly girl in parents' absence

5 4.3 Children

The age group considered here was 6 years up to about 14 years of age These children were seen defecating the backyard, the uncleared portion of the garden and the shrubs. Up to about 10 years of age they were confined to their own garden for defecation.

At the interviews it was revealed that only girls used latrines if they had one in their own premises. If they did not have one it was customary to use the uncleared portion of their land. They were not allowed by elders to go to shrubs alone The male children of course, use the shrubs along with elders in the family

The difference between Diyahoranduwa and Angunakolapelessa is that the children at Angunakolapelessa had lot of lands, their own and outside to be used as defecating grounds whereas the children at Diyahoranduwa had very much limited land within their own premises and some land space with rank vegetation outside the house. Other than pre-schoolers no children were seen defecating either in backyards or compounds of houses in Diyahoranduwa. At the discussion it was brought to notice that those children who had latrine facilities at home were used to use such facilities. It was pointed out that those children who did not have latrine facilities used to go to the nearest shrub (refer to map of Diyahoranduwa) for defecation.

5.4.4 Adults

In Angunakolapelessa during chena period[1] adults, both males and females spent most of the day time in chena. They used to visit their village home at dusk and male members were seen again, returning to chena after dinner, while females remained at home. During this period they used the jungle for defecation purposes. It was found

1 The study was done during chena period — Jan., Feb.

that even if they had a latrine at the village home there was hardly any time left for them to use such a latrine. In the chena they were in the habit of using spots close to the chena. It was brought to notice that they have abstained in polluting a chena of another person. Adults in Diyahoranduwa had two alternatives. One was to use a latrine whether it is theirs or otherwise. The other alternative was to use the 'bedda' or the rank vegetation area for defecation. There was a small piece of land between the paddy field and the residential area (refer to sketch map) which was utilised by the villagers as the common defecation ground.

5.4 5 ***According to Sex***

Defecation practice is closely associated with social factors. As illustrated in Chapter 5 the social factors were responsible for some villagers to construct latrines and used them. It was found during discussions that male members specially the adults did not like their female partners visiting the shrub for defecation. Even in the absence of a latrine their wish was to get their female partners and young girls to use a portion of their land for defecation. In defecation behaviour some degree of privacy was seen observed. It was noticed during discussions that in the case of houses where the whole land was cleared (Angunakolapelessa) for cultivation of cash crops and no latrine was available females were compelled to visit the 'bedda' or shrub for defecation. It was found that in such a situation the female member accompanied another female in the household to visit the shrub. Sometimes their own daughters were accompanied. The role of the accompanying member was to signal the other member using the shrub the incoming of a male to the shrub or happen to pass that way in order to enable her to adjust herself to suit the situation

In the case of houses where the land round the house was partly covered with rank vegetation (Angunakolapelessa) such areas were used by female members for defecation. In such, lands where the rank vegetation was not thick enough to give the required amount of privacy cadjan enclosures with a small pit was seen. This was a temporary measure. This type of pit was seen in use in several houses.

In Angunakolapelessa, when chena work was in full swing, they required more labour as in other agricultural societies where more labour is required. In such situations it was customary for chena cultivators to take their wives and matured children to the chena. They did not have latrines at Chena. All the members were in the habit of using the jungle for defecation purposes.

In Diyahoranduwa there was no such chena life. Females were confined to domestic work at home once the males have left home for work. It was found during discussions that those who (females) did not have latrines used to visit a neighbour's latrine and in the absence of which they used to get up early in the morning and visit the nearest shrub along with another female or a young child.

Where there were latrines in both Diyahoranduwa and Angunakolapelessa such latrines were mostly used by females. The strong reason for this use was the high degree of privacy which the society expects from the females.

The pattern of defecation of male members was different. During chena period they were out in the chena most of the day time. So, during this period it was the general practice to use the jungle for defecation. During the off period (i.e. out of chena work) they were in the habit of visiting shrub close to the house. It was noted that those who had latrines used the latrines as well as the close-by shrubs.

5.4.6 **According to the availability of latrines**

In both Diyahoranduwa and seen Angunakolapelessa it was seen that those who had latrine accommodation were making use of such facilities. Latrines were mostly used by young girls and female members of the family. It was noted that privacy was a strong factor that compelled them to use a latrine. Social prestige was another factor highly valued by the

villagers Female members lose prestige if they were found visiting bedda or shrub for defecation

Adult members if they were at home used the latrine for defecation. This habit of using the latrine was not regular in them as they were seen by others visiting the shrub for defecation.

Young children and pre-schoolers were seen using backyards and other places within premises for defecation. This habit of open defecation was not seriously considered as they felt that these children and pre-schoolers were not matured enough to use latrines. Girls who have attained their age were by norms required to use latrines if available for defecation In the case of young girls this was the transitional period of open defecation changing into the use of latrines if the facility was available. Until such period the habit was to resort to open defecation

5 4 7 **Accorfling to the number of young females in the family — (Family size anu the number of young females in the household)**

As illustrated in 1, 2 and 3 it was clear that the prestige and privacy have influenced the females to get used to the use of latrines It was observed in the study area as well as the outside village (Angunakolapelessa only) some latrine accommodation was available in houses where the family size was large and in which more females were present than males. The latrine present was not a sanitary type latrine but a temporary pit latrine ranging from a wattle and daubed structure to a cadjan enclosure with a pit covered with planks

In those houses where no latrine facilities were available it was noted at discussions that the females of such houses used the rank vegetation area behind the house. They were said to be hardly using the bedda or the shurb unless it could happen during the time they had visited the nearby jungle for firewood

More female members in a family means the requirement of more privacy and more prestige. The denial of these aspects would lead to serious consequences when they reach the marriageable age In such families where the latrine was present the social reasons for construction were more dominant than health reasons.

In Diyahoranduwa, although they consider that the privacy and social prestige are guiding factors in defecation behaviour of females no large families with more females were noted and as such the position cannot be compared. This could be tested on a wider sample of large families with more females in the wet zone

5.5. **Availability of Shrubs**

Thus analysis confines only to Angunakolapelessa

When villagers settled in the area first they constructed only temporary wattle and daubed structures and for defecation they utilized the shrub close by. This pattern continued with the habit of open defecation right up to the present day. Even today, when a villager encroaches a piece of land in the shrub he constructs only a temporary wattle and dunbed structure for living and for defecation he utilizes the shrub behind his house. The availability of a shrub is in one way an encouragement for the villagers who live close to it to utilize the shrub as the common defecation ground.

It was noted in field observation that the non-availability of latrines was more prominent in those houses close to the shrub than houses which were away from the shrub If the house is quite adjacent to the shrub even the females of the household were in the habit of the open defecation. This does not interfere with privacy and social prestige as they visit the shrub which is almost closer to their backyard and they are free from any stranger visiting this particular area

So, availability of shrubs close to residential area is an encouragement to the open defecation practice of villagers

5.6 **Changing life patterns**

In Diyahoranduwa and Angunakolapelessa the changing life patterns have reflected a change in defecation practice. As described in earlier chapters the chena cultivators of Angunakolapelessa have adjusted their life to suit the chena cultivation pattern. Since this is the central point every other behaviour revolves round it. Their social and religious life is also adjusted to their chena life. During

August to January in the following year and again March to May in the same year are the months he is busy with chena activities. He spent most of his time in chena in the jungle The open defecation practice of chena cultivators is getting strengthened because of these life patterns This practice is being extended to those members of his household who join him in the chena to support in chena activities.

In Diyahoranduwa elderly males leave home for work to the nearest towns (Aluthgama, Kalutara etc.) or villages. It was found in discussions that they have facilities where they are working at the time. Here, the life pattern with regard to defecation is just the reverse In the case of Diyahoranduwa villagers even in the absence of a latrine at home they are compelled to use latrine where they work whereas the chena cultivator even if he has one at home he is compelled to use the jungle.

Thus a clear distinction can be seen between the two categories. The changing life pattern of Diyahoranduwa villager encourages him to get away from his open defecation habit while working outside the village whereas the chena cultivator's life pattern in chena is encouraging him further for the open defecation habit.

5.7. Etiquettes in Sanitation Behaviour

Some standards of behaviour as regards the open defecation practice were noted in field discussions in Angunakolapelessa. These standards of behaviour were confined to those who did not have latrine accommodation in their premises.

It was noted that the morning time was the period when both males and females visit the shrub for defecation. Since both behaviour occurs concurrently some standards of behaviour have to be established. This is to avoid a male member visiting an area visited earlier by a female for the purpose of defecation and vice versa. If a male member has come to know that a female has entered the defecating area or the shrub the rule is to avoid going that way. In order to maintain this standard of behaviour and ensure protection a female member when visiting a shrub always accompanies another female whose role is to avoid a male coming to that area. No female member is allowed to visit a shrub all alone. It is against norms of their society.

This rule to avoid females in the shrub is expected to be observed, obliged and honoured not only by the male members of the same family but also by the males in other families. So these evolved procedures or standards of behaviour have facilitated the existence of the open defecation practice without giving any chance to raise any community problems and maintaining the privacy and social prestige of women in sustaining the high morals of the traditional society, thereby smoothing the way and making them comfortable in their behaviour.

5.8. Ablution and Defecation

As regards ablution different degrees of variations were noted in both areas of Diyahoranduwa and Angunakolapelessa. The analyses are based on observations and discussions with villagers.

5.8.1 Size of container used for ablution

In Diyahoranduwa clay pots (about 2 litres of water) and two and a half pound lakspray tins (containing about 3 to 4 litres of water) were mostly seen while in Angunakolapelessa one pound lakspray tins (each containing about one litre of water) and wide mouth small clay pots (smaller size-containing about one litre of water) were seen used. These containers were found kept in backyards of premises and inside latrines. Water in container is used only once that quantity of water was not sufficient in both situations.

5 8.2 Quantity of water for ablution

In Diyahoranduwa water is available in close proximity to the house whereas water was available at a distance (100 yds to about 3/4 of a mile) to people in Angunakolapelessa. In Diyahoranduwa villagers use more water for ablution than villagers in Angunakolapelessa

In Angunakolapelessa water is a scarse commodity. In chenas, it need not be emphasized, that the chena cultivators did not have any water to be used for ablution purposes. In such situations ablution takes place either in an 'ara' or in a 'kem'. Even in aras it was revealed that no water was available during the dry season.

It is said that during the dry season they use stagnant pools of water that remained there after the flow of water in aras and 'kems' which were also stagnant collection of water in rock and stone cavities

In Diyahoranduwa it appears that the villagers (assuming the full quantity is carried) use about two to three litres of water at a time for ablution. In Angunakolapelessa, looking at the container and assuming that a container full of water is carried approximately about one to two litres of water is used at a time for ablution. In both situation, the quantity of water used for ablution was not sufficient for ablution.

5.8.3 Sites of Ablution

It was noted during field visits that there were cadjan enclosures close to their dwelling houses in Diyahoranduwa. Each cadjan enclosure is about the size of 3' × 3'. At the centre two bricks were kept to serve as footsteps. These cadjan enclosures were used for ablution and as well as for urination. This sort of cadjan enclosures were not seen in Angunakolapelessa. There, the ablution takes place in backyards and in latrines. As described earlier the chena cultivators used 'kems' and 'ara' in the jungle where they find stagnant pools of water for ablution.

5.9 Sites of Open defecation and ablution

Ablution was found to have a close association to the defecation sites of the villagers, and as indicated earlier, the following are the defecating sites of villagers.

5.9.1 The rank vegetation area within premises

5.9.2 The shrub closed to their house

5.9.3 In the jungle close to a water source and their own chenas.

5.9.4 Within premises, the backyard and compound (preschoolers and young children)

5 9.5. Close to large water sources like rivers, aras.

If the defecation has taken place in the rank vegetation area within premises (Angunakolapelessa) ablution takes place in the backyard of the house. In the case of small children mother washes the child.

If they have gone to the close-by shrub they were said to be following two methods. Since aras and ditches were full of water during the rainy season they utilize the ara or the ditch for ablution. During the dry season since water is not available they have to come back home for water and use the backyard for ablution.

Chena cultivator's defecation practice was always closer to a water source in the jungles. During the dry season, this water source is always a 'kem' or pools of stagnant water in aras. In such situations they use the closest water source either an ara or a 'kem'.

Defecation within premises takes place in the case of small children and pre-schoolers. The ablution is done by the mother at a site close to the defecation point or in the backyard.

Common open defecation sites were seen near schruby areas of large water sources like oyas, and rivers. This was observed outside the study area at sites of Weli oya off Kotaveheramankade and Kirindi Oya at Tanamalwila. This sort of defecation practice is continued because of the availability of water close by for ablution at the water source.

5.10. Ablution and Personal Hygiene

At the discussions with chena cultivators and villagers (both study areas) it was found that they have never washed their hands with soap and water after defecation. When this aspect was further explored their assertion was that they use the left hand for ablution and the right hand for eating. What was important to them was to keep the right hand free of ablution activity and use the left hand

'Oya' Local term for a small river

for ablution. They failed to understand that their hand would get contaminated during the process. Further, it was found that they believe that they utilize sufficient quantity of water for ablution although by looking at the containers used for ablution and habits of ablution in water sources one may state that this is one of the poorest aspects of personal hygiene of rural people in this area.

Washing hands before meals appears to be a routine activity of both areas. The habit is to take a glassful of water and wash the right hand. It was found that a glassful of water taken for this activity was hardly sufficient to clean the hand before taking meals. Soap was not seen used by anyone in both areas. It is said that washing the hand with water is a good practice and also a custom highly valued by people.

Chapter IV

6. Analysis of Observation – Domestic use of water

The following water sources were available for villagers in Diyahoranduwa and Angunakolapelessa

Diyahoranduwa

— A Public well — constructed by the village Council, Matugama.

— 5 private wells — individually owned

Angunakolapelessa

A tank — completely dry during the study period

2 ara wells

1 private well — individually owned. Completely dry during the study period.

1 Public well — V. C well

6.1 Diyahoranduwa

The water supply for 25 houses in the study population was from 6 wells located on the low side of the residential area—(see map No. 3A). One was a V.C. well while the rest were individually owned. The V.C well was located central to the whole of Diyahoranduwa residential area. The other wells were located on the low side of the sampled residential block and were distributed in semi circular pattern.

The V.C. well was a permanent structure with an inner lining to a depth of about 10 feet, a parapot wall about 3 feet in height and an apron about 2½ ft. wide. The inner lining was seen damaged in several places and the parapet wall was cracked. The apron was covered with gravel up to about one foot. This layer of gravel was formed with gravel and clay washed into the apron during rainy season.

The other six private wells were temporary dug out pits up to a depth of 10 to 15 ft. To avoid rain water and ground washings getting into the well the earth round the wells was found raised to about one foot. The compounds were filled with gravel and pieces of stones. A flat stone of about 1′ × 1′ was found kept in four of the six private wells for the purpose of washing

The well No. 1 belonged to a washer caste family. It was about 12 feet deep with a diameter of about 4 feet, Part of the well was seen covered with cadjan at every time of observation. A separate bucket was seen kept up side down on one side of the well compound. No other buckets were allowed by the owner. The well had about 5 feet of water at the time of first observation. Six families located close to this well were seen using this well. It was noted that the well was used only for drinking purposes Bathing and washings were not allowed

The well No. 2 was located west to well No. 1. It was about 10 feet deep with a diameter of about 4½ feet. At the time of observation the well was seen cleaned about few days ago. The well was seen used for drinking, bathing and washing purposes. At every time of observation the well was seen with polluted water in the well compound. Five families were noted using this well.

Well No. 3 was located about 50 yards west to well No. 2. The well was about 12 feet deep with a diameter of about 5 feet The well was seen used for drinking, bathing and washing cloths. Four houses were found visiting this well for water

Well No. 4 and 5 were located close to V.C. well. Both wells were about 12 feet deep with a diameter of about 4 feet. The well No. 5 was the oldest in the area while the No. 4 was constructed recently. Both wells were used only for drinking purposes. Eight families depended their water supply from these two wells

Of all the wells the well No. 1 was maintained satisfactorily though it was a temporary one. During discussions it was found that few families close to well No. 1 did not wish to visit it since the owner belonged to a lower caste family.

The village council well was used by two families of the study population Even the houses located in close proximity (outside the study. population) to the V.C. well were not using it complaining that this was polluted and not fit for drinking purposes. The houses in the study population were also found avoiding this well for reasons of pollution.

6 2. **Angunakolapelessa**

During the whole period of study the village tank was found completely dry. Buffaloes were found resting in pools of mud here and there.

