SOURCE BOOK ON SANITATION

Proceedings of the Kerala Sanitation Conference 1989 16-17 March at Kanakakunnu Palace, Trivandrum

Sponsored by
Kerala Water Authority
Socio-Economic Units, Kerala
Association of Public Health Engineers of Kerala

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KERALA SANITATION CONFERENCE 1989

FOREWORD

Kerala State remained in the forefront in the matter of health status by any comparable and measurable standards. However, a high morbidity, low mortality syndrome is very unique in the State. We recognize that in order for the state to progress, resources have to be channelized towards water supply and sanitation sectors for alleviating the environmental problems. Unfortunately sectors, such as safe drinking water and sanitation have been given a backseat in any discussions of grand growth plans and economic resurgence. Yet for the common man, safe drinking water and adequate sanitation facilities represent fundamental aspirations, undeniable and unalienable. With such perception it is amazing how little thought is given to the allocation of resources, its utilisation and application for the provision of the basic brickwork of human dignity and integrity. As will be evident, like in water supply, the successful provision of sanitation facilities is as much a question of identifying the right technology at the right price, as it is of sensing a community's needs and of responding to it, and of using the opportunity to address the larger question of health and environmental balance. From 1980's onwards several organisations and Government departments with assistance from the Word Bank , Capart, Unicef etc have undertaken the construction of sanitary latrines in several parts of Kerala. But only during 1987-88 pilot sanitation programme with massive mobilization and motivational programmes were integrated in the sanitation sector. When the Socio-economic Units conceived the sanitation programmes, it has realised inspite of all the efforts the coverage of rural sanitation in Kerala was approximately 22% only. While Planning and Implementing the Pilot Sanitation Programme we have experienced several difficulties and we thought it would be worthwhile to share the experiences with other colleagues involved in the same field.

The Kerala Sanitation Conference was organized at Trivandrum on 16-17 March, 1989 to bring together a large spectrum of people and organisation (Government, Non-Government, International and Voluntary Organisation) associated with the low cost rural sanitation programme and discuss the various issues related to the planning and implementation of such schemes. This was organised jointly by the Kerala Water Authority, Socio-economic Units, Kerala and the Association of Public Health Engineers, Kerala. The Conference was inagurated by the Honourable Minister for Irrigation and Water Supply, Mr. Baby John. Mr. V. Venugopalan, Advisor, CPHEEO, Ministry of Urban Development, Government of India, delivered the presidential address. More than 100 delegates representing various national and international organizations such as UNDP/World Bank, UNICEF, DANIDA, Royal Netherlands Embassy, Sulabh International, HUDCO, Gandhigram Institute of Rural Health & Family Welfare, participated on this occasion.

Eventhough, historically Kerala is in the forefront of implementing several environmental sanitation programmes, no major efforts has been made to organize a forum like the Kerala Sanitation Conference to discuss and share the experiences of the earlier sanitation programmes. However, the organisation of the present conference was a momentuous occasion due to the closure of the International Drinking Water Supply and Sanitation Decade. It is a fact that until today, a comprehensive list of the people involved in the field of sanitation, areas of their operation, scale of their operation, and other resources available etc...is not readily available. In order to gather more information on this a detailed questionnaire was sent out to all the known voluntary organisations involved in the sanitation programme. However, their responses were not encouraging. We very much hope that such type of active effort will be made by the State Sanitation Cell for establishing effective co-ordination and liaision work in this field. I am sure the resolution of this conference will provide substantive feed back to the Sanitation Cell to launch appropriate intervention programmes. Based on the recommendations of the technical groups, resolution have been formulated and this was presented subsequently in the concluding session and more or less accepted by the concerned policy makers. Probably the Sanitation Cell will be able to take a leading role in the effective follow up of the resolutions passed in the Conference.

In this volume, in addition to the proceedings of the Kerala Sanitation Conference, we have tried to include few opinions and ideas expressed by those concerned with the creation of a comprehensive programme to provide basic sanitation to the majority of our population. A few relevant statistics and reference tables on the state of the art in sanitation have also been included in reference section. We hope that this publication will serve as a source document for planners in this field.

I take this opportunity to thank the co-organisers of the Conference, the Kerala Water Authority and the Association of Public Health Engineers, Kerala for their many contributions to the conduct of the Conference. Mr. Venugopalan of CPHEEO offered valuable advice on all aspects of the Conference, and its possible follow-up, for which we are very thankful. A special word of appreciation to Mr. M.P. Mohan, Chief Engineer (North), Calicut, for the valuable suggestions for the organisation of this Conference as well as bringing out the proceedings. I thank Mr. R. Suresh, Consultant and all our colleagues from within and outside Kerala and India, whose many ideas and opinions have enriched the quality of this publication. I trust that the resolutions presented here will provide the basis for concerted action in sanitation in Kerala.

K. Balachandra Kurup
Executive Co-ordinator
Socio-Economic Units, Kerala.

Trivandrum
January, 1990

KERALA SANITATION CONFERENCE - 1989
BACKGROUND & OBJECTIVES

Introduction.

The International Drinking Water Supply and Sanitation Decade (1981-1990) has emphasized what many already knew: safe water and proper sanitation can immensely improve the health and well-being of the rural and urban population of developing countries. Even today most of the diseases and deaths in such countries are due to the unavailability or inadequate use of drinking water and sanitation facilities.

In the State of Kerala, according to 1981 census only 2.8 million people has access to adequate sanitation facilities, i.e. about 0.5% of the population. The estimates of the Kerala Satistical Institute revealed that during 1984 approximately 20% of the rural households had some type of sanitary latrines. However, this need has been recognised at an early stage and the responsible authorities have been making great efforts to provide as many people as possible with safe water and sanitation systems. The Kerala Water Authority is the primary institution in this field and has made significant progress in constructing, improving and operating water supply systems in rural and urban areas. For this purpose assistance is obtained from various sides: State and Central Governments, International donors (World Bank, the Netherlands and Denmark), local bodies and Voluntary Agencies, etc. Socio-Economic Units, Kerala has been established under the aegis of the Kerala Water Authority with the specific mandate of incorporating community aspirations and participation into the implementation of water schemes through social, cultural and health educational programmes, and to explore the interfaces between water supply and sanitation programmes, especially in rural areas. However, in regard to rural sanitation the picture is more confused: a large number of institutions are active in different ways in this field, often without knowing about and learning from each other and rarely collaborating or coordinating. And inspite of the large number of programmes aimed at rural sanitation there is still little shared understanding of cost-effective approaches, appropriate technology, community involvement and effective health education. However, the various departments, voluntary agencies, Socio-Economic Units and the Kerala Water Authority have, over the years, collected many experiences that are worth sharing and that could contribute to the formulation of a long term strategy for rural sanitation. Such a strategy could help in guiding our joint efforts and in inviting and organizing future outside assistance from various sources.

A high level Kerala Sanitation Conference could hlep to initiate this process of sharing, review and future planning.

Objectives of the Conference.

In the past few months, discussions have been held with such institutions as: the Department of Rural Development, the Department of Panchayats, the Department of Health Services, People's Action for Development, Medical College, Centre for Development Sutdies, Unicef (Madras and Delhi), Voluntary Organizations and projects elsewhere in India and some international organizations. It became clear that there is a strong and shared interest in having a conference on rural sanitation in Kerala.

Essentially this conference could serve to

* **Bring together** the different experiences, (technical, educational, social, financial, etc)
* assist in **drawing the lessons** from the past,
* develop a shared **sense of priority and strategy** regarding large-scale rural sanitation in Kerala,
* help in establishing a **platform for future exchange and collaboration**, and
* develop **an action plan** for use by different groups in Kerala.

Resolutions Passed at the Kerala Sanitation Conference on March 16 & 17, 1989.

1. Sanitation should be considered a priority sector by the government and the following steps taken:

* Budgetary allocations should be made for sanitation programmes at the State and Central levels as part of water management programmes, and next only to drinking water programmes.

* State plans should incorporate specific action elements and priorities for the plan period, indicating special target groups (below poverty-line, etc) and priority areas for implementation (coastal areas, comprehensive development localities, etc) over the Plan period.

* Legislation should be passed to ensure sanitation facilities in conjunction with buildings involving mass public activity (eg educational institutions, public offices, religious places, etc) and with all new constructions. Legislative measures should be taken in making sanitary latrines as an integral part of all new constructions in rural and urban areas.

* There should be integrated and consistent planning and implementation of sanitation projects by different agencies, departments and municipalities under the aegis of the State Sanitation Cell and the Kerala Water Authority.

* Focal points at district level must be created to provide 'single-window' facilities for beneficiaries of sanitation programmes; the formal registration of agencies in the sanitation sector should be made mandatory - small-scale finance can be channelised directly to them, while larger projects can be monitored by the district coordinating authority.

* Encourage additional finance for this sector from banks and financial institutions (such as LIC and HUDCO)

* A special effort should be made to inform and educate donor agencies about the possiblities of projects in the state, with flexibilities to accomodate particular areas of concern and interest (underprivileged groups, geographical areas, etc) to them.

2. Progress in sanitation efforts is as much a matter of garnering community support as it is of coordinating construction and channelising finance. Recognising this, the implementation of sanitation projects should involve communities to the extent of

* encouraging their participation at all stages in the planning and execution of the project

* coopting local level bodies for support at all stages in the implementation of the projects

* utilise, wherever practical, local groups in construction activity and supply of material

* informing them about the broader linkages that the project has with water supply and environmental resource management

3. A large part of the success of sanitation efforts will depend upon the extent to which the community benefitted will appreciate, internalise and apply the principles and aims that sustain the effort. To this end, an educational programme should accompany all projects which addresses the following issues:

* The primary message to be reinforced is that sanitation involves waste disposal which has a direct bearing on health status and environmental balance. Consider sewage schemes as integral part of water supply schemes.

* The programme should distinguish different audiences at the community level, household level and institutional level. Within these, there must be recognition of different levels of understanding, especially where personal priorities are involved (eg child rearing women, working women, etc)

* Special emphasis must be given to coastal areas and high-density belts of the state, with associated problems of polluted water supplies and water-borne diseases.

* Specific roles for elected bodies such as panchayats, and institutions in an area such as banks and schools, should be explained. The involvement of these organisations will lend credibility and strength to the effort. The education of the community about what they should expect from these bodies will also contribute to their enhanced involvement.

4. Training and motivation activities will constitute a key element of the sanitation effort and must focus on those capable of garnering institutional and personal capabilities towards the achievment of the project's aims. The following target groups are suggested: Grass-root personnel and supervisory staff in government and non-government organistaions.

School teachers and school health programme students
Panchayat and ward members
Volunteers and selected skilled persons for hardware aspects
Officers of the Administrative cadre and organisers of such programmes

It is suggested that training centres under the Departments of Health and Social Welfare could be used for the purpose. Inter-personal methods, groups discussions and lectures using mass media could form the basis of training and motivation sessions.

It is further suggested that an amount equivalent to at least 10% of the allocation for hardware activities should be earmarked for health education aspects.

Massive campaigns and publicity is needed to advocate the use of sanitary latrines, for which mass media and other avenues should be increasingly used. A concerted effort should be made to create awareness among the people on the need and use of appropriate hygiene practices.