The public well located on the low side of the tank bund of Angunakolapelessa was the most used one in the village. It was a deep well of about 30 ft. wide and about 6 ft. in diameter. The inner lining was found badly damaged while the parepet wall was seen cracked in several places. The apron was also found damaged leaving small pools of polluted water all the time. There was no lead-away drain. All washed water was seen collected close to the well where buffaloes used to come for water and resting on it. The well was used for all the purposes (drinking, bathing, washing etc)

The only private well in the study block was completely dry during the study period. It was brought to notice that this well was used by the neighbouring families for water during the rainy season

The two ara wells were located in Sooriara water way One well was close to Angunakolapelessa School while the other was close to Mahawewa tank. These wells were simply dug pits at the inside edge of the ara. The depth was not more than 8 feet and the water level was found high. It was noted during discussions that these wells were drying up fast and no water would be available from March onwards although at the time of observation water level was found high. Close to each well there was another well used for bathing purposes. Both wells were similar in construction although they have set apart one for drinking and the other for bathing. Water in both was brakish in colour. During bathing all ground water was found getting into the drinking well. Polluted water spots with mosquito breedings were also found near the wells. It was said that these wells could be abandoned during rainy season and water from ara will be used for drinking purposes.

6.3. **Angunakolapelessa**

Use of water source during rainy season

Findings were mostly based from information collected during discussions. During the time of study the behaviour pertaining to rainy season was not observed as the village was experiencing one of severest types of droughts that they have ever experienced. It was reported that during rainy season the ara and private wells were full of water. 'Kems' were also reported to have been used as they were overflown with water. The V.C. well was not much used during the rainy season it was reported. During the rainy season the V.C. well was used only for drinking purposes. The rainy season is usually from October to January.

6.4 **Use of water — Dry Season**

During the dry period i e February to end of September all traditional water sources were reported to be fully dried. Generally it was said that some water was available during February and March, the beginning of the dry period in aras and tanks. This was not so in the year 1982, since north-east monsoon was a failure. The tank was found dried except few small pools of water at the centre of the tank where buffaloes were found lying. The V.C. well was the only dependable source of water during the dry period as it has not gone dry and stood by many droughts.

6.5. **Diyahoranduwa**

Use of water sources — rainy and dry season

Source of water remained the same whether it was dry or rainy season. The only differenee noted was that the level of water in wells subsiding during the dry period. The villagers in the sampled bloc of houses were not in a position economically to construct wells for their houses. The soil was hard cabooky and nearly 30 to 40 feet have to be dug to reach the water. Whether it was rainy season or otherwise they had to depend on the same water sources that they were used to. The wells which were found were all located on the low side of the hill closed to the paddy fields where the water level was high and construction of a well was not a problem and did not cost much.

6.6. Water and Personal Hygiene

Angunakolapelessa and Diyahoranduwa

In Angunakolapelessa, it was reported that during rainy season bathing was not a problem since all their traditional sources of water supplies were full. During the dry season only V.C. well remained with some water while there was some water in ara wells up to end of March if north-east monsoon was not a failuie. The V.C. well was found using for bathing during the dry season. It was noted that this was the heaviest used one by the females for bathing. Youths were found leaving to Mahawewa tank where some water was available for bathing. It was found that chena cultivators while they were in chena used to soak their underwear with water and cleaned the body with it. They were compelled to have a body wash of this type as they had nothing else in the absence of water.

In Diyahoranduwa bathing was done in wells. The V.C. well was mostly used by the young girls and elderly females for bathing Except for three wells in the sample bloc of houses all the other wells were used for bathing purposes. There was a bathing well in the paddy field which was used by the villagers. They were not faced with this problem of bathing as they have plenty of water close by. In Angunakolapelessa, it was brought to the notice that, in the event that the present drought continues the way it was experiencing during the past few weeks they have to forget their body wash and bath and use available water for drinking purposes only. At the time of field visits there were several requests from villagers to speed up the drilling programme and complete the wells so that they would be in a position to obtain their water from these sources

6.7. Washing

In Angunakolapelessa, morning washing was seen attended to at the V.C. well and ara wells and at home. After chena work, they were reported to be utilising kems and ara wells for washing purposes. This morning washing behaviour was observed in three families. The first family was close to the V.C. well, and the second house was about a quarter mile away from the V.C. well. The third house was about 200 yards away from the V.C. well. The washing pattern noted in these three houses remained the same. All adult females and males were used to take water to a small bucket (not more than two litres) and with it they were found finishing their brushing and washing When this aspect was further explored it was brought to notice that this was the general habit of morning wash. The amount of water used remained the same however little differences were noted in the way they did washing. During discussions it was discovered that chena cultivators used to leave home without any morning wash. They were said to be having their morning wash in a 'kem' in the jungle or in an ara well, on their way to chena. Children were found visiting a closer ara well or V.C. well for morning wash. It was observed that they used the same bucket to draw water from the well as well as for washing. This was the practice of all the children and some of the adults who visited the V.C. well for washing purposes.

Washing in Diyahoranduwa was done at bathing wells and at homes. Those who used to go for water early morning attended to morning wash at the well itself. Others manage washing with water available at home. Buckets and basins were found used for the purpose of morning wash

The striking differences noted in both situations with regard to this behaviour were the distance to travel to the water source, and the amount of water used for the act. In Diyahoranduwa, more water was available for use and had comparatively little distance to travel to reach the water source whereas in Angunakolapelessa they had very little water to manage the morning wash and had a long distance to go to reach the busiest spot in the morning. During observations, it was found that none were seen using soap for morning wash at homes. In Angunakolapelessa, (young children) particularly, young females were seen using soap for morning wash. In Diyahoranduwa most of the villagers who visited the wells for morning wash used soap while those who did the morning wash at home used soap only to wash the face.

In Angunakolapelessa, ablution as explained under defecation practices was done at different places and differed according to seasons. Ablution was closely associated with defecation practices and availability of water. For example, during rainy season chena cultivators were reported to be using aras and 'kems' for ablution. It was reported that even defecation was taking place close to these aras and kems. During the dry season, when they were in the chena they used to visit a spot closest to water source for defecation.

In all these situations defecation and ablution was reported to have been taken place in aras, ara wells and in kems

Water for ablution at home was confined to a small tin (one pound lukspray tin) or a clay pot containing about one to two litres of water. During discussions it was revealed that they were used to use backyard for ablution purposes. Those who had latrines had their ablutions in latrines. No soap was mentioned to have been used for washing hands after ablution.

In Diyahoranduwa, water for ablution was confined to clay pots and tins containing about two to three litres of water. It was noted that they were used to have their ablutions in three different spots.

6.7.1. At backyard in the enclosures provided for that purpose

6.7.2. In latrines

6.7.3. In canals and ditches in rank vegetation area

Those who used the rank vegetation area for defecation used to go to the ditches that were close by in the field for ablution while others used either backyard or latrines for ablution. It was found that none were using soap to wash their hands after ablution.

6.8. **Storage of Water**

In Angunakolapelessa storage of water was observed at three levels.

6.8.1. The storage position of water in a family close to the V.C. well.

6.8.2. The storage position of water in a family noted to be at the terminal point of use of Angunakolapelessa V.C. well.

6.8.3. The storage position of water in a family which was in between these two points-about 200 yds away from the V.C. well.

The houses were selected at random and were closely located to those houses where observation was made for morning washing behaviour. The purpose of observing three houses at the above level was to determine whether distance factor had any impact on storage of water and to work out approximately an average of availability of water per household on a day. Three days observation which were spread out gave the following information.

First House

4 pots, 1 bucket, 1 wide mouth clay pot
7 members

Second house

4 pots, 1 bucket, 1 tub (barrel), 1 small size wide mouth clay pot, 9 members.

Third house

5 pots, (one small size), 2 buckets, 1 wide. mouth clay pot, 8 members

Observations were made in the afternoon since their days collection of water was over in the afternoon however it was found that the first and the third used to go for water once in the morning They were found adding a pot and a bucket of water for the days collection Each pot was assumed to be containing about 15 to 20 litres of water. Calculating the balance containers of water and the added frequency in the morning the three houses were supposed to store the following quantities of water.

1st house	70 to 80 litres
2nd house	80 to 90 ,,
3rd house	75 to 85 ,,

The availability of water per member per day excluding the washing and bathing outside home would be as follows :

1st house	10 to 11 litres
2nd house	9 to 10 ,,
3rd house	9 to 11 ,,

Further explorations revealed that in other houses whether they were distantly located or otherwise to the V.C. well were maintaining the same amount of water. It was found during discussions that in case the present drought continues this position would further be diminished. Their experiences were that they had only one or two pots of water available for the whole house during severe drought period. In Diyahoranduwa such type of storage was not seen however they had about two to three pots of water at home. At all times of observation it was found that all these pots were full. Their habit was to bring water whenever they ran short of water at home. The contrasting difference was that the storage position of Angunakolapelessa was more than Diyahoranduwa.

6.9. Frequency of visits to well

In Angunakolapelessa water was brought to the house once in the morning and many more times in the evening. The frequency depended on the storage capacity available at home. It was found that on average they visited the well three times in the evening. They abstained from visiting the V.C. well in the night as they feared that the tank bund was infested with poisonous snakes. In Diyahoranduwa, no fixed period was observed. The habit was to go for water when they ran short of water at home.

6.10. How stored and kept

In Angunakolapelessa pots were found kept on the ground in an inside corner of the kitchen while one or two pots were found kept outside the kitchen. This pattern was found in many houses. Some pots were found covered with coconut shells while some remained open.

In Diyahoranduwa pots were found kept on the ground in an inside corner of the kitchen while a pot or a bucket was found kept outside the kitchen.

6.11. Water and Preparation of food

During discussions with both mothers and other elders in the households of both areas it was noted that they spend nearly fifty per cent of water brought to the house for the preparation of food, washing pots and pans and preparation of tea etc. It was reported that mothers in Angunakolapelessa were accustomed to take extreme precautions not to waste water and to make maximum use of water. This habit was not seen in Diyahoranduwa.

6.12. Water and Drinking habits

During discussions it was found that both Diyahoranduwa and Angunakolapelessa villagers believed the following to be the requirements of water for drinking.

6.12.1. Water should give the taste for which they have been used to for a long period of time.

6.12.2. It should have its normal appearance without any pollution.

In Angunakolapelessa, the taste appeared to be the most important factor in deciding whether water was fit for drinking or not. In Diyahoranduwa, they did not attach any importance to taste but stressed the need that water should not have been polluted. By pollution they meant that nothing would have been dissolved in water to make its colour changed. They were aware that polluted water could make them sick, but, it was noted that they did not mean this to interpret that sickness was due to disease carrying germs. In Angunakolapelessa by pollution they meant any decaying animal or vegetable matter seen to have been dissolved in water. If it was seen by them, by all means they would have avoided drinking that water

Drinking habit of water in Angunakolapelessa differed according to situations. During the first phase of chena cultivation period, if they have failed to take water along with them they were used to visit the nearest ara, or ara well or tank or 'kem' for water. Water was not boiled before drinking. Coconut shells, plastic cups and glasses which were not clean were seen used for drinking purposes.

When they were in the village they depended for their drinking water from their house. Even at home, water was found not boiled before drinking.

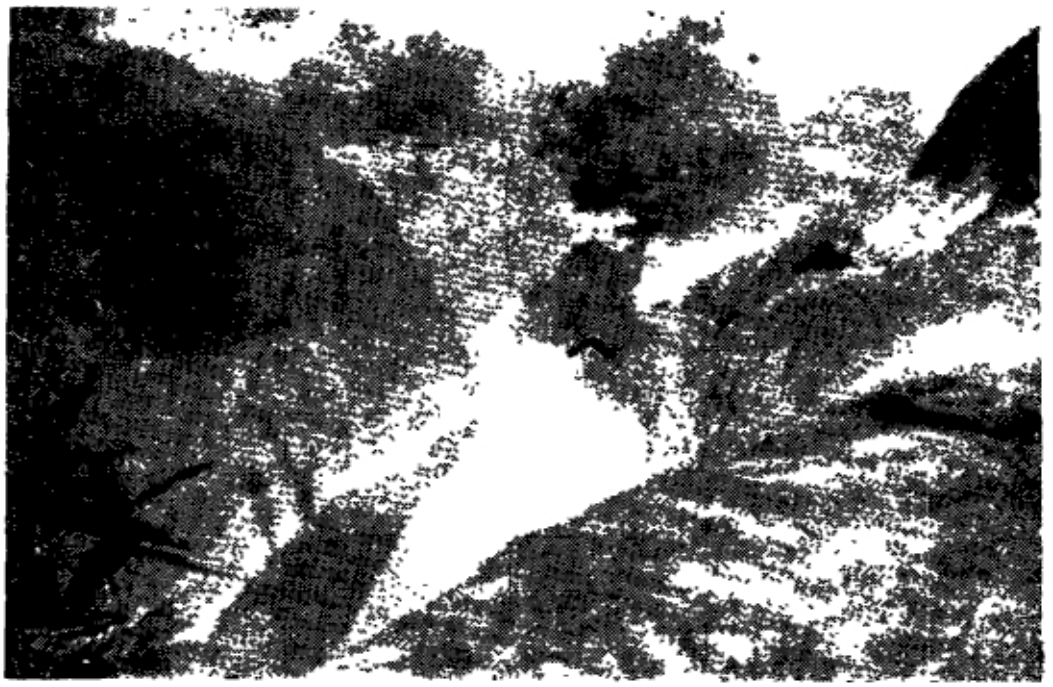
When they visited towns like Ratnapura, Matara and Badulla, it was reported that to the greatest extent possible they were said to have avoided drinking water while they were there since that water did not give them the taste to which they were used to for a long period in their village.

Children who were attending Angunakolapelessa Maha Vidyalaya depended for their water from the school well. This was a semi-protected well, maintained by the school satisfactorily. The well was not cleaned for fear of running short of water in the well. Villagers were not found visiting this well for water.

In Diyahoranduwa, drinking habit of water depended on their working situations. Females and children who were at home had to depend for their water from homes. No boiled water was used by them. Males who were used to leave home for work in nearby towns had to depend for their water at their work places.

Angunakolapelessa V. C. well the only source of water for all during the dry season

A long way to their houses with pots of water along the tank bund, Angunakolapelessa.



A 'kem' off Angunakolapelessa (biggest in the area.).

Chena cultivator taking water from an 'ara' well to his chena hut.

Chapter VII

7. Belief System – Defecation Practices

7.1. Preliminary collection of beliefs

The following methods were used in compiling the preliminary list of beliefs as regards the defecation practices.

(i) Review of literature

(ii) Interviews with knowledgeable persons and subject specialists.

(iii) Pilot investigation in Monaragala and Kalutara.

As explained in the Chapter on Belief System of domestic use of water, a pilot investigation had to be proposed since the first two methods did not yield sufficient information. The pilot investigation as mentioned earlier not only provided a list of beliefs but also indicated behavioural areas for further exploration. Although the list given in the Appendix 3 was a comprehensive one the time constraint did not permit deep explorations in respect of each belief.

7.2. Sources of information

As mentioned in the chapter on Belief System of water the following were the sources of information considered in both areas :

(i) Tea and Coffee boutiques where villagers meet daily and discuss matters of interest to them quite informally.

(ii) Informal discussions with villagers during field visits

(iii) Contacting educated people living in Grama Sewake area and discussing with them as regards this particular behaviour.

7.3. Classification of beliefs

The preliminary collection of beliefs was a crude one. It contained almost all the beliefs that were made known during the pilot study exercise. It was not known to what extent that these beliefs are prevalent in communities. Therefore, it was considered appropriate to undertake a mini survey in both study areas to ascertain the following :

i. To determine to what extent these beliefs are prevalent in the study.

ii. To determine the priority areas based on the extent of beliefs prevailed in the community.

iii. In view of the time constraints of the study to concentrate more to the mostly prevalent beliefs and facilitate advanced planning for observation and discussion of the associated behaviour in more depth.

The observation — discussion schedule (Reference appendix 12) developed on the basis of the preliminary list of beliefs was administered through discussion observation methods The results were analysed and furnished in Appendix 12.

The analysis reveals that there was a high degree of acceptance of all beliefs. Since the degree of variation of the prevalence of beliefs in the community surveyed is almost at a minimum the important beliefs believed to be having a strong relationship to health were given priority for study in depth along with the highly prevalent ones in order of magnitude.

Observation of behaviour on a planned basis and during field visits on an ad-hoc basis.

Although the above four sources were fully utilised the time constraint did not permit to explore in full the behaviour relevant to beliefs mentioned in the Appendix 3. The following discussion, therefore was confined to what have been observed and discussed during the study period in Angunakolapelessa (in Monaragala District) and Diyahoranduwa (in Kalutara District).

7.4. Classification of Beliefs — Defecation Practices

The beliefs related to this particular behaviour was classified into two broader categories taking into consideration the study of

existing behaviour associated with beliefs and the socialisation process under which they have been brought up experiencing the behaviour related to beliefs.

7.4.1. Behaviour that the environmental circumstances have made them to adjust the sanitation behaviour and led them to develop defecation habits and maintained them for a long period thereby forming beliefs in them

7.4.2. In the absence of the influence of norms and supports from the local system of medicine for behaviour related to sanitation practices and adopting and developing such behaviour in forming beliefs associated with defecation practices.

The beliefs listed under the first category had their bases to the earlier housing and the socialisation patterns developed in association with housing patterns. In the chapter on sanitation practices it was found that the latrine was not considered an important part of housing by some villagers It was also observed that this perception was associated with the condition and nature of housing and the availability of either rank vegetation or jungle in the close proximity to the dwelling house.

As mentioned the house remained a wattle and daubed structure confining itself to a room, verandah and a kitchen—the bare minimum that they could afford to build with the available local resources. Since lands were available in plenty villagers encroached lands in bigger pieces constructing houses quite apart to other houses.

Living under such environmental conditions they got used to visit the shrub for defecation. Availability of rank vegetation in close proximity to dwelling houses appeared to be an encouraging factor even in areas where semi-urban influence was found to be affecting their life. This was the case in Diyahoranduwa where faecal pollution was found in rank vegetation area.

Open defecation behaviour was confined to a group of villagers in either areas who did not have latrines. The others who used latrines appeared to have an understanding about this behaviour with a certain degree of social tolerance and therefore, no community organised activities have taken place in both areas to correct this behaviour. Although the pollution concept — (beliefs, 1, 2, and 3) was admitted in beliefs no seriousness was found to have been expressed by villagers during discussions.

In the case of pollution near water sources, they were aware that this particular behaviour was polluting the water supply. In spite of this awareness defecation near water sources were still being continued. During discussions it was found that they (Diyahoranduwa and Angunakolapelessa) were unable to associate the defecation behaviour with the causation of some of the water related diseases. Further, they have been practicing this behaviour quite a good number of years and seen for themselves that nothing had affected them. This was the practice under which they (non users of latrine) have been brought up. The process of socialisation had not imposed any restrictions on their defecation behaviour rather than modifying it to suit local conditions. Living under these circumstances led them to believe that open defecation was not a serious problem except for its smell and ability to pollute water sources.

The above propositions indicate that the environmental conditions have created them an ideal background to develop the habit of open defecation, and the long period of this practice has instilled in them a habit which induced them to believe that the open defecation practice was not a thing to be seriously concerned with although they were aware that it was a nuisance. So the life process goes on with this system of open defecation unabated in both Diyahoranduwa and Angunakolapelessa.

The second categoty of beliefs are associated with norms and traditional and ayurvedic system of medicine which have evolved acceptable ways and tolerance to meet these physical needs of villagers while sustaining their values.

It was revealed that the open defecation was perceived to be causing nuisance and polluting water sources by most of the villagers. The presence of faecal matter close to house or within compound or backyard was also considered an undesirable thing. In such situations the remedial action was to dispose it to a place further away from the residence. During discussions it was found that the villagers were unable to associate open defecation to water related diseases. Therefore, the behavioural concern was for pollution and bad smell.

When faecal pollution was found in stagnant water what the villagers used to do was to avoid using such water for domestic use particularly for drinking purposes. When the pollution was seen in running water, (streams, aras, etc.) although temporarily the use of water was avoided, the use of water was subsequently reported to be restored. This was particularly because of the prevailing belief that when water is in a running process it gets purified. The belief has supported the behaviour whereas the norms remained without enforcing any social control on villagers polluting such water supplies while there was coverage in traditional and ayurvedic systems of medicine not associating such behaviour to the causation of diseases. As a result the open defecation behaviour continued quite a long period establishing beliefs and accepted ways in resorting to it.

As stated, it was found that the villagers were unable to associate faecal pollution to water related disease. Even those who used latrines continued to do so not because they were aware that using latrine was a preventive measure against bowel infections and helminth infestations but because of strong social factors that induced them to have a latrine in premises. The socialisation process insists and expects the privacy and the good conduct from females. Whether a latrine was used or not was not a serious concern to be taken note of or reckoned with, but a violation of the rules of conduct was definitely a matter of serious concern for which social actions would be taken against violators.

In order to maintain these norms the rural villagers have evolved procedures or in other words a system of folkways even to those females who used to go to shrub or rank vegetation with some degree of social tolerance Those females who used latrines and those who did not use latrines as far as the value system was concerned enjoyed the same social privileges provided both maintained without violation the privacy and the rules of conduct.

It was thus clear that the socialisation process and norms did not exercise any serious influence on the villagers to discourage the habit of open defecation.

Although there was evidence in literature* that using latrine was a valued community behaviour, as time went on due to factors connected with their mobility, housing patterns and the availability of land in plenty facilitated them to resort to open defecation practice. The inability to recognise the association of faecal pollution to disease reinforced the open defecation behaviour.

The traditional system of medicine does not correlate faecal pollution specifically to any bowel infections and helminth infestations. It has its own pharmacopoeia and the villagers learn these from village traditional physician. In the absence of such association the habit of open defecation continued unaffected quite a long time (may be hundreds of years in these areas) so the beliefs were built around practices which remained unchallenged by any forces.

The Registered Medical Practitioner, Hambegamuwa, indicated that he had noticed after 3 to 6 weeks of rain in the months of November and December quite a good number of 'ground itch' cases turning up for treatment. When this aspect was further explored the local interpretation was that the heat of the body has caused it due to rain cooling the system. They failed to associate to hook-worm. So their assertion was that they were getting this condition every year when they get rain after a drought. So beliefs were built around these experiences and knowledge and prevailed up to the present day unchallenged by any innovations.

7.4.3 Behaviour that the environmental circumstances have made them to adjust the sanitation behaviour and led them to develop as habits and maintained them for a long period thereby forming beliefs in them.

i. They believe open defecation practice pollute the environment 'giving bad smell'. They also believe that open defecation practice in jungle areas and in shrubs cannot be a serious problem to anyone since nobody lives closeby to feel the smell.

ii. They believe that defecation close to canal or any other sources of water is 'bad' since water can be polluted.

iii. They believe that their elders continued the habit of open defecation in shrubs without facing any problems of health.

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* Mahawamsa, Chapter 10, The consecrating of Pandukabaya, Stanza 90 — indicates that the king had employed 'chandalas' (low caste groupes) to the work of cleaning sewers, and cleaning of streets.

iv. They believe that the ablution in canals and streams pollute the water (but this is not a problem since water is running and gets purified during the process.

v. They believe that their general pattern of living as practiced today is a continuation of what their elders followed and is an ideal for them.

vi They believe that the defecation area should not be close to the house. Even if they construct a latrine it has to be sited away from the house

vii. They believe that the correct way of disposal of human excreta is by using latrine and at the same time, they believe that the open defecation in shruby areas means the same thing as using a latrine (equal consideration for both, practices).

viii. They believe, that females should not visit the 'bedda' or shruby area during noon time since they can be subjected to the attack of spirits.

7.4.4 In the absence of the influence of norms and supports from the local system of medicine for the behaviour related to sanitation practices adopting behaviour to suit the situation forming beliefs around them in a generai feature in rural life.

(i) They believe that open defecation cannot cause diseases in man.

(ii) They believe that helminth infestation is due to open defecation practice.

(iii) They do not believe that open defecation is related to the causation of bowel diseases in man.

(iv) They believe that few worms in the bowels of infants and pre-school children are necessary for health but too much of worms can be harmful to their health

(v) They believe that the causation of diseases is not due to the practice of open defecation practice but due to many other factors including the disturbances of the three 'dos' ('tundos' meaning the disturbance of phlegm, wind and bile system).

(vi) They believe that the treatment of disease should include a traditional exocery activity as an essential part of treatment in addition to other forms of treatment.

(vii) They believe that the habit of open defecation cannot cause any serious threat to their health in the future as nothing serious has happened to them to their known memory.

Chapter VIII

8. Belief System – Domestic use of Water

8.1. **Preliminary collection of beliefs :**

A preliminary list of beliefs was compiled by utilizing the following methods.

i. Review of pertinent literature;

ii Interviews with knowledgeable persons and subject specialists;

iii. Pilot investigation in Monaragala and Kalutara.

The first two methods which were initially utilized did not furnish sufficient information. The pilot investigation which was proposed to elicit the much needed information was launched at the inception of the study. This study which involved series of interviews with persons from different disciplines and statues particularly from rural sectors of Monaragala and Kalutara threw much light on the subject and a list of beliefs (*Ref.* annex 3) was compiled.

This list which served as a guideline in subsequent field explorations was prepared in order of priority taking into account the prevalence and the significance attached to beliefs by the rural folks. The priority list was prepared after discussions with the leadership of the study area.

8.2. **Sources of Information :**

Accordingly, the behaviour relevant to a specific belief was planned for observation and explored in depth utilising informal discussions which normally took place at nuclear points of communication in the village. Of all the village centres of communication of Angunakolapelessa the ex-Village Headman's tea-boutique was the most popular one where most of the chena cultivators met after their chena work. This was one of the popular places where they met, read the daily paper, exchanged ideas and obtained ideas and discussed current political affairs. This was an ideal place to discuss with the villagers and get information about the prevailing beliefs in the community. These discussions were held quite informally stimulating their thinking wherever possible.

During discussions incidents and statements related to prevailing beliefs were introduced at appropriate intervals taking precautions to present ones to suit their taste and level of understanding.

The behaviour relevant to beliefs which have emerged at discussions were noted and observed subsequently during field visits. At the same time behaviour noted during field visits were taken up at the tea-boutique discussions and their ideas were requested. This methodology was adopted to maintain the consistency and the reliability of ideas and statements related to beliefs.

There were no opportunities to introduce all the beliefs furnished in the list (appendix 3) at the tea boutique and at the same time behaviour pertaining to all the beliefs were not observed during field visits The beliefs indicated in the list were collected by conducting series of interviews during the pilot investigations.

The beliefs which were not adequately covered by observation and discussions during field visits were not taken into the classification annexed at the end of this chapter.

Some of the beliefs which were discussed fully and not observed in field situations (as such behaviour occurs only during specfic periods of time) were taken up in the classification. For example the belief that 'Gods' blessings are required to obtain rain was widely prevalent and the associated ritual in particular took place last year. Although the particular ritual was not observed a wealth of information was collected during field visits and at special interviews.

8.3. **Classification of beliefs :**

On the basis of nature and prevalence of beliefs and observation of behaviour pertaining to such beliefs made during field visits, beliefs were broadly classified into three major groups.

i. Beliefs with traditional community functions and supported highly by the culture.

ii Beliefs supported by the process of socialisation and no traditional community functions involved.

iii. Beliefs adopted by particular behaviour patterns stablished in them after a long period of habit formation and particular to them.

The Significance of Beliefs — The Belief associated with traditional community function — (whether held or otherwise) and supported highly by the culture.

The relevant bahaviour in the context of specific beliefs supported by traditional rituals although not observed was also classified For example, the villagers have tremendous faith on the folk ritual 'Gammaduwa' which they planned through 'Geegana mahattaya' to invoke the blessings of gods to obtain rain at the appropriate time of their chena cultivation

The folk ritual known as 'Gammaduwa' or the 'Devol Maduwa' was a specially designed one by 'Geegana Mahattaya[1] the envoy of Gods with the active participation of the leaders and villagers. All the steps associated with this traditional community ritual were well planned ahead of time. Any failure in the performance of any step of this great ritual was said to be accompanying undesirable effects. So every one who was participating the ritual was so conscious to adjust his behaviour in conformity with the code of ethics evolved by the performers of the ritual Anyone who was found to have violated a required behaviour was said to be subjected to community harassments.

These measures were instituted with such great care as getting rain was interpreted to be of such a vital necessity for their existence. The objective of the ritual as mentioned earlier was to invoke the blessings of the 'Village God' and Goddess Pattini[2] to obtain rain and to keep away disease and famine. It was reported that there was a belief that in almost every village in Dry Zone there is a god called 'Gambara Deiyo[3] Villagers were required to offer respect and ritualistic alms to please this Gambara Deiyo in order to get his blessings to prevent malefic and undesirable effects.

Villagers, of Angunakolapelessa treat 'God Kataragama' as their village God. It was believed that the supernatural power of God Kataragama was not confined to Kataragama which is about 20 miles away from Angunakolapelessa but to the surrounding villages The pattern of Gambara Deiyo surrounding Kataragama was different from the rest of the villages of Monaragala District. This was particularly because that God Kataragama is not only the God for Kataragama but for the entire 'Ruhuna Region'.

According to Geegana Mahattaya the blessings of God Kataragama were always with them since the villages under Grama Sewaka Office Sooriara belonged to Kataragama adaviya (area) which invariably had the care (belma) of God Kataragama. While maintaining the same standard of ritual performance to 'God Kataragama' they paid special respects to Goddess 'Pattini' with the objective of keeping away pestilence, infectious disease and vanishing evil influences The 'pooja' or Offerings to Goddess Pattini was highly valued in that they have a high degree of confidence in achieving results.

The ritual was performed in December 1981 when they failed to get rain in mid October Villagers and Geegana Mahattaya when interviewed indicated that they have experienced rain for three days immediately after the ritual and ever since this time (Feb. 1982) no rain was experienced. The failure to get rain after 3 days was attributed to a failure unnoticed to have happened during the ritual performance. The belief

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1 Geegana Mahattaya is the person who is entrusted with the responsibility of holding the folk ritual The literary meaning, of Geegana Mahattaya is 'the envoy of God' who is entitled to enjoy part of the Offerings of Gods

2 'Pattini' is a Goddess in South India and the legend about her life is described in Tamil Epric the 'Cilapathikaram'. The Goddess Pattini has seven incarnations and therefore she is known as Seven Pattini or 'Hatpattini'. Pattini's anklet has magic powers. The legend describes that on one occasion when she has to cross a river and ferryman would not take her across she threw the anklet to the river, and the water parted making a path for her. Pattini's anklet play an important role in the rituals connected with her worship.

3 'Gambara Deiyo' is a God believed to be looking after the village. Any catastrophe falling on the village is believed to be that Gambara Deiyo was displeased with the villagers. The villagers who know about this arrange special rituals to please this 'God'. Different types of rituals are performed in different parts of the country.

that the blessings of Gods were required to have rain was held by almost hundred percent of the study population (both Kalutara and Monaragala)

In the case of Diyahoranduwa in Kalutara District the belief that the blessings of Gods were required to have rain was held by almost all (hundred percent acceptance) who have been interviewed in the study population. Although sentiments of this belief were expressed at the time of the interview no ritual (Gammaduwa or Devol Maduwa) was performed by anyone in the village to known memory This was because that there were none competent enough to perform the ritual either in the community itself or in the immediate neighbourhood.

They believed in 'Paritta' a religious ceremony in pleasing Gods not only to get rains but also to get benefits, blessings and protection from evil spirits. This ceremony had taken place individually but no community level Paritta was perforced either at Diyahoranduwa or at A'pelessa.

The belief that the Gods had to be pleased either by performing a paritta or a 'Gammaduwa' to get rain, was deeply rooted in the villagers of both Diyahoranduwa and Angunakolapelessa No distinctions were noted as regards this belief in traditionally oriented Angunakolapelessa and Diyahoranduwa with semi-urban influences. Of the two ceremonies Paritta was the common one with 'Ratana sutta.* being very popular in both areas

Even National Radio of Sri Lanka commences with Paritta. This shows how much significance is attached to this ritual.

II. Beliefs supported by the process of socialisation and norms without any association to traditional community functions.