5. The following norms are suggested with respect to technical and financial standards in sanitation projects.

* The two-pit pour-flush waterseal latrine may be adopted as the standard model for Kerala, with structural allowances for particular environmental situations. Where there is extreme scarcity of water, the VIP latrine may be considered
* A superstructre is integral to the latrine design and construction. Various low cost designs may be offered to the community for selection.
* The total cost of the latrine in Kerala is about Rs.1800, with the infrastructure alone costing about Rs. 800 to Rs. 900.
* The following subsidy patterns are recomended:

Lower middle class groups	25% govt subsidy
Groups below poverty line	75% govt subsidy
Extremely poor groups	90% govt subsidy

The remaining finance may be in the form of loans (with at least a 3 year repayment period) from financial institutions or beneficiary contributions.

* Exemptions available under 35 CC of IT Act should be publicised to encourage the involvement of commercial organisations. Banks and commercial institutions may be persuaded to set apart a percentage of their profits to subsidise sanitation efforts in their areas of operation.

6. Efforts should be made to make the concept of community latrines a matter of public interest, especially in congested urban and rural localities. Special studies to explore the viability of this concept in the Kerala context should be commissioned, and public interest groups may be encouraged to participate actively. Similarly, the possibilities of establishing public latrines and conveniences in congested urban areas such as transit points and religious places should be explored.

7. It will be necessary to monitor and evaluate the effectiveness of efforts in this sector. To this end, the following steps are suggested.

* Create a database on such activities from which indicators of health impact, community participation and programme effectiveness can be drawn for review periodically

* Conduct case studies on specific variables to monitor local issues
* Design and establish an information system to monitor the construction, maintenance and use of latrines
* Participatory approaches in the form of group discussions, observations, etc may be selectively employed for data collection
* Catalogue and analyse the shortcomings in all aspects of the programmes with a view to increased efficiency in future action.

8. Overall coordination for this activity may be entrusted with the State Sanitation Cell. The implementation of these activities may rest with the concerned departments and agencies, viz. Commissionerate of Rural Development, Directorates of Panchayats, Municipalities and Health Services, People's Action for Development (Kerala), Socio-Economic Units, the Kerala Water Authority, voluntary agencies, etc. It is recommended that SEU will coordinate the training and motivation activities and also monitor and evaluate the efforts with the assistance of technical support organisations such as UNICEF and Sulabh International.

9. A critical review has to be made for assessing the existing sanitary facilities in schools, colleges, public institutions, hospitals, bus stations, market places, etc. and a crash programme should be chalked out to improve the situtation.

INAUGURAL ADDRESS

BY

MR. BABY JOHN

HON'BLE MINISTER FOR IRRIGATION,
GOVERNMENT OF KERALA,

ON THE OCCASION OF KERALA SANITATION CONFERENCE ON 16-3-1989.

I am very happy to note that a State Sanitation Conference is being organised jointly by Kerala Water Authority, Socio-Economic Units, Kerala and Association of Public Health Engineers, Kerala, in Trivandrum on the 16th and 17th of March, 1989.

This conference is being organised at the ideal time to exchange ideas and stimulate discussions on various aspects related to low cost sanitation. We have experienced that large scale improvement in sanitary conditions is more effective and less expensive than any other preventive health measures to combat waterborne and exoreta related diseases which are responsible for about 80% of the sickness in the country.

Eventhough, Kerala is in the forefront in terms of health status, paradoxically, a high morbidity, low mortality syndrome is very unique to the State. Now this position is gradually undergoing a change and of late, though the morbidity has been reduced, there has been noticeable increase in mortality rates especially in the case of waterborne diseases and in particular diarrhoeal diseases. Various suveys and reports have highlighted that the prevalence rate of the above mentioned diseases are extremely high in the coastal belt of Kerala. People in the coastal belt live in extremely miserable living conditions, due to the high density of population and extreme poverty. Given the dire poverty situation, living conditions and the lack of concomitant basic amenities, people perforce resort to unhygienic practices such as open air defecation. Even more pathetic is the situationof the women folk, for who privacy is possible only before day break or after sunset, to carry out their daily ablutions. Therefore, I would like to emphasis that a comprehensive strategy frame work has to be evolved in this conference for addressing the sanitation problems especially with reference to the coastal areas of Kerala.

It is reality that without adequate sanitation full benefits of the rural water supply schemes cannot be achieved. The international drinking water supply and sanitation decade (1981-1990) target was set to provide 25% of the rural population with sanitation facilities. However in 1985-86, in the meeting of the mid-decade review, it was decided to bring down the target to 5% keeping in view the limited funds, made available for the VII plan for Rural Sanitation Sub-Sector. Not even 1% of the rural population in India had access to these facilities in the beginning of the decade. The coverage in Kerala may

be slightly higher than the above figures but adequate data base is not readily available to support it. According to a rough estimate approximately 15 to 20% of the people in Kerala have some form of sanitary facilities. The rest have to be provided with sanitary facilities or alternate disposal facilities through motivation and resource mobilization. It should be a question of priorities as well as possibilities. Eventhough the need is great, due to scarce resources it will be difficult for the Government of Kerala to take up a large scale sanitation programme. However, it may be possible to take appropriate strategies for a large scale sanitation programme with the assistance from bilateral donors such as the Governments of the Netherlands and Denmark. For the time being both these Governments are helping us considerably through financial support for rural water supply schemes and through support for the innovative activities related to drinking water and sanitation of the Socio-Economic Units.

I sincerely hope that your two days deliberations will result in an action plan for future strategies of sanitation programmes in the State. Earlier attempts in this sector were not always co-ordinated effectively and satisfactorily. I would like to stress to all those concerned, that water supply and sanitation are inseparable and it should be implemented simultaneously and consistently with active participation of the communities for achieving an optimal and lasting impact. It is worthwhile to add here, the efforts of the Socio-Economic Units, Kerala in the implementation of pilot sanitation programmes (3000 latrines) in six selected panchayats within half a year. One of the pilot sanitation programmes of building 500 latrines was completed in Cheriyanad (Alleppey District) and I had the opportunity to inaugurate the scheme on 17th February, 1989. Since the awareness programme and the construction activities were undertaken simultaneously, we expect instructive and replicable results from this programme. The other five programmes are under various stages of completion. I am sure, these pilot programmes will throw some light on the strengths and weaknesses of various approaches and I look forward to the presentation of findings and recommendations from this pilot programme. Another significant aspect of the programme was to involve beneficiaries and the local populace, as well as governmental and non-governmental agencies, in this scheme. Due to active involvement of people in the programme we can ensure that people will feel responsible in maintaining and managing their own latrines as well as for proper use by all members of their households.

Before concluding, once again I stress the need for a realistic action plan for the implementation of a comprehensive sanitation programme in Kerala which includes all the coastal areas where the problems are most acute. I am confident that all the parties assembled here will support the idea. I will take all the necessary steps from my ministry to accelerate the preparation of the proposal for submitting to the donor countries. With this I declare open the State Sanitation Conference 1989. Wishing you all pleasant and fruitful discussions for the next two days.

Thank you,

PRESIDENTIAL ADDRESS

BY

MR. V. VENUGOPALAN,

ADVISOR,

CENTRAL PUBLIC HEALTH AND ENVIRONMENTAL ENGINEERING ORGANISATION

(CPHEEO), MINISTRY OF URBAN DEVELOPMENT, NEW DELHI,

ON THE OCCASION OF THE KERALA SANITATION CONFERENCE IN TRIVANDRUM ON 16 TH MARCH 1989.

Hon' Minister for Irrigation, Government of Kerala, Mr. Ramachandran Chairman KWA, Mr. Martin De Graaf, Mr. Balachandra Kurup, fellow delegates and distinguished guests.

I am happy to be with you today to attend the conference on Sanitation which is being organised by the Kerala Water Authority, Socio-Economic Units and Association Public Health Engineers, Kerala.

I am thankful to the organisers to have given me an opportunity to be here with you to share my views as well as to learn from your experiences on sanitation.

You are aware that the Environmental Hygiene Committee set up by Government of India in 1948 recommended in its 1949 report that 90% of the population in the country should be covered with water supply and sanitation facilities within a period of 40 years for which national programmes was to be initiated. The Government of India launched the National Water Supply and Sanitation Programme in 1954 as part of first 5 year Plan. The programme envisaged assistance to state governments in the form of 50% grant towards Rural Water Supply and Sanitation facilities to be provided to the States. The Rural Water Supply programme was based mainly on spot sources as well as piped water supply systems and also included cheap latrine facilities for individual houses in the villages. By the end of 2nd fifth year plan it was realised that Rural Sanitation was not receiving due importance and in my opinion it was the lack of Health Education and Community participation which was responsible for this failure. From that time onwards programmes states were mainly taking up Rural Water Supply Project ignoring the rural sanitation component. The rural water supply projects serve the whole community mainly through public stand posts and occasionally house connections considered to be community service schemes, while individual house latrines become facility for the house owner. This aspect is to be kept in mind while the sharing of cost of the project is to be decided. The first year plan had a provision of Rs.6 crores for the rural water supply sanitation

programmes. However, the provision went on increasing and currently in the seventh five year plan the provision for the total rural water supply and sanitation sector is in the order of Rs.3587 crores.

The International drinking Water Supply and Sanitation Decade programme was launched by the Government of India in1981 with a view to provide the population with protected water supply and basic sanitation facilities, over a period of 10 years. While the preliminary exercise for the Decade programme started in the 78-79, the Government of India also launched a low-cost sanitation programme with the help of UNDP so as to achieve greater progress in the sanitation sector which has been lagging far behind the water supply sector. The Government of India was always keen that water supply and sanitation should go hand in hand but the State Governments were finding it difficult to provide adequate funds due to competing demands from other sectors in the plan. The outlay for all the social service is of the order of 18% of the total plan allocation while the outlay for water supply and sanitation sector is about 3.6% in the seventh five year plan. Here again when we look at the apportionment of funds between water supply and sanitation, sanitation gets a dismal figure of hardly 5% of the funds for this sector.

When we look at the plan outlays for the fifth, sixth and seventh five year plan the position for the total of urban and rural sector is as under:-

a) Fifth year plan 1082 crores
b) Sixth five year plan is 3908 crores.
c) Seventh five year plan is 6522 crores

While plan outlays have gone up nearly four times in the sixth five year plan compared to the fifth plan, the programme did not achieve better resutls particularly in the Rural Sanitation Programme mainly due to lack of provision of funds for an active Health Education Programme with a view to involve the community which is indirectly benefiting them. It is needless to mention that laying emphasis only on hardware part of the programmes will not yield results without giving equal or greater emphasis on the software parts of the programmes. The software parts of the programme includes community education, and community participation, inter-sectoral and inter-departmental co-ordination, human resources development and institutional developments including training programmes, management information systems etc.

The Rural Sanitation programme was started in the early fifties in the state of Kerala as well as in four Public Health Centres in the country. Lot of research work was carried out, different technology options adopted and programmes implemented. It is unfortunate that in the last four decades neither did have developed basic data relating to

sanitation sector nor have we involved the rural community in planning implementation and operation of the programme. Further the Health Education input has been totally neglected. The committee set up by the Government under the chairmanship of Director General of Health Services, Government of India in 1984 focussed attention on the need for health education at all levels with a view to achieve full coverage and success in the implementation of the Rural Water Supply and Sanitation Programme. Unfortunately there is no adequate provision made for carrying out health education activity in the country as part of the decade programme so far. It is my firm opinion that without community education cum participation we will never achieve the goals set in the Rural Sanitation Sector.