The process of socialisation remained as one of the dominant factors for the origination of beliefs and associated behaviour Field observations and discussions as regards the beliefs associated with the use of water were mostly drawn from day to day adapatations of water behaviour which the villagers were compelled to observe according to circumstances and requirements of elders as part of their obligatory functions In doing so they were ignorant that their behavioural actions were contributing to any serious threats to their health and life Further the prevailing indigenous and ayurvedic system of medicine have not imposed any restrictions either in some form of treatment or the use of water, however, during illness specific preventive measures have been instituted with regard to the use of water relevant to that particular illness

The beliefs that were not related to the causation of some of the communicable diseases had their bases to traditional system of medicine, the 'Karma', the spiritual knowledge and experiences that they have under- gone under extreme scarcities of water. For example in Angunakolapelessa villagers believed that diarrhoea was caused due to drinking of 'sun burnt water' at a time when their physical contribution was extremely hot. Hot and cold concept of the traditional medical system had its influences in strengthening the belief

The belief that the well water cannot be polluted had its bases in their perceptions where the concept of pollution was interpreted to mean the introduction of any decaying organic matter or other wastes in the well. This was, according to them an impossible thing to happen, however possibilities of such instances were not ruled out by them. It was observed that if such a pollution took place it would have been

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1. Paritta — The institution of the recitation of Paritta (The Buddhist Subras) as an official ceremony is probably a result of the influence of Mahayana. There are Tibetan ceremonies very similar in character to 'paritta' or 'pirith' Today it is performed as a general purpose charm, on all important occasions in the private life of the individual or the public life of the community — Paranawithana — S 1961 — Buddhist Festivals in Ceylon — Buddhist Studies ed — B.C. Law

2. It is generally believed that the Buddha preached the 'Ratna Sutta — (part of paritta) at Vesali (in India) to free the city from a plague and from the dangers of evil sprits'. King Upatissa, the son of Great physician King Buddhadasa caused the monks to chant this sutta in public at a time when the island was vexed by the ills of a famine and a plague and it is said that immediate relief was the result of this public chanting. Ever since this time the custom took deep root in Ceylon and exists up to the present day. Adikaram, E W. State of Buddhism in Ceylon as revealed by the Commentaries of 5th Century A D. — P 143

3. 'Kama' — A Buddhist concept where man's actions are classified in detail

either introduced by some one or would have happened accidentally In that situation tendency was to clean the well immediately So the belief remained in them with the assumption that well water cannot be polluted. It was noted during discussions that the introduction of various buckets into the well, washing face in the same bucket used to draw water from the well etc., were not seriously considered as pollution If any pollution interpreted by them did not occur, it was assumed that well water was safe for drinking purposes irrespective of other aspects of pollution due to personal habits as mentioned early.

The existence of belief that water taken from whatever the source did not affect them and their previous generations was also due to strong socialisation elements that were responsible in moulding their behaviour from childhood. As a child and as an adolescent they have been utilising the available water sources. This they have been doing on the request of their parents In other words they have been following exactly what their elders did because they did not witness anything harmful happening to them during the process.

The belief that females were not expected to visit traditional sources of water during noon time was really in practice During the study period no females were seen during noon time at water sources It was customary that except for one or two females remaining at home with someones care all other adult males and females used to leave for chena early morning and they used to spend most of the day time in chena. Culturally, females were not allowed either to remain at home or move out from home all alone. This belief was not found to have been happening in Diyahoranduwa. Although the cultural requirement was there for protection, it was not found to have been happening with any seriousness. Further, as in the case of Angunakolapelessa, Diyahoranduwa did not have any traditional sources of water other than wells which were almost closer to their houses. During field visits at Diyahoranduwa it was found that there was no particular time period for them to go for water.

8.3.3. Beliefs adopted by particular behaviour patterns stabilised in them after a long period of habit formation and perceptions particular to them:

Their day to day habits in connection with domestic use of water have been stabilised in them after a long period of practice. For example their habit of collecting water from a running water source and drinking such water for a long time have led them to believe that running water was the ideal for drinking purposes. (This belief prevails only at Angunakolapelessa and not at Diyahoranduwa in Kalutara District). It was noticed at discussions that the villagers have seen that these running water sources for example aras and streams were polluted but the pollution did not do any harm and in the absence of illnesses that they were unable to associate with water, they continued the habit of drinking such water. They admitted that they have been ill with diarrhoea, but these illnesses were not due to the consumption of water from running sources since during August — September all the aras and small streams (except big ones) were dried up. The diarrhoea was due to other reasons, for example due to drinking sun-burnt water in open wells, tanks etc. So, due to these experiences and perceptions they maintained that running water was ideal for drinking.

In the absence of any knowledge as regards the theory of germs it is not strange to state that water means what was available closest to them, from whatever the source. Only condition required in this was purity according to their standards. They believed their perceptions were correct in the light of what they have experienced. It was noticed that there were contrasting differences between (two types of water sources) the amount of sunlight falling on to broader water sources like tanks, ponds, kems (larger ones) and sunlight falling on to small sources like wells. They believed that sunlight falling to a larger area of water made not only water burnt but also the good qualities of water and such water was not good for drinking whereas well water which received a small amount of sunlight was 'good' for drinking. The belief that sun burnt water was not good for drinking (කැකැරුණු වතුර බොන්න හොඳ නැහැ) *Kekerunu watura bonna honda nehe*) was associated with diarrhoea and

other stomach ailments. This perception of disease causation was not due to germs but when such water was taken it was responsible in disturbing the physical constitution resulting diarrhoeal condition On the other hand the well was required to have sunlight but in small quantities. During discussions it was noticed that the necessity of sunlight to the well was recognised as a clearing agent. What they informed was that in case sunlight had not adequately fallen to the well, water in the well would have been subjected to the process of decomposition This belief which was prevailing in both areas stressed the need of sun light in required small quantities. The behaviour associated with this belief was the avoidance of using well water if adequate sunlight had not fallen and not to drink water from sources where too much of sunlight had fallen.

During field visits soil pollution was noted near Weli oya at Kotaweheramankada and Kirindioya at Tanamalwila This sort of pollution was not seen in Diyahoranduwa although during pilot investigations soil pollution was noted along Magura river at Magura, Baduraliya, Midalana and Kalawellawa areas. Soil pollution near aras was said to be prevailing during rainy season but was not seen during study period as all these aras were fully dried up and defecation had not taken place due to non-availability of water for ablution.

The belief that when water is boiled the taste required by them disappears could also be contributed to the long period of habits of drinking fresh water in Angunakolapelessa This belief was not there in Diyahoranduwa. This drinking habit has led them to a taste peculiar to them. It was noted during discussions that they have avoided drinking water when they visited Matara, Galle and Ratnapura towns (in the wet zone bloc) where they found water not agreeable to their taste.

I. Beliefs associated with traditional community functions (whether they are held or otherwise) and supported highly by the culture:

1. They believe that running water is sacred and is used for various types of folk ceremonies.
2. They believe that causing rain is an act of 'Gods'. So, when wells and streams run dry they should pray to Gods for rain.
3. They believe that the traditional sources of water are the abodes of Gods and other spirits.
4. They believe that untouched water by human hand is the clean and sacred water, and such water is recommended for folk rituals and bathing after recovery of 'Gods' diseases.
5. They believe that angry Gods cause infectious diseases (including those of water borne diseases).

II. Beliefs supported by the process of socialisation and Norms without any association to traditional community functions involved:

1. They believe that water is not a causative factor for communicable diseases
2. They believe that water is not related to bowel diseases
3. They believe that water can be polluted but it cannot cause diarrhoea but other conditions in 'stomach'.
4. They do not believe that well water can be polluted.
5. They believe that their traditional sources of water have been used by them for generations without any problems of health.
6. They believe that females should not go for water during noon time since they can be subjected to the attacks of spirits
7. They believe that they have been brought up by utilising their traditional sources of water and as nothing has happened to them so far because of the consumption of water from traditional sources they feel that nothing can happen in the future.

III. Beliefs adopted by particular behaviour patterns stablished in them after a long period of habit formation and particular to them:

1. They believe that running water is ideal for drinking purposes.
2. They believe that even if running water is polluted it gets purified during its running process.

3. They believe that water is very essential and must be available close to them.

4. They believe that water must be available whatever the type and quality of water.

5. They believe that well water is not good for drinking purposes if sunlight has not fallen into the water.

6. They believe that water gets polluted due to open defecation close to canals aras, streams etc., but this is not a serious problem since water is running and gets purified according to them.

7. They believe that their former generations used whatever sources of water available to them without any problems of Health.

8. They believe that water gets discloured during rainy season and such water should not be used for drinking purposes. When this disclouration disappears the water is good for drinking purposes.

9 They believe that when water is boiled the taste of water disappears.

Summary

The methodology of this study was designed in association with the terms of reference and the comments of the Consultancy Review Panel. The study involved in two Districts namely Kalutara and Monaragala. In developing the methodology the available time to complete the study and the geographical distribution of study areas were taken into consideration. The methodology included a pilot survey to collect as many beliefs as possible in respect of domestic use of water and sanitation, a mini survey to find out the extent and the priorities for planning the observations, and an in depth study to get the depth of variable in more details More time and concentration was spent for planning and conducting the in depth survey. The priortiies were primarily searched to obtain the depth by a maximum coverage of mostly prevelant behaviour in relation to the use of water and sanitation practices. An observation schedule which was further strengthened from time to time with more observable areas during the process of investigation served the basis for an in depth exploration of behaviour.

Characteristics of two study areas that were supportive to the behaviour under investigation were briefly mentioned in respect of two study areas

In the chapter on Sanitation practices attention was paid exclus vely for defeacation practices A mini survey about the belief system was conducted to set the priorities and the related behaviours for further exploration. Existing facilities of disposal of excreta were extensively explored with major emphasis on behavioural factors that have led to adopt such particular behaviour patterns. Most of the villagers were unable to identify the association of bowel diseases with open defecation practices. Helminth infestation particularly roundworm and hookworm was not perceived to have been due to open defecation practice. Concept of faecal pollution was confined to the smell and site of pollution within the compound or at a place very much close to house. If it is at a reasonable distance to the house then it is not considered a pollution. Pollution near water sources was considered unfavourable to health. Beliefs and related behaviours which have been explored deeply have unearthened some of the dynamic factors for behaviour as regards defecation practices.

Extent and nature of land, feeling whether a latrine is an essential component of housing, social necessities, generational habit of open pollution, a high degree of mobility, and social tolerance were some of the leading factors favourable for open defecation behaviour. Social prestige in which protection for privacy of females is placed a high value was the most striking factor amongst many other factors for using latrines.

The habit of ablution is associated with the defecation site and the availability of water. Water was sufficiently used in Kalutara whereas it was scarcely used in Monaragala. No soap was found to have been used by anyone of them for washing of hands after ablution and before meals. Poor personal hygiene prevailed even in spite of the availability of water in Diyahoranduwa.

Angunakolapelessa is a typical traditional society with traditional sources of water supply like tanks, aras, ara wells, kems and open wells whereas Diyahornduwa in Kalutara District is a village with a semi-urban influence and has to depend its water only from open wells. During the rainy season Angunakolapelessa villagers used all traditional sources close to their houses. The V.C. well was the only available source of water during the dry season. It was the nucleous of water behaviour where washing, bathing water for drinking washing cloths etc., were done in the village. Chena cultivators depended their water from kems. aras and ara wells close to their chenas. Diyahoranduwa continued with the same behavioural pattern irrespective of seasonal variations

Habits and personal hygiene related to water remained the same in both areas although more water was seen used by Diyahoranduwa villagers

Storage of water was confined to the storage capacity available at home. More water was found stored in Angunakolapelessa than Diyahoranduwa at a time. The habit of storing water at Diyahoranduwa was to visit the well which is close by every time their water storage has fallen below their required standard. Visits to the V.C. well in Angunakolapelessa were mostly in the afternoon however few visits were found made in the morning particularly for morning wash.

No family was found using boiled cooled water. The standard of water for drinking was percieved by its appearance and taste. Washing hands before meals with a glass or an enamal jug was found to be a good practice. No soap was seen used for washing hands. All domestic work including cooking, washing pots and pans etc., was found atteneded to with the available water at home

The beliefs with regard to domestic use of water not only reflected the behaviour but also strengthened the socialisation process. The beliefs were the products of experiences gathered during their life long experiences respected and honoured by them. Other than modifications of behaviour related to beliefs no change agents or other influences were seen to have been brought any appreciable change in their behaviour.

Recommendations

1. This study was done during the dry months of the year (January and Febuary) and therefore the analysis of behaviour was confined to behaviour occurring during that part of the year. The information pertaining to behaviour during rainy season was mostly obtained through discussion and has to be relied on verbal information only. Since the reliability of data are exclusively restricted to discussion it is necessary that this behaviour should be observed again during rainy season — (October to December) in order to maintain the reliability consistency and also to obtain more behavioural data with regard to domestic use of water and sanitation practices during rainy season.

2. This study explored the depth of the variables related to sanitation and domestic use of water. It is suggested that in association with the study findings extent of behaviour should be made known by undertaking a sociological survey. This should be on a larger sample in both dry and wet zones. As an interim measure the study findings should be fed back to health workers and others who are involved in programmes of water supplies and sanitation.

3. As there exists a lack of understanding of the water supply projects now in operation in health and other peripheral workers particularly in the rural sector it is suggested to organise an orientation programme to feed study findings and to familiarise the water projects undertaken by the Ministry of Local Government and National Water Supply and D.B. in the rural sector.

4. Reaching the rural sector to provide facilities of water and to motivate and educate them on the use of latrines requires a deeper understanding of rural life. This becomes exceedingly important when advanced technology is planned to institute facilities to rural people. In order to reap maximum benefits of such programmes the services of a Sociologist/Anthropologist with a public health background may be sought to study and recommend behavioural areas for health education interventions.

5. The informal leadership particularly the traditional and local physicians influence the beliefs and related behaviour which are considered affecting the health behaviour of rural people. These local physicians should be educated to influence this belief system, to bring about the desired change in behaviour.

6. The favourable behaviours and beliefs to health as indicated in the study for example the concept of faecal pollution, social prestige, and pollution near water sources affect health of people may be fully utilised in extending and strengthening behaviour through planned health education programmes.

7. Most of the villagers in these areas learn through informal ways. The results could be more if informal methods of education are used in educating rural people particularly the traditional societies.

8. A health education strategy with major emphasis on extension education will have to be developed to reach traditional societies. It should be behaviour oriented rather than programme centred.

9. Programmes of health education should be planned and conducted when villagers are in off period of chena cultivation i e. from March to middle of August.

10 Institutions like schools, and temples and the traditional leadership in the area serve as the nuclear point in disseminating of information and moulding their traditional life patterns. Such forces could profitably be used in health education.

11. A health education is a vital necessity in areas where facilities of water have already been provided. This should receive very high priority.

12. The availability of water at home of rural people of the low socio-economic group was far below in both dry and wet zones. This reflects the poor personal hygiene on one side and non-availability of water on the other. Both these aspects will have to be looked into in developing programmes of health for rural people.

13. Rural people have failed to understand the relationship of water to water related infectious diseases and as a result whatever is its quality if water appeared to be clean they are in the habit of using such water for domestic use. This behaviour has resulted more of water related diseases particularly diarrhoea in rural people. They are to be educated over these aspects

14. Circumstances under which their life patterns are spent (particularly chena life in dry zone) have forced them to drink water from whatever the source. This looked an inevitable feature in their life as they had no other alternatives. Even if safe water is provided to the living house in the village the nature of their mobility of cultivation patterns in chenas (which are about 3 to 5 miles away from the dwelling house) prevents them using safe water If this behaviour is not arrested a

provision of a safe water supply to those communities will not achieve the desired objectives. Early measures to modify this behaviour by way of an educational intervention are strongly recommended to areas where new water supply schemes are planned

15. Circumstances under which the life pattern of chena cultivator is spent have forced him to adopt the practice of open defecation. This behaviour could be modified if he is educated a sanitary way of disposal, which would suit his behaviour in chenas

16 The study findings indicate that the non-availability of latrines in the area was mostly due to the open defecation habit, availability of shrubs and evolved normative ways of life to meet such situation and not due to economic factors or lack of resources to construct latrines. If villagers are made to realise the importance of using latrines, the construction of temporary latrines is within easy reach of people Temporary latrines are suggested as an interim measure. Nearly fifty per cent of houses are on encroached crown lands. Even if the chief occupant is willing to put up a latrine he will not do so fearing that he will be evacuated. They should be persuaded to put up even temporary latrines in such situations

17 Open defecation habit will have to be arrested by introducing a similar behaviour The existing behaviour in some houses was to use a temporary dug pit with a squatting plate made of planks which was surrounded with a cadjan fence with a door. This temporary dug pit latrine is recommended to those who do not have latrine and use shrubs for defecation. This will serve as a take off point from the present habit of open defecation

18. In order to implement recommendation No 17 villagers should be issued with squatting plates free of charge to enable them to construct any type of latrine minimum being temporary pit latrine. This programme should be followed up with a health education programme

19. The services of a Sociologist/Anthropologist with a public health background should be obtained to attend to the co-ordination work between the health education and health services at rural level to prepare and educate the communities before the installation of supply services. This will ensure community participation and proper use of water and sanitation facilities provided to them

20. An impact survey to ascertain the use of facilities of water and sanitation will have to be undertaken to determine the factors for use. It is suggested that impact survey may be undertaken after installation of water supply services.

Suggested content for questionnaire/schedule construction to assess/evaluate sanitation and domestic use of water

The following content is suggested for use in developing questionnaires/schedules to assess/evaluate domestic use of water and sanitation of rural communities. The content suggested here is based on study findings and experiences gained in working with communities and could suitably be adjusted to suit the researchers and objectives of studies.

1. **Preliminary information** .

1.1 Name of chief house holder

1.2 Address

1.3 District

1.4 A.G.A. area

1.5 G.S. area

1 6 Race

1 7 Religion

1.8 Family size — No. of males
No. of females.

1.9 Marital status

1.10 Education — No education
Primary
Secondary
University

1.11 **Occupation** :

1.11.1 Name of occupation

1.11.2 Ownership of land

1.11.3 Ownership of house

1.11.4 Ownership of other movable properties

1.11.5 Occupation of other members

1.12 **Housing** :

1.12.1 Temporary — Walls, roofs, rooms

1.12.2 Semi-permanent — do —

1.12.3 Permanent — do —

1 12.4 Light and ventilation

1.12.5 House how located to land
Central to land
At a cornor.

1.13 Extent of land — mention size of land

1.13.1 Land how located — on a flat land, side of a hill

1.13.2 Land how used — cultivation
rank vegetation

1.14 **Soil** :

1.14.1 Nature of soil — stony, cabooky, etc.,

1.14.2 How soil is used

2. **Assessment of existing facilities** :

2.1 Water

2.2 Sources of water supply

2.3 Traditional sources — spring, ara, kem, tank, pond, canal, river

2.4 Public — specify

2.5 Man made — open wells etc.,

2.6 Seasonal variations of water supply

2.6.1 Rainy season — specify source of supply

2.6.2 Dry season — specify source of supply

27. **Nature of water supply** :

2.7.1 Specify the source, location and environment in the immediate vicinity of the source.

2.7.2 Any contamination of the source

2.7.2.1 From animals

2.7.2.2 From environment

2.7.2.3 From the behaviour (Specify further) for example — handling of water washing, drawing etc.,

2.8 **Sanitation** :

2.8.1 What facilities available ?

2.8.2 Latrine available

2 8 3 If avilable what type ?

2.8.4 open defecation

2.9 **If latrine available how located** ?

2.9.1 How located to land ?

2.9 2 How located to house ?

2.9.3 How located to the source of water if one (open well) available in premises ?

2.10 **If latrine available — how constructed** ?

2.10.1 Wattle and daubed with thatched roof

2 10.2 Cadjan enclosure with cadjan roof

2.10.3 Brick work with tile roof

2.10.4 Brick work with thatched roof

2.11 **How used** :

2 11 1 Used by all members of premises

2.11 2 Used by some members only

2.11 3 Satisfactorily used

2.11.4 Use is unsatisfactory.

2.12 **If no latrine available — disposal of excreta.**

2.12 1 Using a neighbours latrine

2.12.2 Open defecation in premises

2.12.3 Open defecation outside.

2.13 **Disposal of excreta — Infants and Pre-school children**

2.13.1 What facilities available ? Specify

2.13.2 If no facilities available how disposal of excreta is made ?

2.13.3 If the compound is used — specify

2.13.4 If rank vegetation is used — specify

3. **If no latrine available, Why** ?

3.1 No land available

3.2 Because in rented out house/land

3.3 In encroached crown land

3.4 Temporary residence

3.5 No means to put up a latrine

3.6 Open defeacation practice

3.7 Rank vegetation available

3.8 Shrubs available

3.9 Not necessary to have one

3.10 No social pressure to use one

3.11 Dispute over the site

3.12 Do not believe in using latrines

4. **Sanitation and housing**

4.1 Is latrine a felt need ?

4.2 Is latrine an essential component of housing ?

4.3 Has she/he felt that open defeacation is polluting the land and housing ?

5 **Sanitation and personal hygiene**

5 1 Washing hands with water after ablution

5.2 Washing hands with soap and water after ablution

5.3 Sufficient quantity of water (specify) used for ablution.

5.4 Sufficient quantity of water (specify) used for washing hands with soap and water after ablution

5.5 Sufficient quantity of water (specify) for washing hands before meals

5 6 Sufficient quantity of water (specify) for washing hands with soap and water before meals.

5.7 Washing hands of mothers with water after preschool childrens' ablution

5.8 Washing hands of mothers with soap and water after pre-school childrens ablution.

6. **Site of ablution**

6.1 In latrine

6.2 In backyard

6.3 In water sources — specify

6.4 In rank vegetation area — specify

7. **Sanitation and subsidy**

7.1 Do they aware that subsidy is available to construct latrines ?

7.2 Do they aware that through whom they can get this subsidy ?

7.3 Do they aware that free instructions available to construct latrines.

8. **Sanitation and law**

8.1 Do they know that non availability of latrines/ open pollution in premises is an act of violation of law of country ?

8.2 Do they know the officer delegated with the authority of prosecution ?

8.3 Do they know why the non availability of a latrine/open pollution is considered violation of law of the country ?

9. **Sanitation and Health Education**

9.1 Has anyone in the village discussed the importance of a latrine ?

9.2 Who is this person ?

9.3 What is his social status ?

9.4 During his visits to Dispensary of any Medical Institution has anyone discussed or told him the importance of latrine ?

9.5 To his memory who is this person ?

9.6 What would be his status ?

9.7 Has he heard or read at any time that open defeacation is related to health ?

9.8 What would be this source ?

9.9 Any social organisations interested in health work Name these organisations.

9.10 Has he seen/read any health education literature related to sanitation ? specify — type of health education literature — source, how obtained ? Whether message understood ? Any impact.

10 **Sanitation and social status and prestige**

10 1 Do they consider whether having a latrine is a status factor ?

10 2 Do they consider that visits of the female members to the shrub for defecation is a socially acceptable thing ?
(This question may be modified to suit the respondent and the objective. The question may be asked irrespective of whether the respondent has a latrine or not to ascertain the social acceptability)

10.3 What would they suggest (in case latrine is not available) when a visitor to his house requests toilet facility ?

10.4 Do they feel embarrassed with the answer they make ?

(Question may be modified to suit the respondent and objective What is necessary is to determine whether the respondent has felt it or not.)

10.5 Is the defecation area socially acceptable ?

10.6 If yes — specify reason (open end item)

11. **Sanitation and knowledge of diseases due to open defecation. (What is more important here is to ascertain the knowledge about the relationship of open defecation to diseases. Therefore the questions have to be directed to both those who have and do not have latrines).**

11.1 Do they know what bowal disease is ?

11.2 How would they describe ? (open end item)

11.3 How this bowal disease is caused ?

(open end item or if alternatives are provided pretesting with a similar population is necessary).

11.4 What would they do when they contract a bowel disease ? (open end item or follow procedure of previous question).

11.5 Do they relate the disease to open defecation habit ?

11.6 Do they know what worm disease is ? (Mostly prevelant ones-round worm and hookworm).

11.7 Do they know worm disease is due to hook-worm ? (Ankylostomiasis).

11.8 Do they know worm disease is due to round worm ?

11 9 How would they describe worm disease due to round worms ? (open end item).

11.10 How would they describe worm disease due to hookworm ? (open end item).

11.11 What would they do when they feel that a child is suffering from a worm disease (open end item)

11 12 How often do they treat ?

11.13 Do they relate that worm disease is due to open defecation habit ?

11 14 If they could relate do they know how the disease is caused (open end item)

11.15 Do they relate any disease causation due to open defecation habit ?

12 **Beliefs regarding sanitation (Defecation Behaviour)•**

12.1 Do they believe that open defecation cannot cause any disease in man ?

12.2 Do they believe that helminth infestation is not due to open defecation practices ?

12.3 Do they believe that open defecation is related to the causation of bowal diseases ?

12.4 Do they believe that infants are born with some amount of worms ?

12 5 Do they believe that worms which infants have got by birth are necessary for living

12.6 Do they believe that worms which infants have got by birth should not be evacuated.

12 7 Do they believe that the open defecation habit pullute the environment ?

12.8 Do they believe that the open defecation if done in rank vegetation areas and in shrubs does not affect anyone ?

12.9 Do they believe that open defecation near (canals, rivers) water sources pollute the wator supply ?

12.10 Do they believe that nothing happened to their elders health because of open defecation habit ?

12.11 Do they believe that nothing can happen to their health in the future even if they continue the habit of open defecation ?

12.12 Do they believe that ablution in canals and other water sources pollute supplies of water ?

12.13 Do they believe that the open defecation is the accepted way of disposal of humam excreta ?

13. **Use of water supply — Behaviour at site.**

The following information will have to be collected by observation.

13.1 Specify the water supply

13 1.1 Open well

13 1 2 Pipe-borne

13 1 3 Traditional sources

13.1.4 Public water supply

13 1.5 Others-specify

13.2 **Drinking** — how water collected/drawn and taken home

13.3 **Washing** — Whether washing of cloths done at the source of supply and contamination takes place — how bucket is used for washing purposes

13.4 **Bathing** — Whether bathing done at site — any possible contaminations.

13.5 **Ablution** — Whether ablution done at site. Any contamination of the water supply

14. **Knowledge about the use of water supply** : —

14.1 Do they know that washing at site of supply pollute the water supply ?

14.2 Do they know that washing linen at site of water supply pollute the water supply ?

14.3 Do they know that bathing at site of the water supply pollute the supply ?

14.4 Do they know using the same bucket for washing and drawing pollute the water supply ?

14.5 Do they know that using individual buckets pollute the water supply ?

14.6 Do they make any preparation before drinking ?

14.7 If so, specify what do they do ?
(open end item) **e.g.** boiling, filtering etc.

15 **Storage of water.**

15 1 What is the storage capacity of water (observation)

15.2 How many buckets/pots taken home for a day. specify

15.3 How do they store water ?

15 4 Where do they store water.

16. **Quality of water and perceptions.**

16.1 What water do they accept as safe for drinking ?

(open end item) (if alternatives are suggested a pilot investigation is necessary as the quality perceived by them differs from area to area)

16.2 Do they require taste in drinking water ?

16.3 If so, what type of a taste — specify (open end item)

16.4 Do they require a particular colour in drinking water ?

16.5 If so, what type of a colour — specify (open end item)

16.6 Water from what source do they percieve as safe for drinking ?

16.7 Why do they consider such sources safe for drinking ?

17. **Knowledge about the use of water and diseases. ffiuestions under sanitation and knowledge of diseases may be repeated here.**

17 1 Do they know that bowal diseases are caused due to drinking of polluted water supply ?

17 2 Do they know that water could get polluted due to open defecation habit near water sources ?

17.3 Do they know that water could get polluted due to bad handling of water — specify handling of water by adding more questions, for example drawing water poor personal hygiene etc.

17 4 Do they know what safe water is (specify — open end item).

17 5 Do they know that by boiling water can be purified.

17 6 Do they know that by drinking boiled cooled water they can get rid of bowal diseases ?

18. **Domestic use of water and health education.**

18.1 Has anyone discussed about the water which is safe for drinking ?

18.2 Who is this person ?

18 3 What is his social status ?

18 4 Has any health officer working in the village told you about drinking water.

18 5 If so, mention

18 6 During your visits to a Medical Institute has anyone there told you about diseases due to drinking polluted water.

18.7 Who is this person ?

18.8 What is his status ?

18 9 Has he seen any health education literature at the Medical Institute ?

18 10 If so, mention

18.11 Has he learned about water from any social organisations in the village ?

18 12 If so, mention the organisation.

18.13 Has he seen/read any health education literature related to domestic use of water ? specify type of material, source, how obtained ? source obtained etc.

18.14 How do you come to know things about the village ?

(Specify the medium — This may be an open end item)

19. **Beliefs** — domestic use of water

19.1 Do they believe that water is not a causative factor for communicable diseases ?

19.2 Do they believe that water is not related to bowal diseases ?

19.3 Do they believe that water could be polluted ?

19.4 Do they believe that polluted water cannot cause diseases ?

19.5 Do they believe that running water is ideal for drinking ?

19.6 Do they believe in germs ?

19.7 Do they believe that germs can live in water ?

19.8 Do they believe that running water is sacred ?

19 9 Do they believe that since running water is used for ceremonial activities, it is safe for drinking ?

19 10 Do they believe that if sunlight has not fallen into the open well that water is not fit for drinking ?

19.11 Do they believe that open defecation near running water sources is not a threat to health since water is running and gets purified ?

19.12 Do they believe that traditional sources which have been used for generations have not caused any harm to their health ?

19.13 Do they believe that the use of traditional sources will not cause any harm to their health ?

19.14 Do they believe that safe water is the one that gives them the required taste ?

19.15 Do they believe that safe water is the one that gives them the colour and the required taste ?

19 16 Do the believe that piped water is safe for drinking ?

19.17 Do they believe that water coming through iron pipes is safe as spirits cannot cast their influence ?

Terms of Reference for Short-term Consultancy – to study the Domestic Water Use and Sanitation Practice of Rural Families.

1. **Purpose** :

To identify and evaluate the various social, cultural, economic and physical factors, attitudes and habits which influence domestic water use, hygiene and defecation practices of rural families, particularly those in the lower economic strata The results of this study will add to the knowledge in this field particnlarly for use in developing strategies with respect tu water and sanitation for rural families. With this eud in mind the information will be used to develop qoestionnaires for diagnostic and baseline surveys of domestic water use and sanitation practices. These questionnaires, in turn, will be used to develop monitor and evaluate interventions in the field, particularly the Government's Community Wells and sanitation programmes.

2. **Administering Authority** :

The consultancy will be administered by the National Water Supply and Drainage Board. (N.W.S & D.B)

3. **Duration** ·

The study will be conducted over a continous 4 month period beginning in the latter half of 1981.

Location :

Investigations for the study will be conducted in a dry zone district Monaragala where N.W.S. & D.B. is conducting drilled community wells project and in wet zone district, Kalutara, where the Ministry of Local Government, Housing and Construction is conducting a hand dug community wells project with assistance from the N.W.S. & D.B.

5. **Study Outline** :

5.1 The consultant will interview knowledgiable individuals, review any available studies, reports etc., and preparo a preliminary list of the various social, cultural economic and physical factors which he or she believes influence domestic water use, both with respect to quality and quantity, hygiene and defeacation practices (duration 1 week)

5 2 The consultant will present this preliminary list of influencing factors to a consultancy of Review Panel consisting of a representative from N.W.S. & D.B., the Ministry of Local Government, Housing and Construction, the Ministry of Health, WHO, for review and discussion (Duration ½ day)

5 3 In consultation with District Officials, the consultant will select rural families in Monaragala and Kalutara Districts which are representative of the rural populations of the areas for intensive interviews and observations. The number of families selected will be determined by the consultant based on his or her estimate of the time required for interviews and observations and the time available, but in no case shall the number of families selected per district is less than 8. (Duration 1 week)

5.4 Using the preliminary list of influencing factors as a guide and keeping in mind the comments of the Consultancy Review Panel, the consultant will interview members of the selected families to determine beliefs and attitudes with respect to domestic water use, hygiene and defeacation practices. The consultant will then observe the families day to day habits compare or contrast these actual practices with the beliefs and attitudes (Duration 11 weeks).

5.5 The consultant shall prepare a draft report on the results of the interviews and observations, listing and evaluating the various social, cultural, economic and physical factors, which he or she determined influence the selected families, domestic water use, hygiene and defeacation practices. The consultant shall distinguish between those influencing factors which are socially or culturally specific as opposed to those which are common to all families interviewed. (Duration 1 week)

5.6 Based on the evaluation of the various influencing factors, the Consultant shall prepare a draft questionnaire which could be used to assess monitor or evaluate the domestic water use, hygiene and defecation habits of more general sections of the rural populations. (Duration ½ week)

5.7 The consultant shall submit the draft report and draft questionnaire to the consultanct Review Panel for their review and comments. (Duration ½ week)

5.8 The consultant will prepare a final report detailing the study and its results and including recommendation on how the resulting information can be put to practical use, particularly with respect to the Community Wells Programme. (Duration 1 week)

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Details of Methodology

1. **Review of Literature :**

The literature reviewed in this connection is furnished in Appendix 4 The literature search was carried out in libraries of Sri Jayawardenepura University, Medical School Colombo. Health Education Bureau, W.H.O Office, British Council and other leading libraries in Colombo The literature written directly on the subject area of the domestic use of water and defecation practices of the low socio-economic strata of rural populations of Sri Lanka was not available, however few articles writtent to Journals about 60 to 70 years ago on some aspects of sanitation and use of water provided rich information on the subject. The literature particularly in relation to Sri Lanka covering other dimensions on the relevant subject areas were reviewed.