I am looking forward that the eighth plan working group set up by the planning commission will come out with sizeable outlay for the Rural Sanitation Sector so as to achieve maximum results in the neglected sector atleast by 1995. It is all the more important that the governments 'commitments to reach' Health for all by 2000 is reached. I would also urge the need for a greater involvement of the voluntary agencies (NGOs), women as well as private industries in furthering the cause of the programme. The Government of India has annouced Income-tax concessions to the Industries and Private Organizations on the expenditure incurred by them in providing rural development facilities such as Rural Sanitation and Water Supply.

I would like to stress the fact that it will be too much to look to the government to fund a major part of the sanitation programme. While government may provide catelytic support in the form of token cash subsidy, free training for Sector Staff as well as technical and health education support, it should be the responsibility of the people who are the direct beneficiaries to find the resources for the construction activity. Even in the maintenance programme people should be able to meet the cost in sanitation sector as must be the case in O & M of rural water supply schemes. In short cost recovery by means of sale of manure from the filled in leaching pits or biogas generation should be seriously attempted.

I request all those present here today to have an honest assessment of the past programmes, bringing out the main constraints and problems faced, failures met with and to come up with a practical and realistic action plan for future adoption.

I am very happy that Socio-Economic-Units, have initiated commendable work in Kerala and has organised this important conference at a time when we are at the tail end of the decade programme as well as on the verge of launching the eighth five year plan. You will also be happy to learn that there is a move to extend the decade beyond 1991 to achieve complete coverage in the sanitation sector in the coming years with a view to reach goal of 'Health for all by 2000'.

SUMMARY OF PROCEEDINGS

Kerala Sanitation Conference 1989 was inaugurated by Sri.Baby John, Hon.Minister for Irrigation and Water Siupply, Government of Kerala, on 16th March 1989 at Kanakakunnu Palace, Trivandrum. This function was presided over by Sri.V.Venugopalan, Advisor, Central Public Health and Environmental Engineering Organization, New Delhi. Delegates from the government and non-government organizations, and International organizations participated in this Conference.

Inaugurating the conference, the Minister stressed the need for a realistic action plan for the implementation of a comprehensive sanitation programme in Kerala with particular emphasis on the coastal areas where the problem of environmental sanitation are more acute, taking the example of water-borne diseases. The Minister hoped that a comprehensive strategy framework would evolve from the conference for addressing the sanitation problem in Kerala with special focus on coastal areas.

Earlier welcoming the participants Sri.K.Balachandra Kurup, Executive Co-ordinator, Socio-Economic Units, Kerala drew attention of the participants to the need for a conference like this and requested all the participants to critically review and assess the sanitation programmes carried out by various bodies including SEU.

In his presidential address Sri.V.Venugopalan expressed the view that it will be too much to expect to the Government to fund a major part of the sanitation programmes. He emphasized that while Government may provide catalytic support in the form of token cash subsidy, free training for sector staff as well as technical and health education support, it should be the responsibility of the people who are the direct beneficiaries to find the resources for the construction activity.

Sri.K.Ramachandran, chairman, Kerala Water Authority, in his keynote address presented the historical perspective of sanitation in India and Kerala. He had highlighted the set up and functioning of the Environmental Hygiene Committee (1948) appointed by the Central Government and its eventual developments such as the National Conference for Drinking Water Facility held at Sevagram, Wardha in 1969. He categorically mentioned that after this period there was a virtual halt on the Sanitation programmes. He also emphasized the need for Sanitation programmes in all the rural and urban areas and he provided an estimate of Rs.400/- crores for covering the remaining areas. He further elaborated that the people have to find their own resources for building latrines and he verymuch expect that some practical resolutions will come out from this gathering. Mr.C.J.Mathews, Managing Director, KWA then proposed the vote of thanks.

Inaugural Address by The Hon'ble Minister for Irrigation and Water Supplies, Government of Kerala.

Sri. K. Ramachandran I.A.S., Chairman, Kerala Water Authority, delivering the Keynote address.

Technical and Financial Issues group work in progress.

Training and Motivation group work in progress

After the inauguration session 10 papers were presented by the sector specialists. However, three persons were presented their views but no papers were circulated. The invited papers of the Conference are included in Section 8.

In his presentation on "Rural Sanitation - A Story of failures" Mr. Martin de Graaf, emphasized the need for conceptualising the role of sanitation. Looking at the high incidence of diseases usually occurred due to inadequate sanitation, he pointed out the urgent need for large scale sanitation in Kerala. According to him, in Kerala, there is a lot of rhetorical emphasis, but very minimum funds made available due to the unrealistic approaches of policy makers, planners and donors towards the sanitation programmes. He explained why so little is done in the sanitation programmes and why the chosen strategies failed to offer an effective solution to this problem of life and death. For the successful functioning of organizations or institutions their programmes should meet the needs of the beneficiaries. The programme must reflect the cultural factors of the environment. Sanitation is not a government problem; it is and should be defined as a programme of the people. He concluded that any future approach should take into account the three essential components (1) involvement of beneficiaries from beginning to end, (2) cheap and replicable technology, and (3) health education that aims at behavioural change.

Discussing on the issues Mr.Mohammed Najeeb, Municipal Commissioner, Alleppey, opinioned that sanitation is a matter of habit that should be observed at the individual and social level. Commenting on the issues Ms.Wendy Quarry, UNDP/World Bank emphasized the broader issues of environmental sanitation. She said that our objective should be to train people in hygiene education and change of unhealthy habits. In his reply to her questions Mr. Martin de Graaf pointed out the need for constructing public latrines as a solution for the sanitary problems of Kerala, where money and space are not easily available. Ms. Maaike Van Vliet, Royal Netherlands Embassy, viewed that if we are very serious about people's participation and water use in homes and communities, we should be definite in our definitions about who these users are - men, women or children. This affects implementation, planning and evaluation. The whole strategy (planning, implementation and evaluation) have to be tailored based on the target groups.

Speaking on the "Technologies in Sanitation" Mr.O.D.Gonzalez, UNICEF, Madras mentioned the linkage between sanitation and health. He thought that latrine construction is still one of the main elements in a successful sanitation programme. Technologies used in sanitation programme; especially in latrine construction programme, should be simple, low-cost and appropriate. According to him, in choosing technology

importance should be given to the habits and cultural patterns of the society. He discussed in detail the technological and financial aspects involved in the construction of latrines. He also emphasized that for water logged areas and places where space is limited no cost effective solution are available at present.

Mr. S.T. Khare, presented the paper "Sanitation as a People's Movement", while reviewing the programmes of Sulabh International in the public health and sanitation activities. Outlining their activities, Mr.Khare revealed that Sulabh International is engaged in the construction and maintenance of public toilet complexes on a pay and use system. He pointed out that one of the important aspects in a public toilet system is that nearly 100 people can use one unit, thus economically the proposal to construct a toilet can be viable. From their experiences he believed that sanitation can become a people's movement once the people realize the importance of sanitation. This is possible if people understand what a sanitation unit is and how it serves them. He concluded that "people are willing to pay for the services you give only if they find a definite advantage". Mrs. S.Rebacca Kattikaran, NAP, Hyderabad criticised the institutional arrangements of organization like Sulabh International on the ground that these institutions are so large that it does not know what is happening at the grass roots level. She believed that sanitation programmes will not succeed unless and until built around water supply schemes. Speaking on the issues Mr. Gonzalez revealed that he believed in 100% people's involvement in sanitary programmes. He emphasized that UNICEF, will be reluctant to support a project which does not have adequate people's participation. He pointed out that latrine construction alone does not make hygiene a priority. In his discussion on the topic Dr. Thankavelu, P.S.G., Institue of Medical Sciences, Coimbatore, highlighted that priority should be given to improve the environmental conditions in schools for attracting and mobilizing the children for participating in the sanitation programme.

In his presentation "Rural Sanitation in Kerala - Towards a New Approach", Dr.Harichandran, State Planning Board, discussed the various programmes and schemes on rural sanitation in Kerala. Elaborating the thrust in the 7th Plan he revealed that during the plan period, i.e. 1985-90, in line with the objectives of the International Drinking Water Supply and Sanitation Decade (1981-90), The target was to provide adequate drinking water facilities for the entire population and to provide sanitation facilities for 25% of the population. He explained in detail the programmes of various government departments involved in the sanitation sectors. Concluding his paper, Dr.Harichandran, clarified that one of the major defects in the existing practice is that there is no integrated approach involved in finding a solution to sanitation programme. He argued that as seen from the financial allocations and expenditure, financially this is relegated to a low priority. In our country, sanitation is seen as a governmental programme and this is one of the reasons for its tardy progress. He strongly recommended that as is the case with family

welfare programmes, sanitation should become a massive people's programme. According to him, this is possible through motivation and awareness education programmes with the concerted efforts of the panchayats, voluntary clubs and mahila samajams and governmental agencies. Discussing on the issues, Mr. Appooty, Director of Panchayats, also depicted the importance of inculcating the idea of sanitation in the minds of women. He also appreciated the role of Mahila Samajams in Kerala in the Sanitation Programmes. Mr. Mohammed Najeeb, Municipal Commissioner, Alleppey presented the experience of urban basic service programme in Alleppey Municipality with particular emphasis on the historical development of Resturant Sanitation Programme. He elaborated by saying that the whole staff members and the Municipal Councillors were mobilised and motivated for activating the programmes.

Ms. Elizabeth Zachariah, Head, SEU (North), presented SEU experience in low cost rural sanitation. She pointed out that SEU Programmes give importance not only to the technical quality of construction, but places equal emphasis on the software aspects, namely information and conscientization especially of the beneficiaries, Narrating the various programmes of SEU , she concluded that the experiences of SEU clearly shows the inverse proportion between community participation and achievement of physical targets. Outlining the negative experiences, she arrived at the conclusion that community participation can not be achieved by any single agency or any one department. It is the effort of all and the duty of every one including the community that is needed in the Sanitation programmes.

Mr.John Fernandes enumerated PCO's involvement with SEU in a fishing village in Anjengo, where 30,000 people living in 2.25 sq.kms. The houses so close that there is not even adequate breathing space. The positive aspect of the experiment was the high level of people's participation, mainly because of SEU subsidy of Rs.1500. Narrating their experiences he highlighted the role of politics in the success of public health and sanitation programmes. He revealed that many programmes are ongoing in these area for women and children. Here trained girls are deeply involved with the community, to communicate and educate them in their own local language and in their own cultural context. He advocated that a socio-economic study should precede any sanitation programme. From their experiences he came to the conclusion that in Anjengo, the most important priority of the people is for drinking water. For them, latrines are not a priority at all, even today due to diverse cultural reasons.

In his presentation Mr.Johnson, Costford, Trichur viewed that sanitation programmes does not concentrate exclusively on latrine construction alone. He had presented the experience of Costford on low cost housing as well as their involvement in the construction of latrines in a panchayat viz, Edathuruthy in Trichur District.

Sanitation programmes should include pure water supply system, clean kitchens and appropriate system for disposal of household wastes and drainage systems. He revealed that Costford offers 2 types of water filter units - Charcoal filter unit and sand filter units. For disposal of household wastes, especially from bathroom and where utensils are washed, it provide sand filled pits. The filter units can also be used for the disposal of agricultural wastes and can be used in biogas plants too. Concluding his presentation, Mr. Johnson pointed out that in Edathuruthy many beneficiaries did not contribute 25% of the cost of latrines due to financial difficulties.