2. National experts in related fields were interviewed to elicit more data about the subject matter. The purpose of consulting national experts was to get more information on the following.

(*a*) To discuss with them and obtain behavioural aspects that are to be considered for field exploration.

(*b*) To elicit detailed information about literature known to them so that such literature could be reviewed to get further information about related behaviours

(*c*) To discuss and get further comments as regards the methodology to be adopted for this study

The pilot investigation was planned and conducted in both Kalutara and Moneragala Districts to enhance the coverage already made under the first two methods stated above under the Methodology.

It was assumed that since studies of this nature has rarely been undertaken literature review would not yield the expected information particular to Sri Lanka Further, it was believed that the consultation of national experts would base their comments on experiences that they have gained in implementing programmes It was, therefore assumed that the pilot investigation would throw much light on the possibilities of current behaviour for consideration of further exploration in the proposed study areas.

In view of the time constraints undertaking a pilot investigation in the proposed two districts would facilitate to achieve a comprehensive coverage of observable areas since concentration could on planned basis be focussed on much needed areas for which educational therapy will have to be planned subsequently

In association with the data collected by reviewing literature and contacting national experts a preliminary list of beliefs perceived to be influencing the behaviour related to domestic use of water and defecation practices was complied for the purpose of utilisation during pilot study investigations. It was the consensus of the Consultancy Review Panel members that the preliminary list would serve the basis for exploration at the pilot study endeavour. Further it has supported the investigator in furnishing information unknown to him to make a sound beginning

The Pilot investigation was launched in three A.G.A. areas of Moneragala District, namely Madulla. Siyambalanduwa and Tanamalwila and three A.G.A, areas of Kalutara District namely Matugama, Agalawatta and Horana The procedure adopted was to visit an A.G.A's office, and contact A.G.A and his field staff. The Grama Sewaka Divisions in respect of each A.G A. area were listed and two G.S. Divisions were selected by drawing lots Of the selected G S Divisions the list of villages was prepared and one village from each G.S. Division was selected in consultation with the field staff of A G A

The considered criteria were :

(*a*) The accessibility to the village

(*b*) The low socio-economic status

Here, the governments classification of income below Rs 300/— was considered belonging to the low socio-economic group This information is easier to get since all Grama Sewakas have classified their areas according to the above income groups since government supplies the subsidy to the low socio-economic grouip **i.e.** below Rs. 300/- and G.S. is expected to maintain and furnish this information regularly to the Government.

After the preparation of lists of villages of the selected G.S Divisions of the A.G A area the list of

names of leaders in those villages was prepared. The list included Buddhist Priest in temples, V C members, Teachers, Ayurvedic and Traditional Practitioners, social workers and exorcists

These persons in the selected villages were visited individually and interviewed quite informally. Long discussions quite at informal level were held to elicit the required information from these leaders Further interviews outside the list of persons were obtained and conducted Names of such influential persons were obtained from, the first contacted leader in the list by requesting him to suggest any others known to him in the village since they also would be able to furnish information relevant to the field of interest This step was instituted to cover all influential persons in the village and whose name in all probability would have been dropped by chance by the A G A. and field staff

The information collected through all sources and methods was finally processed and a list of beliefs and probable attitudinal areas in respect of domestic use of water and defecation practices was prepared and presented to the members of the Consultancy Review Panel.

Field visits of the pilot study have brought to light some of the behavioural areas that require deeper exploration The preliminary list of beliefs, probable attitudinal areas and the field experiences facilitated to develop a basic sketch of the field observation schedule. Since it was required to have a minimum number of houses for continous observation it was felt that some of the expected behaviour for deeper analyses would not take place in these houses As this behaviour would carry a greater significance as far as the domestic use of water and defecation practices are concerned such behaviour if not happened in the sampled bloc of houses will have to be observed outside the sampled houses. Therefore a deviation was made to observe such behaviour outside the sampled bloc of houses This measure was evolved in order to bring a comprehensive coverage of behaviour related to the domestic use of water and sanitation practices This could be explained in an example.

An ara is one of the traditional sources of water supply for the villagers in Monaragala, particularly the southern sector. During the rainy season they depend much on this water source for drinking and other uses. Water in an ara remains for few months during the rainy season Thereafter it runs dry. The villagers who are living closer to aras dig wells in aras and take such water for drinking, bathing and washing purposes. In other words, an ara is very closely connected to the life of people living closer to aras. Suppose the sampled bloc of houses does not have an ara or any other traditional sources of water supply and if the study is only concentrated to that bloc a comprehensive coverage of behaviour as regards water cannot be achieved. Therefore it became necessary to adjust the methodology to suit the dry zone pattern of use of water

As the study progresses the observation schedule also got expanded to suit situations and circumstances. Chiefly the observation schedule had three broader dimensions

(i) Continuous observation of sampled houses— both — participant and non participant observation;

(ii) Observation of behaviour (not expected to occur inside the sampled bloc) by visiting the adjacent houses and villages.

(iii) Conducting interviews outside the sampled bloc of houses

There were basic distinctions in both Diyahoranduwa and Angunakolapelessa. For instance Angunakolapelessa had traditional water sources like aras, kems and tanks whereas Diyahoranduwa had all man-made sources The observation schedule was a general one applicable in both areas It was mostly a guide to prepare notes of observation and interviews.

Continous observation was made in the sampled bloc of houses The tea boutique of the ex-village headman was the central spot of the sampled bloc of houses. The villagers used to visit this boutique in the afternoon and discuss many things of interest to them This boutique was fully utilised to gather the much needed information and to discuss many topics quite informally.

Observation of behaviour outside the village was concentrated on the following areas.

(*a*) The chena life —

(*b*) Defecation site outside the village.

(*c*) Use of ara wells — bathing, drinking and washing.

(*d*) Use of the tank.

(*e*) Observation of defecation sites close to water sources — rivers and oyas.

(*f*) The ritual performance and religious behaviour

(*g*) Use of 'kems'

(*h*) Group behaviour. (performance of a ritual, religious gathering or a social gathering)

No chena life was found in Diyahoranduwa (Kalutara District) Chenas of Angunakolapelessa was located about 2 to 6 miles away from the sampled houses. Males (adults) spent most of the day time and the night in the chena. Therefore, it was imperative that chenas should be visited for observation. Other behaviours concerning the mentioned areas from (b) to (g) were available outside the village but within close proximity except the observation of defecation sites close to water sources — rivers and 'oyas'. Group behaviour was not observed since within the study period such a group activity mentioned was not available.

Defecation sites near water sources were visited once due to physical and time constraints. The two sites visited were at Kirindi Oya at Tanamalwila and Weli Oya at Kotaveheramankada. Both sites were (Kirindi Oya 8 miles, Weli Oya 14 miles) away from Angunakolapelessa The major purpose of visiting these sites was to ascertain whether defecation does take place at such places as it was reported and that this defecation behaviour would have been taking place at Angunakolapelessa during the rainy season near aras.

Series of interviews had to be conducted outside the sampled houses in order to obtain information and cross-check some of the findings for accuracy and reliability. For example the activities of the "Great Ritual" called "Gammaduwa" were first obtained from the villagers of the sampled area. They were not able to furnish the required information. Therefore, a visit to the Ritual Performer known as Geegane Mahattaya was inevitable Similarly to determine the rural indebtedness prevailing to the extent that they were narrating had to be cross-checked by visiting outside and meeting 'middlemen' who transact most of the chena products of the villagers. In the same way persons were met outside Diyahoranduwa (Kalutara District) to determine behavioural areas and maintain reliability. For example, to cross-check some of the information and maintain reliability, a Buddhist Monk outside Diyahoranduwa living at Dewagoda (adjoining village) had to be visited to discuss and obtain whether the priest gets boiled and filtered water after alms.

The terms of reference of this assignment required to select a sample from Monaragala and Kalutara Districts covering low socio-economic groups.

Field Observation Schedule

2.1 Observation — domestic use of water

1. **Observe sources :**

1.1 Condition of source — brief description

well — depth, inner lining parapet walls, cross-bar, apron etc .

1.2 How water taken — buckets/Other types of buckets etc ,

1.3 How introduced into the water source/ well — if rope how handled.

1 4 How is water drawn up and kept on ground.

1 5 How water is transferred to pots/containers.

2. **Storage :**

	Drinking	**Other uses**
2 1	Where stored ?	
2.2	How stored ?	
2.3	No of pots/other containers	
2.4	Size of pots	
2.5	No of pots/containers	
2.6	Exposed/Non exposed	
2.7	House away from V.C well	
2.8	House closest to V.C. well	
2.9	House in between V. C well	
2.10	Quantity of water No. of pots/containers and how stored	

3. **Transport of water** — V C. well

3 1 **Morning** — Who comes to well for water? Note the house from which she/he comes

3.2 **Evening** — Who comes and how often ? Note house from which she comes

3.3 Note down frequency — visit and find out the storage position at the end of days collection of water.

4. **Wells — washing and bathing :**

Washing — face

4.1 Time of day — Mor. — well

4.2 How water drawn up — by whom ?

4.3 Same bucket/separate bucket used for washing

4.4 Soap used for washing — No soap used

4.5 How many buckets used for washing ?

5. **Washing linen :**

5.1 Where seen, washing ? — Describe place

Well

Tank

Ara well

Home

5.2 What container used ?

5.3 How is it used ?

5.4 How soap is used ?

5.5 How washings done ?

(Observe a piece of cloth being washing to a finish)

5 6 How much water used for washing ?

5.7 (Observe behaviour — watch the number of pieces brought for washing and determine the number of buckets used to complete washings)

5.8 If washing is done at home from

5.9 Where water was brought ?

How used water disposed of ?

6. **Bathing** :

6 1 Where seen ? Name water sources seen

Tank

Ara well

V.C. well

Private well

6.2 If well — how many buckets — (Observe)

6.3 Observe how bathing being done (bathing behaviour)

6.4 How much time spent ?

6 5 If well is ued — probability of water getting polluted — (take notes subsequently)

6.6 Bathing at home — infants — how is it done ?

7. **Drinking** — water (observation and discussion)

7 1 At home — with what and how many times

7.2 At Chena ,, ,, ,, ,,

7.3 At local tea boutique ,, ,,

7.4 At other places ,,

7.5 After meals —

7.6 Observe — condition of utensils and habit of whether water boiled

8. **Cooking** :

8.1 How water used ?

8.2 How much water used ?

9. **Washing hands** :

9.1 After meals — with only water

9.2 ,, with soap and water

9.3 ,, how much water used. ?

9.4 **After defecation** with only water

9.5 ,, with soap and water

9.6 ,, how much water used ?

No separate wasnhig

9.7 **After work** with only water

9.8 ,, with soap and water

9.9 ,, How much water used ?

9.10 ,, No water used for washing.

Observation 2.2

2. **Defecation Practice**

1. **House**

1 1 House — type — condition

1 2 How located in land and to road and accessibility ?

1 3 Extent of land per household

1 4 Use of land

1.5 Rank vegetation/shruby jungle

1.6 How much cleared?

1.7 Ownership of house and land

2. **Latrine**

2 1 Type of latrine, condition and made of what?

2.2 How located to land and house ?

2.3 How used ?

2.4 Extent of land where latrine located ?

3. **Defecation Behaviour**

3 1 Infants (Observe whole process)

3.2 Pre-school — early life

3.3 Late pre-school period

3.4 Children

3.5 Observe backyard, compound for faecal pollution

3.6 Observe rank vegetation area or shrub close to house for faecal pollution

4. **Defecation behaviour**

Where no latrines available ?

4.1 Infants — where faeces disposed of ?

4.2 Early—pre-sch. — Defecate where ?

4.3 Pre—Sch. — Defecate where ?

4.4 Children — Defecate where ?

4.5 Adults—male — where do they defecate ?

4.6 Adults—female — where do they defecate ?

5. **Defecation sites and behaviour**

4.1 Observe for sites—Nature of the site

5.2 What time of the day do they visit ?

5.3 How males and females visit same area same time ?

5.4 Observe for the normative system which they may have developed to regulate this behaviour.

5.5 In Chena—where do they go for defecation ?

5 6 Sites near water sources—Near stream, ara, tank and kem (develop plan to observe separately)

5.7 Site what distance to house — Common defecating areas and the distance to the nearest dwelling house.

6. **Ablution** — Where ?

6.1 In latrine of premises

6.2 Any covering or enclosure close to house.

6.3 If no latrine was available where did the ablution normally take place ?

6.4 Infants — Ablution

6.5 Early pre-school ablution

6.6 Late ,, ,,

6.7 Children ,, ,,

6.8 Adults ,, ,,

6.9 What is the container used ?

6.10 Size of container

6.11 How much water carried for ablution?

5.12 Ablution in ara

6.13 Ablution in Kem

6.14 Ablution close to streams

6.15 If possible plan to observe any one of above behaviour

6.16 Washing hands after defecation—if not seen —item for discussion.

7. **Urinals**

7.1 Where located ?

7.2 If no place is available what place is used?

7.3 Urination according to sex, urination according to age.

8. **Any possible contamination due to open defecation habit.**

8.1 Food taken for preparation

8.2 Food to be eaten

8.3 Contamination of utensils, containers etc.

8.4 Contamination of water sources.

Domestic use of water 2.3

1. **Sources of water**

   1.1 Types of sources of water and use for what ?

   1.2 Traditional sources — (ara, stream, kem, river, ponds, tank) and how used?

   1.3 Man, made sources — wells, etc., and how used?

   1.4 What do they feel about their sources of water supplies — in terms of suitability, for drinking, washing cloths, personal hygiene ? (Items to be taken separately and introduced at appropriate intervals).

   1 4 1 Traditional sources :

   Ara

   Stream

   Kem

   Tank

   1 4 2 Man-made sources :

   Wells

   Private wells

   Ara wells

   1.5 Use of traditional sources of water during rainy season — (to be observed and discussed in village and Chena).

   1.6 Use of other sources during rainy season (to be observed and discussed in village).

   1.7 Use of traditional sources during dry season (to be discussed and observed in village and Chena).

   1.8 Use of other sources during dry season (to be observed and discussed in village).

   1.9 Chena life and traditional sources of water-tank, ara, ara wells, and 'Kems'. (to be discussed and observed at a Chena).

2. **Habits of using sources**

   2.1 Habits of using traditional supplies of water-(visit houses close to ara and tanks).

   2.2 Habits of drawing water from wells-ropes and buckets (to be observed in Angunakolapelessa and if time permits to proceed to Kalawelgala and observe behaviour).

3. **Storage.**

   3.2 Why and how they store water ? (Select 3 houses on a set criteria).

   3.2 Storage in Chena — Why and how ? (Visit chena and ascertain the suppy—check for source of water).

4. **Transport of Water**

   4.1 Why only females are coming to well to take water home ? (watch out at V.C. well — Angunakolapelessa, V.C. well).

   4 2 Why do they normally disallow young females to go to traditional sources of water (to be discussed with adults, tea boutique—ex. V.H. for discussion).

   4.3 Who takes water to chena and why ? (Observation and discuss at a chena).

5. **Washing and bathing**

   5 1 Normal discussion on how they bathe — (casual at tea boutique)

   5.2 How and why they use traditional sources for bathing ?

   (Traditional leaders to be met)

   5.3 Washing of clothes in traditional sources of water and the idea of pollution — (to meet mothers in the village and discuss).

   5 4 Washing of clothes in wells and the idea of pollution.—(to meet mothers in the village and discuss).

   5.5 Normal discussion — regarding washing face, hands after meals, work, ablution, body wash etc. — (These aspects first to be observed and then discussed in the village and tea boutique).

   5.6 The idea of using soap for washing — hands, face, body etc. (Observation at all sources and discussion at village centres).

   5.7 Bathing of infants and children at home (to be discussed with anothers).

6. **Drinking**

6.1. Normal discussion with villagers about, drinking habits ?

6.2 Sources from where they take water for drinking habits ?

6.3 Place from where they quench their thirst.

6.4 How do they consider or on what criteria do they consider that water is good or fit for drinking purposes?

6.5 Any idea whether the water they drink is safe to drink ?

6.6 Any idea about the cleanliness of cups, glasses and other containers used for drinking?

(From 6.1 to 6.6 to observe at homes and informally discuss at centres of communication in the village).