Mr.N. Bhageerathan, Member Secretary of the Peoples' Action for Development (Kerala) discussed about the role of voluntary organizations in the prosperity and well being of our rural areas. In his presentation, he highlighted the functions of CAPART (Council for Advancement of People' Action and Rural Technology) and PAD Kerala in rural development activities. He also enumerated the problems faced by voluntary organizations and factors that hinder the effective functioning of voluntary organizations. Mr. T.A. Varghese, Memeber, PASSS presented the paper on "Participation of the People and Organizational alternatives in rural sanitation". According to him, participation, to be meaningful and effective needs active involvement. Discussing all aspects of participation, he came to the conclusion that active participation of the people is essential in sanitation programmes and participation of the community is closely related to its perceptions and awareness about the programme.

Messers.Kandaswamy and Ramachandran Nair enumerated their experiences and finding of the sanitation programme conducted at Chinnalapatty (Tamil Nadu). They found community involvement appreciable in the implementation of sanitation programme. They also revealed that inspite of the continuous education input, considerable number of families do not use community latrines due to various factors such as non-affordability to pay the charges, nearness to the open field, availability of water in ponds very close to open field etc.

After the presentation of papers the delegates were divided into groups to discuss specific issues further under the following heads: (1) Technological and financial issues, (2) Social issues, (3) Instituional and policy issues, (4) Training and motivational issues and (5) Monitoring and Evaluation. Group discussions were coordinated by the following Chairpersons.

(1) Technological and financial issues:
Mr. Gopalakrishnan Nair,
Additional Development Commissioner,
Commissionerate of Rural Development,
Government of Kerala.

(2) Social issues: Prof: Leela Gulati, Associate Fellow, Centre for Development Studies, Trivandrum.
(3) Institutional and Policy issues: Mr. A.K.Appooty, Director of Panchayats, Trivandrum.
(4) Training and Motivational issues: Dr. Sarvanandan, Assistant Director of Health Education, Health Services Department, Trivandrum and
(5) Monitoring and Evaluation: Mr. N.T.Mathew, Chairman, Kerala Statistical Institute, Trivandrum.

After the group discussion, the respective Chairperson presented their recommendation. Dr. C.R. Soman, presented a synthesis of ideas presented by different groups. Followed by this pertinent resolutions have been evolved based on the group discussion. Mr. M.P.Mohan, Superintending Engineer, KWA has been delegated the responsibility of the formulation of an Action Plan with the help of the members from the State Sanitation Cell and the organising committee members of the Conference. Prof.I.S.Gulati, was invited to respond to the suggestions for the preparation of an Action Plan by Mr. M.P.Mohan. Prof. Gulati's reaction and the discussion points are indcated in section (7b).

Dr. Thankavelu (former principal, Medical Collge, Trivandrum) currently - Dean, PSG Institute of Medical Sciences and Research, Coimbatore, made the valedictory address. In his address he stressed the importance and need of an integrated framework and approach in the Water Supply and Sanitation Programmes. He further elaborated the role of social mobilization and social education for creating more awareness and commitments among the women, children and community at large for achieving the goal of health for all by 2000 AD. The meeting was concluded with the vote of thanks by Mr. Martin de Graaf, Senior Advisor of SEU Kerala.

GROUP REPORTS & RECOMMENDATIONS

1. TECHNICAL AND FINANCIAL ASPECTS OF RURAL SANITATION:

The original type of bore-hole latrines common in Kerala is no longer in use because it is not considered hygienic now. Only two-pit latrines of the pour-flush type with the water seal was found to be the most suitable for Kerala. In areas with extreme scarcity of water, the VIP type latrine is recommended. In sandy areas, where honey-comb construction is not possible, lining with concrete rings with perforations can be adopted. In water-logged areas, the same concrete platforms but the entire unit has to be raised suitably above the ground level. The infrastructure alone is estimated to cost between Rs.800-900.

Superstructure is a must for every latrine. There may be different patterns easily understandable by the people, to be circulated among the beneficiaries and the probable beneficiaries.

Financial aspect: The cost of a latrine including the superstructure with roof of a permanent nature will be about Rs.1800. For the lower middle class, financial assistance upto 75% of the loan may be arranged from financial institutions, and 25% from govt. and other sources. For those below the povertyline, which we define as Rs.6500 per annum, a subsidy portion of 75% has to be provided and the balance 25% to be met out of a loan, either from the beneficiary himself or from a financial institution. For the poorest of the poor, 90% should be given as subsidy and the balance 10% should come as beneficiary contribution in the form of cash or labour. A minimum period of 3 years should be given for the repayment of the loans.

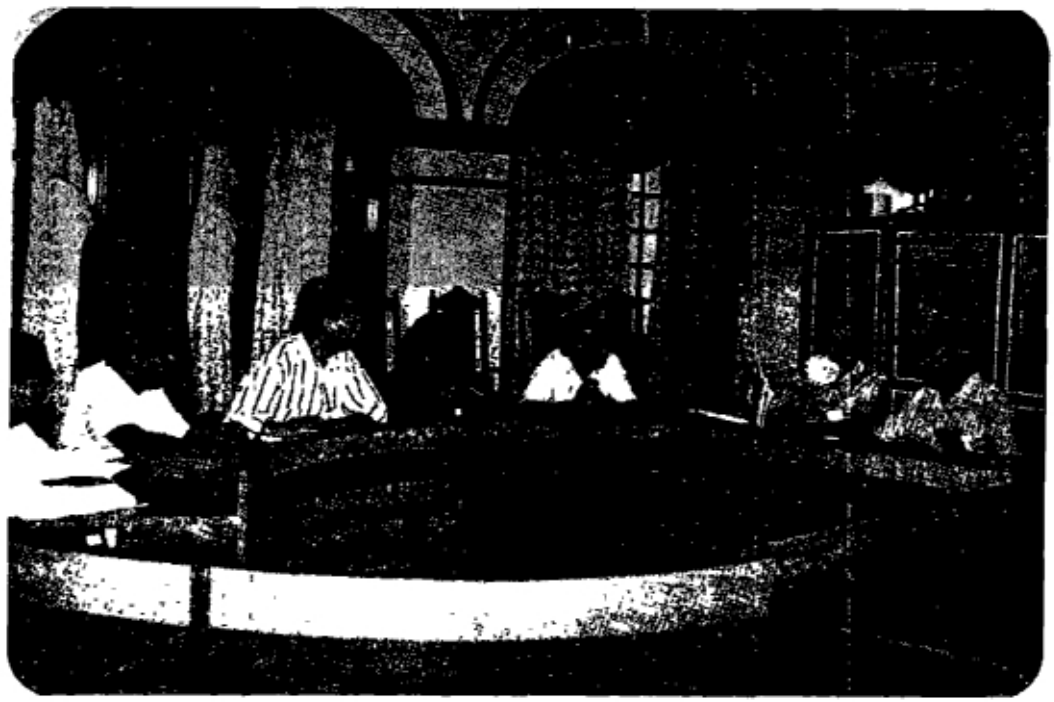
Priorities: Sanitaion should be given the second highest priority, next only to drinking water, in the state and central budgets. Public sector units should provide some money for rural sanitation purposes. Agencies like LIC, HUDCO should start financing regular departments of the state govt. at nominal interest rates of 4%. Commercial organisations should make use of the exemption available under Sec 3 (c) of Income Tax Act.

In places where there is congestion and acute pressure on land, community latrines should be the order and these should be of the pay and use type.

The group finds that the estimated cost of infrastructure is the bare minimum for Kerala. There are different schemes for the poorest people by which the Govt. and voluntary sector advance Rs.1200 for the construction of latrines.

Social Issues group work in progress

Institutional and Policy Issues Group work in progress.



Monitoring and Evaluation group work in progress

Since 70-90% is given as subsidy, proper superstructure and roofing should be insisted on. But some flexibility should be there since the target is to cover 25% of the people by end 1990.

For places having very high water table/water-logged areas, the floor can be raised substantially high so that it would be just above the water level. For 2-pit latrines the minimum depth required is 3-3.5 feet. Around the raised portion, i.e.above the ground level, sand lining has to be provided. This will take care of natural purification also.

II. SOCIAL ISSUES

Sanitation should be defined in a broader sense to include waste disposal of all kinds. Any action plan, to be effective, should look at different segments of the population and address each one of them separately, eg. urban, rural, coastal, slum, and so on. At the household level, the household should not be taken as a homogenous unit; the programme should be beamed at each member differently. We should aim for a clear understanding of the child-rearing patterns in the state and what messages are really providing by the mothers to their children. A lot of misconceptions about waste disposal in the child rearing period exist. The group feels that where no intervention can be done, no infrastructure could be given.

Men take a lot of liberty and license; for them, the rules are different. Sanitation is very essential in the coastal areas. We need to take a clear stand and not be ambivalent about this, for it poses a major hazard.

Institutions: Both schools and teachers play a negative role in establishing good hygiene surroundings. Teachers play a passive role by not demanding toilet facilities. Medical institutions like primary health centres also play a passive role. They do not set an example within the hospital.

Community places like bazzars, restaurants or bus-stands, are major areas of pollution and environmental hazards. Each of these categories should be addressed separately.

We can start by aiming for model panchayats and see if members can discuss and experiment (with devices like plastic bags for collecting garbage or tools instead of bare hand for disposing garbage).

III. TRAINING AND MOTIVATION.

The broad objective of the Group is to bring about favourable sanitation consciousness and practice among 75% of the people of Kerala in an integrated approach through training and motivation over a period of five years.

The following are the specific objectives.

1. To equip the Government and Non-Governmental agencies to carry out sanitation related health education through Information, Education and Communication (IEC) activities.

2. To equip the trainees to conduct an intensive health education campaign in a phased manner in an area coverage basis to motivate the community to construct, use & maintain the latrine in the most appropriate manner.

3. To develop a co-ordinated approach among the different related departments in carrying out health education and

4. To identify the major target groups for training and motivation.

The target group for training and motivation should comprise

1. All grass root level personnel in the selected Government departments/Non-Governmental agencies.
2. All Supervisory staff at the peripheral level.
3. Selected School Teachers, preferably women.
4. Selected student class leaders.
5. Members of people's Committee at the Sub-centre level (15 lady volunteers).
6. All panchayat ward members.
7. Selected skilled labourers/masons.
8. Implementors and Administrators.
9. Selected National Service Scheme Volunteers.

The duration of the course may vary from 1 to 4 days depending on the target group and the course content should be chalked out appropriately for approaches, strategies, activities and target.

The training and motivation should be a 3 tier one at Administrators' level, implementors'/Organisors' level and Field level covering community at grass root level. The institutions responsible for training/orientation of the trainees should be the Training Centres under the Health, Social Welfare and other related departments and also private agencies which are capable and willing to undertake the training of field level staff.

The motivational approach should cover inter -personal communication, group discussions and mass media activities.

One group discussion for every 30-50 households should be organised and awareness campaign should be three months prior to the actual construction of latrines and weekly mass media campaigns should also be organised. After the construction of the latrines, group discussions should be organised for every 30-50 households to teach them regarding the proper use and maintenance of the latrines. For 1-11/2 years group discussions have to be organised every month to 30-50 households during house visits regarding use of alternate pits, blocking of pits, maintenance of latrines etc. House visits have to be continued once in two months.