7. **Ablution**

7.1 Discussion on the habit of ablution — (adults in Village).

streams

aras

kems

using water available at home

7.2 Idea of ablution — whether habit is sanitary or insanitary?

2.4 Sanitation Practices — Obs ervation and Discussion

— Extent of land and why house was centrally located and latrine to the boundary ?

— What do they mean about housing and latrine ?

— Whether latrine is an essential component of housing?

— What reasons do they furnish for the construction of latrines ?

— Use of latrines, Females — males, children etc

— Rank vegetation within premises and open defecation practice

— Shrubs close by and open defecation practice.

— Socialisation process and habit development infant to adulthood—trace behaviour in respect of each stratum.

— Use of latrine, open defecation and ablution

— Ablution habits — different situations— shrubs, house, chena life. Amount of water used ?

— Ablution and personal hygiene

— Open defecation and pollution of water sources.

— Etiquetts in defecation practice and norms.

— Beliefs — open defecation and pollution of water sources.

— Beliefs — open defecation and diseases helminth and bowel diseases.

— Beliefs — open defecation and socialisation process — Use of latrines

— Use of latrines — Beliefs — open defecation and folkways and beliefs

— Open defecation and females.

— Open defecation near water sources.

Analaysis of Information

3.1 **Beliefs — Defecation practices. Monaragala and Kalutara**

M — Monaragala

K — Kalutara

— They believe that open defecation cannot cause diseases in man (M & K).

— They believe that helminth infestation is not due to open defecation practice (M & K).

— They do not believe that open defecation is related to the causation of bowel diseases in man (M & K)

— They believe that few worms in the bowels of infants and pre-school children are necessary for health but too much of worms can be harmful to their health (M & K)

— They believe that the causation of diseases is not due to the practice of open defecation practice but due to many other factors including the disturbances of the three 'dos' — i e. ('tundos') and attacks of spirits etc (M & K)

— They believe that the treatment of diseases should include a traditional exosery activity as an essential part of treatment in addition to other forms of treatment (M)

— They believe open defecation practice pollute the environment giving 'bad smell'. They also believe that open defecation practice in jungle areas and in shrubs cannot be a serious problem to anyone since nobody lives close by to feel the smell (M).

— They believe that defecation close to canal or any other sources of water is 'bad' since water can be polluted. (M & K)

— They believe that their elders continued the habit of open defecation in shrubs without facing any problems of health (M).

— They believe that the habit of open defecation cause any serious threat to their health in the future as nothing serious has happened to them to their known memory (M).

— They believe that the ablution in canals and streams pollute the water (but this is not a problem since water is running and gets purified during the process).

— They believe that their general pattern of living as practiced today is a continuation of what their elders followed and is an ideal for them. They believe any deviation of this pattern might bring about undesirable results. (M)

— They believe that the defecation area should not be close to the house. Even if they construct a latrine it has to be sited away from the house (M).

— They believe that the correct way of disposal of human excreta is by using a latrine at the same time, they believe that the open defecation in shrubs area means the same thing as using a latrine (equal consideration for both practices). (M).

— In Kalutara District Villagers even in remote villages (for example — Magura, Addaragoda, Pelenda, Baduraliya) believe that open defecation is an undesirable thing and the proper way of disposal of human excreta is by using a latrine (K)

— Although they (Kalutara District) believe that the proper disposal of human excreta is by using a latrine they do not believe that the open defecation practice is one of the causes for the causation of bowel diseases and helminth infestation (K)

— They believe, that females should not visit the 'bedda' or shrubby area during noon time since they can be subjected to the attack of spirits. This can happen if they visit the area alone (M & K).

Analaysis of Information

3.2. Beliefs — Domestic use of water

— They believe that water is not a causative factor for communicable diseases (M & K.)

— They believe that water is not related to bowel diseases (M & K).

— They believe that water can be polluted but it cannot cause diseases (M & K .)

— They do not seem to believe the theory of germs and that water acts as a vehicle in carrying germs

— They believe that running water (canals, streams etc) is ideal for drinking purposes. (M)

— They believe that even if running water is polluted, it gets purified during its running process (M)

— They believe that water is very essential and must be available close to the house (M & K)

— Their belief is that water must be available, whatever the quality of water (M & K.)

— They believe that running water is sacred and is used for various types of folk ceremonies (M)

— They do not believe that well water can be polluted and sunlight is necessary to prevent pollution (M & K)

— They believe that water gets polluted due to open defecation close to canals, streams etc., but this is not a serious problem since water is running and gets purified according to them. (M.).

— They believe that their traditional sources of water have been used by them for generation without facing any problems of health. (M & K)

— They believe that their former generations used whatever sources of water available to them without any problems of health. (M & K.)

— They believe that females should not go for water during noon time Since they can be subjected to the attacks of spirits (M.)

— They believe that water gets discloured during rainy season and such water should not be used for drinking purposes When this discolouration disappears the water is good for drinking purposes (M & K).

— They believe that untouched water by human hand is the clean and sacred water and such water is recommended for folk rituals and bathing after recovery of Gods' diseases. (Like chickenpox, measles mumps etc.). (M).

— They believe that they have been brought up by utilizing their traditional sources of water and as nothing has happened to them so far because of the consumption of water from traditional sources they feel that nothing can happen in the future (M & K.)

— Some believe that causing rain is an act of Gods. So, when wells and streams run dry they should pray to Gods for rain. (M..)

— They believe that when water is boiled the taste of water disappears (M.).

— Those who are close to piped wells believe that, piped well water is 'protected' and 'good' for drinking purposes (M). (This is in Madulla AGA area)

M — Monaragala

K — Kalutara

Analaysis of Information

3.3. **List of probable attitudes — Defecation practices**

— They do not seem to agree that the latrine is an essential component of their housing pattern. (M).

— They do not seem to agree that open defecation is related to diseases. (M & K).

— They do not think that open defecation is related to bowal diseases and worm infestation (M & K).

— They do not seem to agree that even if they put up a latrine it should be close to their house (M)

— They agree that open defecation close to house pollute the environment. (M & K).

— They do not think that open defecation has affected their health at any time of their life. (M & K)

— They do not seem to think that open pollution pollute the water sources to that extent that traditional sources of water cannot be used for domestic use. (M).

— They feel that any latrine close to their house pollute the environment and produce objectionable gases. (M & K)

— They feel that since jungle area is available for defecation purposes they should not pollute the immediate environment of the house (M).

— They feel that outside people should not use their defecation area (which their family members use).

— During chena cultivation period they feel that they should not use any part of their chena for defecation purposes. (M).

— They do not feel a right thing to pollute other chenas of other villagers (M).

— Those who have latrine accommodation seem to think that defecation should be done in a latrine (M & K).

— Those who have latrine accomodation do not seem to think that open pollution is related to either bowel diseases or helminth infestation (M & K).

— They seem to think that when outsiders visit their house they should use a latrine. This has not become a problem since those who visit them also were in the habit of using the jungle. (M).

— They seem to think that open pollution near canal or stream pollute the water source but this does not affect their health since water is running and during that process water gets purified. (M).

— They feel that ablution in canals and streams pollute water but since water is running, water gets purified (M).

— They do not seem to agree or attach any importance as bad the practice of open defecation. (M).

M — Monaragala

K — Kalutara

Analaysis of Information

3.4. **Probable Attitudes — domestic use of water. Monaragala & Kalutara.**

— They do not seem to agree that water is related to the causation of bowel diseases (M & K)

— They do not seem to agree that polluted water can bring about diseases. (M & K).

— They feel that nothing could happen even if they happen to drink water available to them. (M & K).

— They think what their earlier generation did (i.e. drinking water from sources available to them) is correct and therefore what they do now cannot be incorrect (M & K).

— They appear to strongly feel that running water in canals and streams cannot bring about any diseases. (M)

— They hold the view, that folk rituals (like tying yellow thread etc.) can heal them even if they happen to become sick (M)

— They think that even if they take western treatment full recovery cannot be obtained until an exosery activity is performed to the person concerned (M)

— Their attitudes is that it is better for them to have water close by rather than pure water said to be available at a distance (M & K).

— They feel that their action is right because they have been drinking water available to them to their known memory but no disease related to water did any harm to their health (M & K)

— They firmly hold the view that diseases occur not because of germs or water but because of the maladjustment or malproportion of the three disturbances ('Tundos') in the system. (tundos-'va' — wind, 'pith', bile and 'sem' phlegm) and, the malefic effects or invasion of the influences of spirits (particularly, yakka, demons prete — spirits of low rank and bhuta — spirits). (M & K).

— They seem to think that diseases and other misfortunes occur when their time is bad. The time is either good or bad is interpreted in astrological terms (M & K).

— Some seem to think that the severe drought is the result of the malefic effects of the planetory system and the angry god (M)

— Some seem to think that the answer to severe drought and loss of harvests is the performance of folk rituals. (M)

— Some seem to agree that the folk ritual is the answer to bring about fertility in all respects. (water for agriculture and water for general prosperity) (M)

— Some seem to agree that traditional folk rituals have not been performed for years and therefore, they are now experiencing severe droughts. (M).

— Some of the native physicians and traditional leaders feel that villagers are disorganised and as a result folk rituals cannot be organised (M).

— They seem to think that they require water only during the dry season since their water sources (wells, springs, etc.) are full during the rainy season

M — Monaragala

K — Kalutara

Annex 4

BELIEFS SUPPORTED BY THE PROCESS OF SOCIALISATION AND NORMS WITHOUT ANY ASSOCIATION TO TRADITIONAL COMMUNITY FUNCTION INVOLVED

1 The Belief	2 Bases for support of belief	3 Community behaviour/action
1. They believe that water is not a causative factor for communicable diseases.	* That disease is caused due to disturbances of 'Tundos' — (wind, phlegm, and bile).	‡ No organised community efforts to protect water sources.
2. They believe that water is not related to bowel diseases.	* Hot and cold concept of human constitution— When human body becomes too heaty during the drought, the 'sun burnt water' or water that is not running causes stomach ailments. * Due to bad time and 'Karma'	* It is a taboo to defecate into water sources but defecation near water source is not seriously taken. Ablution in water sources not seriously taken up.
3. They believe that water can be polluted but it cannot cause diarrhoea but other condition in 'stomach'. 4. They do not believe that well water can be polluted.	* Well in their own terminology is protected. * Pollution to their mind is the introduction of animal matter and other organic matter into the water. Such a thing is not possible in a well.	* Pollute water sources by washing soiled linen and bathing domestic animals * No significance is attached. * No community feelings expressed.
5. They believe that their traditional sources of water have been used by them for generation without any problems of health.		
6. They believe that females should not go for water during noon time since they can be subjected to the attack of spirits		
7. They believe that they have been brought up by utilising their traditional sources of water and as nothing has happend to them so far because of the consumption of water from traditional sources they feel that nothing can happen in the future	* Spirits move out during noon time and haunt at water sources * Females become easy pray to spirits * Attack of spirits is one of the causes of diseases	* Do not support young females to go for water during noon time * Do not attach any significance to females prestige if they violate the requirements

4	5	6	7
Behaviour if disease occurs	**Community behaviour if disease occurs in epidemic proportions**	**Sustenance of Belief**	**Final Behaviour**
* Mostly local treatment which includes local herbal decoction. * Ayurvedic treatment * Other traditional forms of activities — exosery or religious — taking vows etc. * Failure of above make him to seek western treatments either in the Dispensary or in hospital	* No protection to water sources as they fail to understand the relationship	* Socialisation process wherein traditional knowledge and experiences are passed down and controlled by norms by elders. This authoritarian element of socially matured parents reinforces the habit development and traditional actions.	* Continuation of use of same water supply as they fail to connect water to disease
Same as above	Same as above	Same as above	Same as above
* Mostly exosery activities	Same as above	Same as above	Same as above

Annex 5

USE OF WATER - BELIEFS FORMED DURING THE PROCESS OF ADJUSTING TO THE ENVIRONMENT

	1 Belief	2 Bases for belief	3 Community/Individual feelings	4 Community Action/ Expectation
1.	They believe that open defecation practice pollute the environment giving bad 'smell'. They also believe that open defecation practice in jungle areas and in shrubs cannot be a serious problem to anyone since nobody lives close by to feel the smell.	Continuation of the habit for a long period and in the absence of any threat to health they felt that only smell and pollution causing them some problem.	Feeling to prevent smell and pollution. Feeling to keep away faecal smell and pollution away from the living house and water sources.	Not to allow defecation near water sources and houses since everbody feels about the smell and the pollution
2.	They believe that their elders continued the habit of open defecation in shrubs and rank vegetation areas without facing any problems of health.	* Common acceptance that defecation in shurbs cannot cause diseases. * Not seen anyone developing any illness after defecation in shrubs. * Elders continue the habit without any problem of health.	Feeling that it is a way of life and no notice is taken. Feeling that everyone does it (those who have no latrines) has no bases for any community or individual action.	Since defecation takes place in the shrub and no one is affected no community action is contemplated. Most of the community members are the partners of this behaviour and there was no room for any action to come up against the habit

5	6
Sustenance of belief	**Behaviour**
The idea that pollution and smell cause them only nuisances which cannot be avoided.	Avoiding closer spouts to house and water supplies for defecation
Open defecation without causing smell and pollution allowed and no notice taken.	Open defecation continue in places acceptable to them and in places where no pollution and smell caused
Lack of understanding that water and open defecation are related to diseases.	
Socialisation process in which the behaviour is passed down to coming generations, and along with it the idea that they do not face any threat to their health.	In the absence of any social change agents making any change in their behaviour, the open defecation practice continues uninterrupted.

Annex 6

BELIEFS AND THE ASSOCIATED BEHAVIOUR IN THE ABSENCE OF SOCIAL CONTROL AND THE INFLUENCE OF LOCAL SYSTEMS OF MEDICINE

1 Belief	2 Bases for Belief	3 Community/individual feelings about the belief
(i) They believe that open defecation cannot cause diseases in man. (ii) They believe that helminth infestation is not due to open defecation practice.	* That they have been defecating for years and the feeling established in them after many years of practice that nothing serious has happened to them and therefore open defecation practice cannot be related to disease.	Though they did not associate to diseases they admit the pollution of water sources and the nuisance of smell due to defecation close to house and near water sources.
(iii) They do not believe that open defecation is related to the causation of bowel diseases in man.	* There were no social controls No influence from the local systems of medicine.	The above feeling influences change/ modify practice of open defecation.
(iv) They believe that few worms in the bowels of infants and pre-school children are necessary but too much of worms are harmful to their health.	* Infants are born with worm in their bowels. * These worms are essential to maintain nutrition and health of children. * Only worms by birth are necessary.	Worms which are found by birth should be retained. Other worms are not necessary to be in the system.
(v) They believe that the causation of diseases is not due to the practice open defecation but due to many other factors including the disturbances of the "Tundos".		
vi. They believe that the habit of open defecation cannot cause any serious threat to their health in the future as nothing serious has happened to them to their known memory.	* Major factors contributing to the causation of diseases are the disturbances or the unbalanced nature of phlegm, bile and wind.	Feeling that the three disturbances are the only causes of diseases.

4	5	6
Community Expectation/Action	**Sustenance of Belief**	**The Behaviour**
* Not to pollute water sources and not to practice open defecation close to house	* Common understanding that they all share the open defecation behaviour.	* In the absence of strict social control and innovation to bring about changes the habit of open defecation continues.
* Privacy and rule of conduct of females for the maintenance of social order is necessary	* Absence of community reaction and social control	
	* Feeling that nothing has happened to them so far	* Continuation of open defecation habit by pre-school children and adults due to socialisation influences.
	* Lack of scientific knowledge.	
	* The understanding that open defecation is not associated to helminth infestation	
	* The understanding that all worms are not harmful and that some worms are necessary.	
* In keeping with the above requirements open defecation away from house and water sources allowed	* The deep-rooted feeling of the causation of diseases in terms of traditional systems of medicine.	* Open defecation behaviour is continued
* Since community does not associate latrine construction and use of latrine related to worms no organised activities are seen.		

Appendix 7 — Use of Water.