The overall responsibility of implementation of the programme should be vested with KWA, Socio-Economic Unit and State Level Sanitation Cell.

The budget for the Health Education Programme should be 10% of the total allocation of the hardware programme.

IV. MONITORING AND EVALUATION

The main thrust of the group was to identify the key indicators for the continuous monitoring and evaluation of the programme. The second area was how to develop indicators for assessing the health impact. The third area was on what study/data collection programme can determine whether there is a decrease in the incidence of water-related diseases/other diseases in the project area before commencement of SEU intervention and in periods during and after the SEU intervention. One suggestion was to conduct case studies on a small sample, using trained and experienced medical doctors or social scientists, including women. To analyse water-related diseases, micro-analysis of stools will be required. The studies should also be gender specific. The case studies will have to be on a long-term basis. Monitoring should be done by an external agency and not by the SEU because it has a vested interest in showing, it is all going well. But on behalf of SEU it was said that an internal monitoring is also necessary to correct actions as they go along.

The SEUs have already evolved certain mechanisms for monitoring the use and maintenance of latrines in the selected panchayats.

However, there is a strong need for process documentation and process investigation in a much more qualitative sense....how decisions are made, how beneficiaries are contacted, what stops them from being contacted, from getting the latrines.

Eventhough, health impact evaluation is integrated by most of the donors, the quality of such exercise would be warranted in developing countries. This is mainly because such impact is based on the social behavioural practices of people. It is not practical to make an assessement of the changes for short term projects. The minimum requirement would be approximate 5 year.

V. INSTITUTIONAL ISSUES.

The group discussed institutions and policies. Sanitation has two aspects or faces: there are small things which can be done at the local level by voluntary agencies or local bodies; the other is the field, needing more technical expertise, eg. the sewage system or the water supply system.

Sanitation must be brought into the priority sector of the country. This has to be done at the state level for which a policy must be evolved to emphasize the implementation of sanitation systems in the state as a whole. We can insist, through legislation, that whenever a new institution (school/college) is formed, there must be adequate sanitation facility. Similarly, whenever a housing system is constructed there must necessarily be some element of sanitation. Construction of houses without sanitary latrines should not be sanctioned by the local bodies. There are many agencies now associated with sanitation and allied activities. A centrally located agency, independent of any particular department, should be formed to guide and monitor the activities. Similar agencies should exist at the district level too to look into sanitation schemes. These can be co-ordinated by district collectors.

Some areas, especially the coastal areas, should be given priority in sanitation schemes.

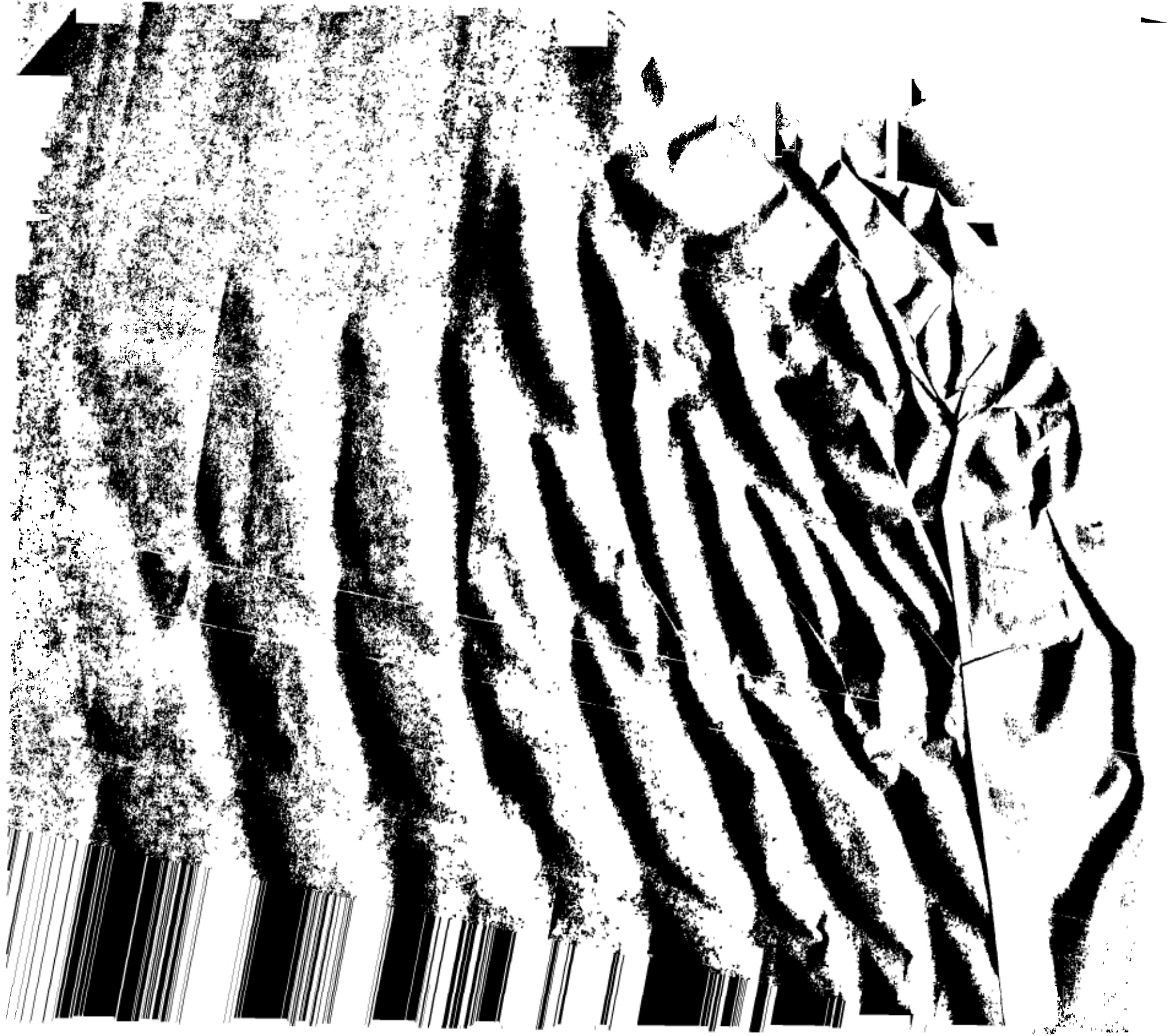
In the matter of funding, nationlised banks should be approached for loans to the sanitation schemes. Sanitation must be made one of their developmental priority in such localities.

Awareness and actual implementation should go together, unlike now, when the agencies involved do only implementation, without generating any awareness. In implementation, the local bodies could take up small works, and the highly technical one be left to the KWA which can be treated as the nodal department for that.

There should be a system for registering voluntary organisations at the local level, after assessing their intentions, capabilities, etc. before they are brought into the field to co-operate with the scheme.

Professor I.S. Gulati, Addressing the participants.

Dr. M. Thangavelu, Dean, P.S.G. Institute of Medical Sciences & Research, Coimbatore, delivering the Valedictory address.



COMMENTS OF PROF.I.S.GULATI ON THE RECOMMENDATIONS OF THE CONFERENCE

(Excerpts from the Speech)

The pace at which Kerala is getting urbanised, it is also getting polluted at a very fast rate. The sort of things that was in Kerala have been taking pride in may not be met with pride any longer in the next 20-25 years.

Sanitation therefore deserves to be given a high priority. Resources, as far as planning is concerned, will always be scarce. If resources were plentiful, there need not be any planning. Therefore if you are going to wait until the resources in the state are plentiful for a part of it to be directed to sanitation, then I am afraid, you will have to wait for 100 years.

The point is how much importance do we attach to sanitation. And how much of that importance is recognised due to education. My own strong suspicion is that we who are to be giving the lead in these matters, turn a blind eye to them. And if we think that this cannot be done and this is a matter which does not deserve the priority that other things deserve, I suspect that sanitation will not be attended to in Kerala.

Resources is not the problem in Kerala. It's true that out of a Plan of Rs.2100 crores in the 8th plan, sanitation does not get more than Rs.10 crores. But if tomorrow there is a public, mass movement in Kerala which insists upon concrete progress in sanitation, I can assure you that sanitation will receive a higher attention, despite low resources. Sanitation demands and programmes have never been vociferous or strong. Also, be really sincere with your decisions. Do you really mean them? Would you implement them if the funds are released to you? I have a strong suspicion that even when the funds are released, you don't spend them.

The Union Finance Minister has said that with respect to certain projects, the centre will release 100% of the funds. I hope sanitation will come under such projects. I also hope the centre will have a system of revolving funds whereby they should give us some advance cash in the wake of the financial instability of the State Government.

In the context of planning sanitation is a problem that can be tackled not from the state headquarters but from the local or panchayat level. Our local bodies are not sufficiently active in this field, they are becoming totally dependent, putting everything on the State Government, which is totally unjustifiable. The reason why they are not doing anything is that they do not kow what to spend on. So think of programmes which can be effectively decentralised. Also involve voluntary agencies like Mahila Samajams which can apply pressure on the elected members to attend to the sanitary needs of the electorate.

The need for public toilet is greatest in the cities, especially in areas where the low-income people live. Personally, I do not believe in legislative measures. The important thing is to make people aware of sanitation. If they recognize the need for it, they will deamand it and our leadership will then have to respond. It depends on how strongly and urgently the demand is articulated.

INVITED PAPERS

RURAL SANITATION: A STORY OF FAILURES

MARTIN DE GRAAF,
Senior Advisor, SEU, Kerala

Introduction

There is no need to restate the objective importance of proper sanitation. All available data have proven beyond any doubt that properly constructed and used sanitary facilities are one of the two most crucial and decisive steps towards survival.

The number of deaths due to water-borne or water-related diseases went down by 99% over the 60 to 70 years it took to introduce sanitation in England. In the Asian context, we can safely presume that death rates decrease by as much as 30%, and the frequency of diseases is reduced by as much as 60% through properly used sanitation.

There is a statistical relationship between infant mortality and coverage of sanitation. The better the coverage, the lower the infant mortality. India has the dubious distinction of being on top of the chart.

Such statistics suggest that we do not need further discussion about the need and priority for good sanitation.

If we then also realize that, in fact, most of the required technology and its application is well-known and surprisingly agreed upon, one starts to wonder: why isn't it happening? How can it be that, in a rational world, sanitation is neglected by most of the involved parties? And if it isn't neglected why is it that most sanitation programmes seem to be ineffective, inefficient and insignificant?

Here an attempt is made to explore these questions and to suggest some answers in the Indian context, with special emphasis on Kerala's conditions.

Some Facts

a. the rhetoric: We can of course read, hear and observe the empty rhetoric that seems to be popular when subjects like sanitation are discussed. The Government makes

statements, politicians speak out, doctors say so, donor-agencies advocate. No Five Year Plan is framed without some refernce to this sector, no aid-document without some statements on the topic. The official goal for the soon-to-end International Decade for Drinking Water and Sanitation in the case of the State of Kerala is to ensure that 25% of the rural population and 100% of the urban population has access to adequate sanitation.

This would require, according to the exceedingly unrealistic estimates of the High Level Committee on Social Infrastructure and Services of the State Planning Board, Rs.37.50 crores, for assisting 25% of the 1991 Kerala rural population towards obtaining some kind of sanitary latrine. The estimate is based on the rather arbitrary assumption of Rs.50 state subsidy per capita. But not even a small fraction of that money is realy available (e.g. the sixth Five Year Plan earmarked Rs.135 lakhs for rural sanitation..). And the number of rural toilets is negligible in proportion to the needs as well as the targets.

b. Present coverage: No reliable data are available regarding the real distribution and use of safe sanitation facilities in urban and rural areas in Kerala. Thorough but geographically limited research carried out by the Kerala Statistical Institute indicated that between 1978 and 1984 the number of rural households with some form of sanitation in three different locations went up from between 1.4% and 9.3% to between 6.5 and 21.5%. (Mathew and Scott, 1985). Other estimates suggest a distribution between 10 and 20% of all rural households in Kerala. It might be safe to assume that around half of Kerala's urban households and approx. 20% of the rural households have access to man-made sanitation. Obviously another question is whether such facilities are properly used and to what extent open-air defecation still offers a safe alternative.

c. The action: However, looking at the high incidence of diseases usually conveyed through inadequate sanitation, it might be correct to conclude that there is an extremely urgent need for large-scale sanitation in Kerala. What then is done about this?

Various institutions are involved in rural and urban sanitation. The major actors are: the Municipal Corporations, the Department of Panchayats, Urban authorities, the Kerala Water Authority, the Department of Rural Development and, finally a rapidly increasing number of voluntary agencies.

It is difficult to find out what all of these august bodies are doing, and it is impossible to assess what the impact of their good intentions has been. There is no reliable collection and recording of data on this subject, not yet an effective system of sharing of findings and results and no efforts whatsoever to assess efficiency and long-term effect of government programmes in this sector. In other words all institutions are equally groping in the dark and seem to base their interventions more on good intentions and budget-trends than on solid evidence or long-term plans.

But, with due acknowledgement of the incompleteness of these figures, the following picture can be presented:

* The Department of Rural Development is involved in the construction of approx. 1500 rural latrines under the ESP, NREP, SPSP and similar programmes, and 11000 rural latrines under various housing schemes.

* Between the Department of Panchayats, Department of Municipalities and the Kerala Water Authority 30,000 latrines are constructed, (mostly in urban areas) with extensive World Bank assistance.

* Socio-Economic Units Kerala, a programme sponsored by the Dutch and Danish Governments and the Kerala Water Authority is presently constructing 3000 latrines and exploring further options.

* The various voluntary agencies approx. 8000 rural latrines with financial support from CAPART, the national body of voluntary agencies, channeling funds of Central Government and foreign donors.

* UNICEF assists some urban and municipal authorities towards the construction of some thousands of latrines.

How many latrines are constructed by local voluntary agencies with direct assistance from assorted foreign voluntary agencies, by local ones such as Mitraniketan, Dale View, PASSS, is impossible to find out. Equally unclear is the number of household latrines constructed by individual efforts: i.e.by a household itself, with or without involvement of private masons or plumbers.

And finally, strikingly absent in the above list is the Department of Health Services. Not only is this department not involved in design or construction activities, neither does it display widespread activities of health education, mobilisation, monitoring or training in regard to rural sanitation. Needless to point out, most professional medical staff are involved in the (more lucrative?) curative services, whereas para-medical and field-staff apper to be mainly preoccupied with family-planning, mass-immunistion and Mother and Child Health Care. This seems to reflect the current priorities, at least of the responsible authorities.

Perhaps the situation can be summarised as follows: Of Kerala's over 30 lakhs rural households, at best 6 lakhs actually have some form of man-made sanitation, for the 24 lakhs households without sanitation, at best 20,000 latrines are available, each year,

less than 1% .... even less than the natural annual growth of Kerala's population. Obviously this means an actual deterioration of the situation in rural sanitation.

d. The technology: Is it perhaps some dispute about what should be done that stops the responsible authorities and active agencies to act as required? Certainly not any dispute about the technical aspects, there seems to be amazing consensus about the "ideal design". That seems to be, a household latrine of the double-pit pour-flush type (see diagram and drawings), requiring between Rs.1000 and 2500 for its complete construction. (The price variation is caused by the different choices regarding the so-called "superstructure": thatch or brick, with or without roof, door or no door, whitewashing, cementing.....). But the basic technology seems to be agreed upon:

*sanitation at household level
*pour-flush
*double pit

Minor choices are left: Pan and trap can vary, the materials can be different (only since SEU encouraged Kerala ceramics Corporation to design and produce the "ideal" UNDP/UNICEF/WB/GOI/KWA model in Ceramics this is locally available, next to the PVC, mosaic, or cement pans), the pits can be lined, un-lined, circular, rectangular, close or distant, and so on: all variations on one common theme.

If all instituions would always agree to such an extent our world would be better place to lives in! But is it not amazing that so many agencies agree on such an expensive and unfeasible technology? Even in its cheapest form it seems to be impossible to reduce the required amount below Rs.1200. If we really aim at full coverage for all rural households in Kerala, an outlay of at least 380 crores is required.

How to explain such a lack of realism and lack of action?

WHY IT DOES NOT HAPPEN

Clearly, there are many factors that might explain why so little is done and why the chosen strategies fail to offer a (cost) effective solution to this problem of life and death. In this article only the four major reasons will be mentioned (in decreasing order of importance!):

1. Sanitation is not a felt need among Kerala's population

2. Kerala's governental institutions fail to respond to obvious needs of its constituencies

and to carry out comprehensive large-scale sanitation programmes which combine hardware and software on a significant scale.

3. The present technological concept is based upon unrealistic and unreal assumptions

4. Kerala is faced with a genuine lack of resources for the solution of such a wide-spread and massive problem.

Let us look more closely at each of these:

1. Sanitation not a felt need: In spite of the already quoted rhetorical statements of politicians, bureaucrats, aid-officials and doctors we might conclude that in fact not many people in Kerala really care about sanitation. At the household level investments for sanitation have a low priority, lower than expenses for alcohol, cigarettes, dowry or education (just to mention a few items on which virtually all Keralite households spend a major part of their disposable income). Even a sizeable number of more well-to-do households have other financial and social priorities. At the present level of public and private health awareness in Kerala, sanitation simply has a low priority.

This is not only reflected by the extremely low level of private expenditure on this item, more significant is the obviously very low political priority of rural sanitation. I am not aware of any politician who has really campaigned for this issue and who has invested time, resources and influence to claim assistance for his/her constituency in this field. If we can assume that Kerala's politicians reflect the sense of priorities of the general population, we have to conclude that sanitation simply does not carry much weight. Perhaps such an assumption is naive and we might find a more correct explanation for the lack of political attention when we analyse the real incentives that make politicians and bureaucrats emphasize or neglect issues. One special characteristic of rural sanitation for example is its necessarily decentralised implementation: precluding "special deals" between contractors and official and not providing any special glamour, credit or clout to the decision-makers. Rural sanitation is in the end, an endless process of motivation, drudgery and small-scale, labour-intensive construction. Who would be interested in that, apart from those individuals who suffer from diseases that could have been prevented? And of course, the something similar can be observed in many other ways: the apparent absence of sanitation from most health related programmes, its conspicuous absence from the list of subjects really studied in the educational system, the lack of interest of the private sector, the dismal state of sanitary facilities in government buildings, restaurants, public places.

2. The ineffective Government structures: Even when rural sanitation is recognised as an important action item, we have to acknowledge that the present government institutions fail to make a significant contribution. As noted, the Department of Health Services hardly pays any attention (unless an outbreak of gastro-enteritis or even cholera attracts public attention and political pressure), the Kerala Water Authority does not carry out any sanitation programme, panchayats only act if and when foreign funds create opportunities. The Department of Rural development has a longer history of sanitation programmes, but none to be proud of. No single government agency has succeeded in mobilising people's awareness and people's resources on a significant scale and with sufficient continuity. I already noted the lack of reliable data, the lack of information-sharing, the absence of impact studies, the fact that there seems to be no collaboration among those institutions that have some involvement.

The pattern is: lack of funds, unrealistic targets and a static approach which fails to deliver result or to solicit substantial contributions from beneficiaries.

3. Inappropriate technology: It is not for me to speculate why the Government of India and the Government of Kerala have adopted the unaffordable luxuries of the Pour-flush Double-pit system, which would require most of the State's budget. The Rs.135 lakhs devoted to rural sanitation under the Sixth Plan compare pitifully with the required minimum of, say Rs.300 crores. From a planning point of view, one can either aim at perfection for all and in fact not accomplish anything or look for more affordable solutions which at least would have some real chance of success.

If ultimate impact is a more important factor than political posturing or following urban middle-class fashions the reality of cheaper technology as well as mass mobilisation of people's resources might be a more relevant approach than the promise of solutions that can never be replicated. The lack of appropriate and creative responses to Kerala's sanitation problems can be illustrated by a few points:

-in spite of the unusually high density of the population, extreme shortage of space and well-developed cash-economy no genuine efforts have been made to propagate and experiment with public latrines (which have proven their economic viability in other state!).

-the private sector has never been encouraged or supported to develop useful initiatives in regard to sanitation, again: inspite of the fact that experiences elsewhere suggest that mutually advantageous collaboration can result in much wider availability of sanitary facilities.

-urban or middle-class standards seem to have been accepted without critical reflection on their appropriateness for the particular physical and social environment of Kerala, but leading to inappropriate expectations among the public.

-no serious attempts have been made to develop and test cheaper designs: round latrines (saving the Rs.200 usually spent on doors), sharing of pits betwen different latrines, the use of compressed earth forbuilding blocks, thatched roofs as used for houses, starting with one pit only (in some situations good enough for the first 10 year after which a second can be dug).

4. lack of resources: However, even ith a much more cost-effective approach towards rural sanitation, no sufficient funds would ever be available with the Government of Kerala to provide all poor households with proper sanitation. If one would only regard the below-poverty-line households and a public investment of, say Rs.1200 per latrine, the total public investment would still come to minimally Rs.125 crores: clearly out of reach for Kerala.

It might be of interest to note that the total amount of foreign assistance in the sector of water supply (provided by the Dutch and Danish Governments and the World Bank over a number of years) comes close to this amount. What could be the explanation that these so called donors give such a strong priority to drinking water, to the virtual neglect of the logical complementary sector: rural sanitation? But assuming that these priorities will not change and that the financial position of the Governments of India and Kerala will not, in the foreseeable future, allow substantial increase of public expenditure in this sector, the conclusion is clear: the required funds can only come from the rural population themselves and, to a much lesser extent, from Kerala's (stagnant) private sector.

WHAT NEXT?

All Analysis and criticism would not be worthwhile if we could not evolve from them at least the broad principles upon which an action agenda could be formulated. To this end, the following ideas are presented:

1. For organisations/institutions to succeed:

-their programmes should meet the needs of the beneficiaries. The only way to do this is by providing participatory organisations.

-the programmes must reflect the cultural factors of the environment. The way people are organised at the social level has to be taken into account.

2. The problem of sustainability: It is much more difficult to continue a programme than to start it. To sustain it, the enviroment should support it with political support, cooperation, motivation and resources.

3. The challenge for any government organisation's programme is to develop empowering and enabling services. It is not wise to expect the government to provide all the resources. Sanitation is not a government problem; it is and should be defined as a programme of the people.