BELIEFS ASSOCIATED WITH TRADITIONAL COMMUNITY FUNCTIONS (WHETHER HELD OR OTHERWISE) SUPPORTED HIGHLY BY THE CULTURE

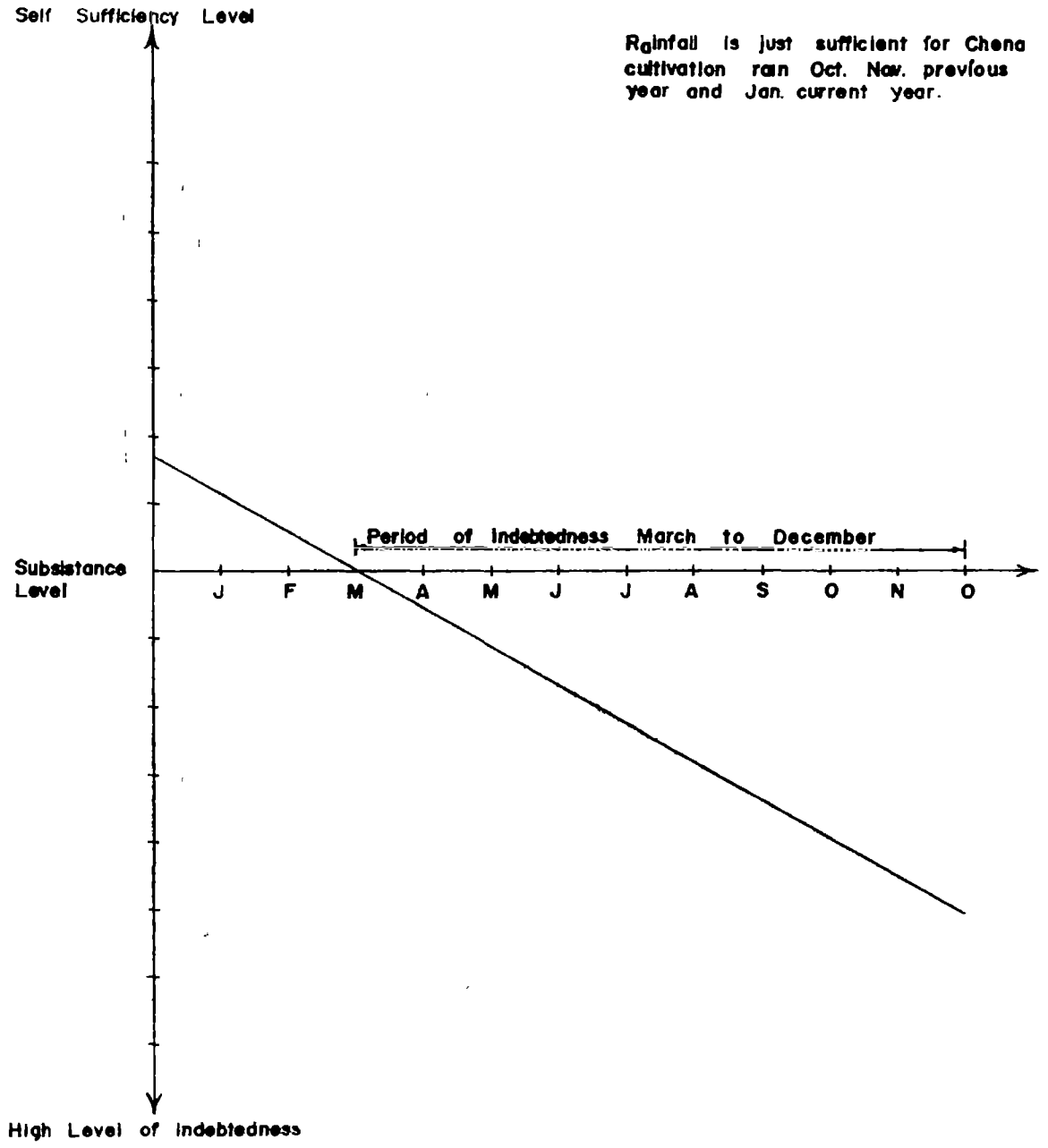
1	2	3	4	5
The Belief	**Bases of belief**	**Holder of Responsibility**	**The Social Responsibility**	**The Traditional function**
1. They believe that causing rain is an act of 'Gods'. So, when wells and streams run dry they should pray to Gods for rain.	God is the one who can cause rain. So Gods have to be pleased to obtain rain at the appropriate time.	The priest of the local folk ritual, Geegana Mahattaya meaning the envoy of God or 'Kapuwa' the lay priest responsible to hold rituals.	The leadership of the community who organises the community in consultation with Geegana Mahattaya or Kapuwa and raise the necessary funds.	The Gammaduwa or the village folk ritual or Devolmaduwa is the accepted one by everyone. This may vary according to areas of the country.
2. They believe that angry Gods cause infectious diseases (including those of water borne diseases).	God is the one who can give infections of that nature when he is angry. Religious support in religious literature affirming such belief.	Same as above	Same as above	Same as above

6 **Community Action**	7 **Text or Subject**	8 **Final position** **Duration & Sustenance**	9 **Community behaviour**
By contributing their share by means of money, kinds, food and labour and participate actively in activities.	Connected to Buddhas' life or Village Gods or God Kataragama or historical religious events — Spiritual powers of God Kataragama and Goddess Pattini.	3 days The strong belief system and experience where they had rain on previous occasions. Evidence in literature of such incidents.	Continuation of folk rituals every year at the appropriate time
			Oblige, respect and accept the ritual and the associated behaviour as a way of life.
Same as above	Same as above	The strong belief system where they had previous experiences in obtaining cure for infectious diseases by performing rituals. Evidence in religious literature where such situations were handled by similar acts. The cultural support and cultural values.	

Annex 9

A HYPOTHETICAL EXAMPLE ECONOMIC POSITION

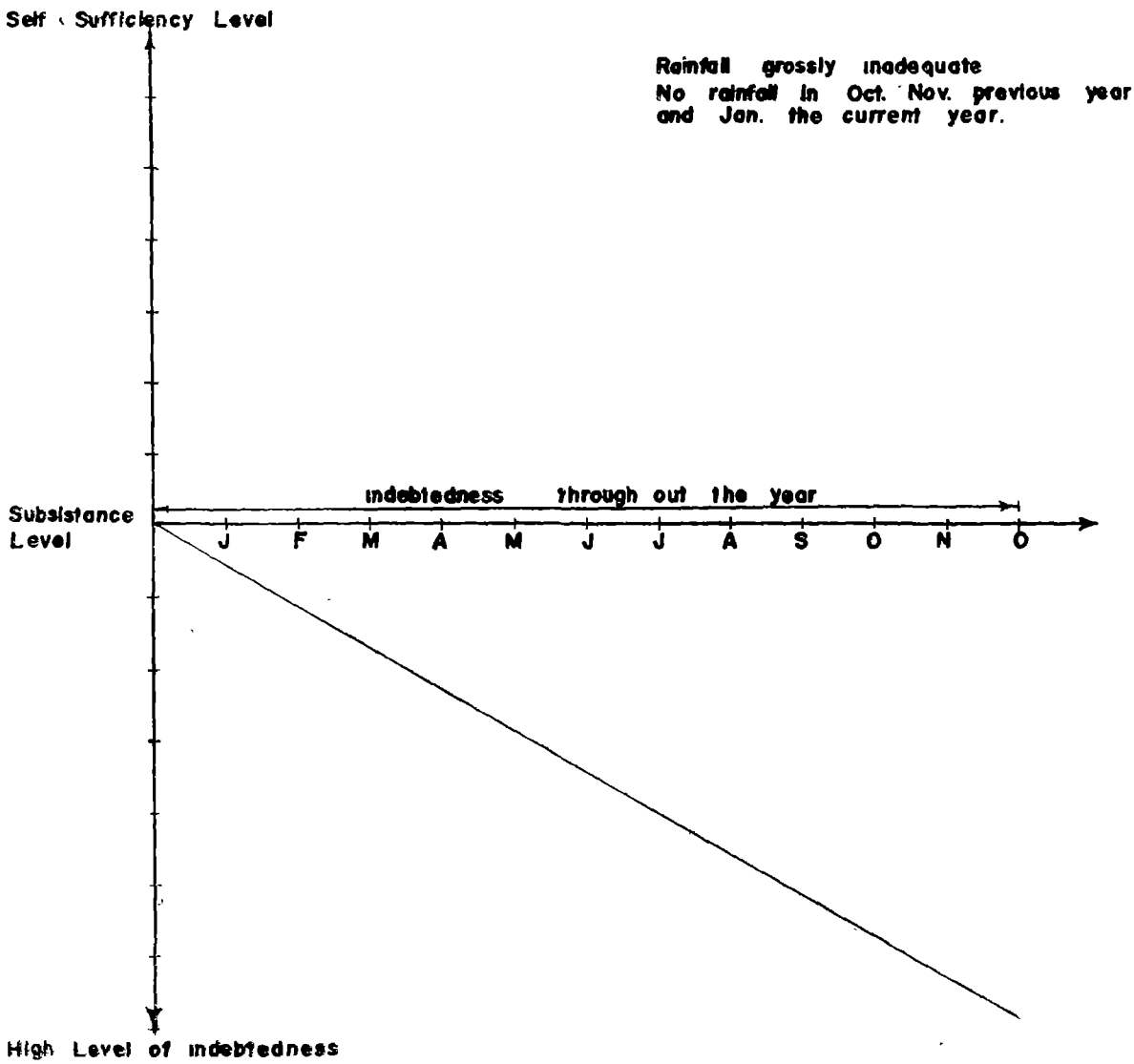
Fig 2



Annex 9

A HYPOTHETICAL EXAMPLE ECONOMIC POSITION

Fig. 3



Annex 10

Summary — Survey of Beliefs

	D	6A	D	7A	D	8A	D	9A	D	10A	D	11A	D	12A	D	13A	D	14A	D	15A	D	16A	D	17A	D	18A	D	19A
Related	1		1				25	25	24	25	25	25	23	24	24	25	24	25	20	23	20	23	22	24	24	25	24	20
Not related	22	22	23	24	25	25							2		1		1		5		5		5		1		3	
Do not know	2	1	1											1						2		2	1	1			2	3
No answer		2		1																								2

	D	20A	D	21A	D	22A	D	23A	D	24A	D	25A	D	26A	D	27A	D	28A	D	29A	D	30A	D	31A	D	32A	D	33A
Related	18	20	23	24	23	22	25	25	25	25	25	25	25	24	20	20	18	20	24	25	25	25	25	25	25	25	25	25
Not related	3	1	1		2										3		5	2	1									
Do not know	3	3	1	1											2	4	2	3										
No answer	1	1				3								1		1												

	D	34A	D	35A	D	36A	D	37A	D	38A	D	39A	D	40A	D	41A	D	42A	D	43A	D	44A	D	45A	D	A		
Related	25	25	20	23	21	20	23	25	22	24	25	25	18	20	20	22	21	24	20	24	19	23						
Not related			3		2		2		1				6		4		3		4		5		6	2				
Do not know			2	2	2	5			2	1			1	5	1	3	1	1	1	1	1	1	1					
No answer																							18					

D — Diyahoranduwa

A — Angunakolapelessa

Annex 10.

Observation and Discussion Schedule – Mini Survey

Name of Respondent : ... ...

Address : .. . .

. ...

....

A G. A. Area : ....

G. S Division : ....

1. Age

15 — 24		1
25 — 34		2
35 — 44		3
45 — 54		4
55 — 64		5
65 —		6

2. Latrine

Buddhism		1
Hinduism		2
Islam		3

3. Religion

Spring		1
Stream		2
Canal		3
Open Well		4
Protected Source		5

4. Water Supply

W/S		1
Pit		2
Other		3
None		4

5. House

Permanent		1
Semi Permanent		2
Temporary		3

Discuss with the chief occupant (i.e. father or mother of the house about the water supply and its relationship to diseases and ascertain the following : Mark the relevant answers.

6. He believes that water is related to infectious diseases.
7. He believes that water is related to bowel diseases in man.
8. He believes that water is related to helminth infestation
9. He believes that water is related in causing disturbances of wind, bile and phlegm ("Tundos").

Discuss presently available sources of water and beliefs connected with these sources and mark the relevant answers.

10. He believes that whatever is the source of water supply, if water appears to be clear that water cannot be harmful for drinking purposes.
11. He believes that nothing has happened to their knowledge and to their known memory to their elders by drinking water from the available sources.
12. He believes that if running water appears to be clear such water is ideal for drinking purposes.
13. He believes that the water is the gift of the God.
14. He believes that well should be kept open for sunlight.

Discuss about the folk rituals that are being practised today and ascertain the following beliefs. Mark the relevant answer.

15. He believes that the untouched water by human hand is the sacred and the purest.
16. He believes that water has magical powers in curing diseases (connect to folk magics).
17. He believes that streams, tanks and big ponds of water are the abodes of spirits
18. He believes folk rituals can cause rain. (Refer to guidelines).
19. He believes that water has spiritual powers of cleaning individuals (removing 'kili').

Discuss about folk religion and practices connected with water and determine the following. Mark the relevant answers.

20. He believes that water has spiritual powers in curing diseases (like 'pirith pan').

21. He believes that large reservoirs of water are infested with spirits.

22. He believes that large reservoirs of water are the abodes of Gods.

23. He believes that water should be kept exposed to Gods of nature like sun God, God of wind, etc.

Discuss about the socialisation process in particular to this area and in relation to the use of water and determine the following. Mark the relevant answers.

24. He believes what they learnt from their adults about drinking of water is correct. i e. drinking water by using their palms from whatever the source

25. He believes the habit of ablution they learnt from their adults and friends is correct. (i.e. ablution in whatever the source—streams, canals, tanks, pools of water).

26. He believes what they learnt from elders and friends, the habit of ablution (i e. by taking water to a small tin or a large coconut shell) is correct.

27. He believes what they learnt from elders and others in the village regarding washing soil linen. i.e. close to open well is correct.

28. He believes what they learnt from their elders and others in the village regarding washing (face, mouth, body, etc.) close to well is correct

Discuss about the open defecation practices of people and diseases prevailing in the area and answer the following. Mark the relevant answer.

29. He believes that the open defecation habit cannot be a threat to their health.

30. He believes that the habit of open defecation cannot cause any diseases in man.

31. He believes that the habit of open defecation cannot cause any bowel diseases.

32. He believes that the habit of open defecation has nothing to do with helminth infestation.

Discuss about traditional beliefs about worms in infants and children and related it to health. After the discussion mark the relevant answers.

33. He believes that infants are born with worms in their bowels.

34. He believe that some amount of worms are necessary for infants and pre-school children.

35. He believes that since urine of infants could be used as medicine (very often as a first aid measure) open defecation cannot be harmful.

36. He believes that too much of worms in the system is bad and require treatment

Discuss about social norms in relation to open defecation practices and determine the following :

37. He believes that the habit of open defecation is not considered a serious thing by others.

38. He believes that the open defecation cannot pollute the water sources.

39. He believes that their elders lived a much bigger span of life without using latrines.

40. He believes that ablution in water sources is not severely dealt with by the community.

Discuss about socialisation in relation to defecation practices and answer the following. Mark the relevant answers.

41. He believes that the way he has been brought up with open defecation practice by elders is correct.

42. He believes that the open defecation practice is the normal pattern of life of everyone in the village.

43. He believes that since others are in the habit of open pollution he is not doing a wrong thing to others by resorting to open defecation.

44. He believes that females should not visit 'bedda' or shrubs for defecation purposes, because they can be subjected to attacks of spirits and other misfortune

45. He believes that he cannot construct a latrine because he spends most of his time outside the traditional home.

During your discussions if you have come across any beliefs other than the ones that you find in this questionnaire format, please write them separately.

Any other beliefs:

1.

2.

3.

4.

5.

6.

7.

7.

8.

9.

10.

Signature of Interviewer.

Priority Areas for deeper Analysis – Defecation Practices

1. They believe that the open defecation habit cannot be a threat to their health.
2. They believe that the open defecation cannot cause any disease in man
3. They believe that the habit of open defecation cannot cause any bowel diseases.
4 They believe that the habit of open defecation has nothing to do with helminth infestation.
5 They believe that infants are born with worms in their bowels.
6 They believe that some amount of worms are necessary for infants and pre-school children.
7. He believes that the habit of open defecation is not considered a serious thing by others.

Priority Areas for deeper Analysis – Domestic use of Water

1. They believe that water is not related to bowel diseases.

2. They believe that water is related in causing disturbances of wind, bile and phlegm. (tundos).

3. They believe that whatever is the source of water supply, if water appears to be clear that water cannot be harmful for drinking purposes.

4. They believe that nothing has happened to their knowledge and to their known memory to their elders by drinking water from the available sources.

5. They believe that water is the gift of the God.

6. They believe that the well should be kept open for sunlight.

7. They believe that folk rituals can cause rain

8. They believe what they learnt from their adults about drinking of water is correct.

9. They believe the habit of ablution they learnt from their adults and friends are correct.