4. Following from the ideas above, the characteristic of two types of programmes can be distinguished:

	Dependency-creating Programmes	*Vs*	**Empowering programmes**
Origin	Usually initiated in cities by experts with money from donors		Starts in village with people themselves taking the initiative
Resources	Usually Central funds (govt/LIC/donors)		Local funds
Organisational Momentum	Top down		Bottom-up, spread out
Management Focus	Procedures and		target estimate result is measured in terms of households actively involved in sanitation, and properly using amenity
Control	Political		Social and collaborative (implementors and beneficiaries)
Attitude to Errors	Denies or ignores errors		Understands, learns from and evolves through errors

CONCLUSIONS

What can we now conclude? The Kerala Sanitation Conference, where so much more information and knowledge is being brought together, is the first opportunity in Kerala's history for rural sanitation to receive the official attention of so many different professionals from different sectors. This is a unique opportunity for the cross-fertilisation of ideas and perhaps develop new initiatives to break the present impasse.

For a beginning, it might help in our discussions to summarize the conclusions that seem to follow logically from the above facts:

1. Serious efforts to document and assess present activities this sector, such as the newly established State Sanitation Cell, deserve all support - provided they do not just provide another layer of bureaucracy but facilitate honest sharing of ideas and information. A starting point could be to collect more reliable information on who is doing what - and to what effect.

2. Any future approach should take into account the three essential components: involvement of beneficiaries from beginning to end, cheap and replicable technology, and health education that aims at behavioural change.

3. Only if and when Kerala's population realizes that proper sanitation is an indispensable step towards improved health and if politicians express this priority, will rural sanitation become a serious, shared responsibility between people and their government. Today's politicians might stand in the way of such an awareness and reorientation or might support it.

4. Considering the evident lack of financial resources in Kerala (as elsewhere in India) more emphasis should be placed on the mobilisation of resources outside of the Governmental context: the contribution people themselves can make as well as possible involvement for private sector institutions. Government might see itself more as a facilitator and moderator less as the provider of moss-based service.

5. It is doubtful whether Kerala could or should adopt any standard solutions, imported from elsewhere or announced by some authority. The only clear conclusion is that past and most present efforts are not effective or replicable on a larger scale. Our priority might be on open-minded experimentation and drawing lessons, rather than on preaching policies and imposing standards.

Governments, voluntary agencies, private institutions and individuals will always commit errors. But the really harmful failure lies in the refusal or inability to learn from one's errors. Perhaps the time has come to look back and learn and then to look forward and try.

SANITATION AS A PEOPLE'S MOVEMENT

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Shri. Venugopalan, distinguished participants to the conference ladies and gentlemen, I am indeed thankful to the organisers for giving me this opportunity to participate in this conference and share some experiences and thought with you. I am particularly happy since, as a member of the Te chnology Advisory Group (I) of the World Bank, I was directly associated with the preparation of the feasibility reports for Urban and Rural Sanitation for Kerala.

In the field of sanitation efforts have been made in the past by individuals, institutions, Govt. and International agencies. While inputs from International Agencies are extremely useful these can amount to about 5% in financial terms and hence the efforts by the Govt. and the people themselves are very necessary. By the very nature of the work itself, that is provision of the latrine in a house hold, efforts at individual level are required. For effective impact on programme implementation what is needed in a peoples movement in the field of sanitation. It is in this context that the role of social organisations can become important. Having worked with State and Central Govt., International agency and now with a Social Organisation, like Sulabh International, I thought it will be useful if I narrate the work of Sulabh International and experience in the field of Sanitation.

Dr. Bindeshwar Pathak an action sociologist from Patna, Bihar, noted that for implementation of Gandhiji's programme of emancipation of scavengers, actual conversions have to take place and thus he founded Sulabh Shouchalaya Sansthan now known as Sulabh International. The Sulabh International now works in more than 17 states in India and nearly 400,000 bucket latrines have been converted into Sulabh Shouchalaya (four flush twin pit water seal latrine) and has liberated more than 10,000 scavengers from this demeaning task. Sulabh International has also undertaken construction of new latrines for the households. Goa is an example where under the leadership of the present Chief Minister, Govt. undertook a project to provide a latrine for each household in two towns and Sulabh International has successfully completed the work. Govt. specially improved upon the specifications so that people felt like using the latrine as against open defecation and a latrine has now become a status symbol encouraging individuals to build latrines while constructing houses. This is one way of getting the people interested in use of a latrine.

Sulabh International not only helps to liberate the scavengers but also plays an active role in rehabilitation of wards of scavengers by giving them training in different trades so

that they can get self employed. There is such an Institute in Patna and another is now under construction at Jambhul near Bombay in Maharashtra. These institutions have attracted the attention of a number of social organisations and Sulabh International has thus, drawn indirectly their attention to the question of sanitation.

An important area in which Sulabh International is today engaged in construction of public toilet complexes and maintaining the same on pay and use system. More that 1000 such complexes comprising of toilets, baths and urinals (separately for men and women) are today in operation in India. Sulabh International has gained considerable experience and has been able to assess the public reaction to these complexes. It has been exteremely encouraging. It is noticed that individually a person is prepared to pay for the service. This is an important revelation. It appears that in water supply local authorities as a body are reluctant to bear the expenses but individual if given service is prepared to pay. It has been the experience that even in poor localities people to pay. In Bombay we have noticed that shoeshine boys and even beggars have taken advantage of this facility by paying. We are far behind in sanitation even in urban areas and position is worse in jumbo cities like Bombay. Community toilet complexes with toilets, baths and urinals are required in large numbers for places of floating population and also for areas where individual toilets for households are not possible.

One important aspect in a public toilet is that nearly 100 people can use one seat thus economically the proposal to construct a public toilet can be viable. Maintenance is the important aspect of a public toilet complex and Sulabh International has succeeded in keeping these complexes clean and hygienic. Can public toiltes be an answer to provide sanitation ? In China, we noticed that in big cities large number of public toilet complexes at reasonable distance have been provided and maintained well in areas where individual toilets are non-existing.

Sulabh International has improved the design of these complexes with experience specially with pan and the Sulabh drain. Further Sulabh International wants these toilets to be different from normal toilets by providing medical and first aids, drinking water fountains and telephone facilities.

It is true that Sulabh International has mainly worked in Urban area since Urban areas also lack in sanitation. It is however proposed to work in rural areas also. What is required is to train individuals who will not only know how to construct a latrine but also work in other areas, like improved chullas, water sanitation, hand pump repairs, and social forestry. Sulabh International has ambitious proposals in this regard and hard work is expected to begin very shortly.

Sanitation can become a people's movement once the people realise the importance of sanitation. This is possible if people see what a sanitation unit is and how it serves them. Our experience has been that by providing a sanitary and hygienic facility like a toilet whether private or public, the people will demand for these facilities and will also take part in providing themselves with the same. In China, in large cities the people themselves undertake to keep the streets clean by forming community groups of houses facing the street and paying for the service. The Municipal or the local authority only takes care for the larger roads. It is possible therefore to keep sanitary services effective if the people participate in such an activity. It will be worthwhile if efforts are made for peoples active participation in rural areas as it will be almost impossible to finance large scale sanitation programmes by Govt. In Gujarat efforts have been made by Safai Vidyalaya to hold camps in rural areas to train people in rural sanitation and also to participate in the same. Since it is not possible to finance large scale sanitary programmes in rural areas as the cost will be astronomical, only an active peoples movement in which there is participation in the programmes can make it possible to attain the goal of a sanitary environment. Social organisations can play an important role in this respect and Sulabh International is today involved in wide spread areas of the country in this activity and will always be willing to play this important role.

17. The extent to which use is made of all village leaders' camps, all Panchayat president meetings and all other gatherings in the Block in order to demonstrate the use of sanitary latrines.

18. Policy of never providing public latrines when household latrines are possible. Where public latrines are needed at places of public gatherings, arrangements for maintenance are also essential. It is recognised that a poorly maintained public latrine influences people against latrines.

Working under most receptive village conditions

19. The policy of working in most responsive villages first, using available resources to achieve greatest possible results. This policy can quickly start a widespread movement in favour of latrines.

20. Adjustment of the operational programme to seasonal variations in the amount of village people's free time, their available cash, their ability to undertake construction, and their interest in the use of latrines.

21. Ensuring that there is adequate water supply in the villages taken up for the latrine programme.

Fostering village leadership and participation.

22. The policy of quickly providing latrines to the most receptive people in each village, to begin with.

    Receptive groups can be expected to be those whose leaders are more educated, with some urban contact, and who have been early to accept other innovations.

23. The extent to which elected or other recognised and influential leaders take responsibility for the programme. Involvement in planning the programme is especially important.

24. The extent to which village leaders are assisted by technical workers to develop their leadership. This can be done through a village leaders training camp. A particularly useful technique is to have an excursion to other villages to observe sanitary progress. Separate activities for women are indicated.

25. The extent to which volunteers and other helpers in the village are used for the work. These should come from all segments of the village.

26. Use of small interested groups of people in the village to facilitate carrying out the programme by informing them and helping them to discuss and carry out action.

Reaching all village groups.

27. The extent to which contact is made with representative of all segments of the population (since communication may be poor between segments). Even where there is low receptivity to latrines, the process of stimulating thought about latrines should be started early. This applies particularly to Harijan groups.

28. Having women technical workers arrange a regular, special programme for the village women. Monthly visits have been found most useful. It is particularly important to have participation of women workers like Social Education Organisers, Grama Sevikas, Health Visitors, Midwives and women School teachers.

29. When there is additional subsidy available for latrines for a certain group, such as Harijans, a special programme must be framed in order to ensure adequate education prior to construction and to ensure good use and maintenance. This is necessary because of (a) low educational and economic level of people, and (b) the difficulty of being sure construction is likely desired, when the subsidy is high.

30. Channelling educational activities through existing kinship groups in villages.

Helping village people to see clearly what is a sanitary latrine, and to link it with things which they value.

31. The policy of explaining details of what a sanitary latrine is at the first meeting in a village by showing an actual latrine as demonstration.

32. The policy of having people see, during the early phase of the programme, a good latrine being used and well maintained.

33. The policy of encouraging cheap types of superstructure so people will realise a good latrine can be had at low cost.

ACTION PRINCIPLES FOR A SANITATION PROGRAMME

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The following principles have been identified, out of experience, as being important determinants of success for promotion of sanitary facilities in rural areas. These are not 'new' principles, but having them clearly defined and not down is found useful for these interested in the promotion of rural sanitation.

During the past two decades, considerable changes have also taken place in the administrative set-up for rural areas with Panchayat unions, village panchayats, block development agency, primary health centre and voluntary agencies playing very useful roles. The set-up at the state level for rural water supply, sanitation, rural development, community health etc. also varies to some extent between states. The principles, therefore, have to be adapted to suit local variations.,

The success of the programme will be influenced by the following :
Making full use of community development block organisation.

1. The total number of technical workers who participate in the programme in a given area.

2. The number of different types of technical workers who participate in the programme. Contributions can be made by all members of primary health centre staff, plus social education organisers, V.L.S. Gram Sevikas and school teachers.

3. The extent of co-ordination between the participating technical workers.

4. Presence of atleast one full-time Health Inspector in each Block, to concentrate on environmental sanitation activity.

5. The presence in each block of a trained mason employed to work under the Health Inspector, to help with construction and maintenance of latrines and with training of local masons.

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6. The extent to which health workers themselves provide leadership in bringing about this co-ordination.

7. The extent to which administrators insist on co-ordination among all technical workers for this programme.

8. The extent to which through practical training is initially provided for technical workers. The best way of providing this is through their observation and participation in a good operating programme in a village area.

Training and supervising of personnel

9. The extent to which each worker knows his specific tasks and has the skill needed to carry them out.

10. The depth of knowledge which technical workers have about people's habitual practices, beliefs, and values relating to sanitation, economic status, health, agriculture, adoption of new practices, influence within the village etc.

11. The extent to which technical workers are involved in overall planning of the programme operations.

12. The extent to which technical workers constantly plan their own activities, so that each village visit is aimed at solving current problems and at achieving overall goals.

13. The extent to which the entire staff are kept well informed about the programme, through periodic reviews.

14. The extent to which there is continuous support and guidence of block technical workers by specialists in their respective fields to help: (a) in developing best methods of work, and (b) in co-ordinating with other personnel.

Setting examples

15. The extent to which the technical workers have and use latrines. Administrators have responsibility for providing these.

16. The policy of constructing latrines and water supply for all schools, and having an intensive programme of educational activities and supervision of use and maintenance of facilities in every school.

34. The extent to which people are helped to understand reasons for latrine use which are meaningful to them.

35. Linking of teaching about latrines to previous developments recognised as being successful by the villagers.

36. The extent to which continual attention is given throughout the programme to answering people's objections to or difficulties with, latrines. Important points to note are:

    a. Latrines don't smell bad
    b. Latrines don't bread flies
    c. Water is always present in the tap.
    d. Latrines are safe places for depositing excreta.
    e. Amount of water needed for flushing after each use.
    f. How to flush latrines.

37. The number of different educational methods and materials used. Each method or material has a certain type of limited use, which must be applied in a careful manner, for a specific purpose. However, visual materials are not essential. The most important visual aid is a sanitary latrine.

38. Making available visual aids which are cheap, portable, interesting and understandable.

39. Helping people develop their own teaching aids; for example, flashcards done by school children or dramas developed by villagers.

40. The extent to which participation by the people is developed at every stage of the educational process, so they feel it is their own programme.

Constructing latrines in an individualized, efficient manner.

41. Use of an individual request-form for a household latrine, which must be signed before construction. This will ensure there is clear understanding and will provide a record of the request, to help ensure good follow-through.

42. The extent to which careful explanation and discussion of latrine location is given to villagers desiring latrines.

43. Minimising delay in providing necessary materials to villagers who desire them.

This involves solving problems of purchase, storage, transport and help in construc tion. Strengthening administrative powers of the block agency along these lines is especially important. Also important is encouraging local manufacture of latrine parts.

44. The policy of encouraging construction of complete latrines rather than a partial construction. Ideally, all materials should be ready before construction starts. Construction should be completed in a short period (2 months at most).

Following-through

45. Having continuation of contact with any village, through monthly visits over at least 1 or 2 years duration. Overall development will be in successive waves of construction, more education etc. New groups in the village become more interested in having latrines as these phases advance.

46. The presence of a detailed plan for ensuring use and maintenance.

47. The thoroughness and regularity of follow-up visits by Health Inspectors and village level workers to help see that the latrines are used and kept clean.

Maintaining adequate budget support.

48. Presence of budget adequate to support a fairly intensive programme. Ideally, it should cover a block completely in about 15 years. This involves a higher level of budget than now available for community development blocks in stages I and II.

49. Pooling of other budget allotments from various sources (such as State Health Department, Harijan Welfare Fund, Community Development Department, Education Department and Local Bodies). These funds should be co-ordinated by the District Health Officer, and expended through the framework of Community Development Blocks.

50. Availability of a subsidy for construction which will be uniform throughout the State.

Strategy for an effective health education programme.

1. The programme should be organised as an outreach activity of the PHC/PHU/PHE etc. Institutional services alone are inadequate.

2. The first step is community involvement or participation. While the concept of community participation is quite old, the idea of health education for and through community participation is comparitively recent. Community participation is likely to be effective only if we involve the community in various aspects of programme planning and implementation i.e., identification of needs, prioritisation, programming, implementation and evaluation. It should involve transfer of responsibility to people.

3. Adequate attention must be paid to the felt needs, particularly felt health needs, of families and communities. Satisfaction of these felt needs or at least sincere efforts on the part of the health workers to get the needs set, will contribute to not only acceptance of the workers but also of the programme. The multi purpose concept team work in PHC and co-ordination with the community development block-will facilitate this.

4. The programme should make use of all available media. A judicious combination of mass media particularly Radio and TV; Cultural indigenous media; and interpersonal communication should be planned. Radio already reaches about 65% of rural population and coverage by TV is increasing. A co-ordinated use of media should include co-ordination of messages and their mutual reinforcement through all channels.

5. The programme should provide for intersectoral co-ordination. 'Most of the projects like rural sanitation, family welfare, nutrition, immunization, CRS are amenable to intersectoral co-ordination. Other sectors can not only contribute to health education but also make other inputs. The nodal agency will have to take the initiative in bringing about intersectoral co-ordination.

6. The programme should provide for adequate training of all health and related workers and staff. The training should take care of the technical information and communication needs. Workers should be not only knowledgeable but every competent in transferring what they know to individuals, families and communities. In addition, workers and staff should be trained to recognize that empathy matters a great deal in health education.

7. No health education programme can succeed without political and administrative support. Political decision makers at all levels from the national through state to panchayat level, should be educated. They should not only recognise the seriousness of the present problems but come out openly to support the solutions being implemented and influence the community to accept the change.

8. Education and services should not be separated. On the other hand, they should be planned to function in a co-ordinated manner. Provision of quality services on time in itself promotes education.

9. Highly sophisticated educational materials are not necessary at the village level. Flashcards, Pamphlets etc will be sufficient. More sophisticated materials like filmstrips, films, video cassettes can however be very useful for training of staff.

10. The messages should be simple and specific. For example, sanitation may be related to diseases which people already know and have experienced. The messages should conform to the needs of the people and the programme.

11. Involvement of women and drawing them into the development stream is critical to the success of health education efforts. Women have been found to play a very constructive role in promoting immunisation, family planning, environmental sanitation and control of communicable diseases. Special efforts are necessary to identify interested and influential women, train and utilise them for health education work.

12. Health education planning both at micro and macro level should be based on essential information. The community should be involved in the information gathering process right from the beginning. Periodic consumer oriented surveys on services provided and its utilisation should be carried out to enable programme managers and service provider to plan and implement changes, where necessary.

13. Effective health education requires a combined use of various approaches like interpersonal communication, group discussion and mass approach. There is no inherent contradiction between these approaches; each has its own advantages and limitations. The main consideration should be the selection of one or a combination of approaches appropriate to a situation and the ability of the workers to select and use them effectively.

RURAL SANITATION IN KERALA - TOWARDS A NEW APPROACH

Dr.C. HARICHANDRAN*

The Problem

Non-availability of safe drinking water, lack of minimum housing and lack of proper facility for disposal of human waste constitute a denial of basic human rights. Diseases like blindness, elephantiasis and diarrhoea are its products. In India it is estimated that over 73 million mandays are lost every year as a consequence of water borne diseases. The cost in terms of medical treatment and loss in production is around Rs.4500 million annually.

Though a good sanitation system is one of the important factors affecting the quality of life of people, till the beginning of the Sixth Five Year Plan this was almost a neglected sphere of activity. This could be seen from the very meagre financial committment of the Centre and the States and the lack of integrated and co-ordinated policies and strategies for the development of sanitation facilities in the rural as well as urban areas. The magnitude of the problem is evident from the fact that as on 31.3.1981 only 2.8 million (0.5%) of the population had basic sanitation facilities in rural areas. The Seventh Five Year Plan states that 40.03 million (27%) of the urban population had basic sanitation facilities in 1981. Going further, it is revealed that in the urban areas there were 12.78 million urban households with dry latrines. The problem is convert them into pourflush latrines. The present rate of conversion is approximately 25,000 latrines a year. Even at 1 lakh per year this would take more than 100 years. In addition, there a staggering 10.54 million urban houses which have no latrines at all. Thus the dimension of the problem is indeed a formidable one.

Thrust in the seventh Plan

During the 7th Plan 1985-90, in line with the objectives of the International Drinking Water Supply and Sanitation Decade (1981-1991), the target is to provide adequate drinking water facilities for the entire population and to provide sanitation facilities to 80 percent of the urban population, and at least 25 percent of the rural population.

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The views expressed in the paper are those of the author only and not of the State Planning Board he belongs.

According to the 7th Plan estimates, the expected coverage under sanitation by March 1985 was 5.7 million (0.95%) rural population and 57.27 million (33%) urban population. Though the water supply and sanitation sector as such received a big push in the 6th and 7th Five Year Plans, the attainment of the target set for the Decade 1981-1991 remains a distant dream. The provision made for water supply and sanitation in the First Five Year Plan was Rs. 49 crores. This increased to Rs. 3922 crores in the Sixth Five Year Plan and to Rs. 6522 crores in the Seventh Five Year Plan. The Government of India and the states are committed to find a solution to this problem. An analysis of the rural water supply scenario as on Ist April 1985 reveals that the population covered under potable water supply accounted to only about 62.2% of the rural population. The population covered as claimed by the departments are under debate and dispute. Generally, it is taken for granted that installing a tap covers a population of 250 on an average. This is rarely borne out in reality.

Kerala Situation

It was estimated in 1983 that in urban areas about 37 percent of the population had disposals through septic tanks, about 49.5 percent used water-seal latrines, about 2.5 percent adopted conservancy system and an estimated 8.7 percent had no disposal facilities at all. The major sewerage schemes initiated for the three cities of Trivandrum, Cochin and Calicut with LIC assistance could not take off mainly due to lack of provision of adequate funds. As regards rural areas, as per 1981 census, a population of 99000 representing only 0.32 percent of the total population were covered with sanitary type of latrines. This would mean that almost the entire households needed sanitary latrines in rural areas. The 1980 Housing and Employment survey indicated that 15.29 percent of the rural households had water-seal latrines. Pit latrines, ESP type latrines and open latrines are the common methods of excreta disposal in rural areas at present. Of the above only the ESP type is sanitary.

The major departments implementing the sanitation programme in the state are the development department, and the Panchayat department. The scheme wise analysis of achievements of each department is briefly attempted below.

Development Department Scheme

The Rural Development Department implements the following programmes:

1. ESP Type latrine under Community Development programme
2. Sanitary latrine programme under NREP
3. Sanitary latrine programme under RLEGP
4. Sanitary latrines constructed under the Central Rural Sanitation Programme and
5. The Sanitary latrine projects taken up under the PAD (K) programme

1. ESP type latrine under the C.D. Programme

Under the plan scheme of the Community Development programme, assistance is given to rural families at Rs.500 per latrine, it is admissible to SC/ST beneficiaries and other families who are below the poverty line. An analysis of targets and achievements shows that the actual expenditure and achievements are far below the targets set for the years. The allocation and achievement under the programme are given below:

	Target				Achievement			
	General	SC	ST	Total	General	SC	ST	Total
1987-88	380	6704 +	250	1300	103	527	185	815
1988-89 (31-12-88)	410	800 +	410	1620	191	91	17	299

The final allocation for the above scheme during 1987-88 and 88-89 are given below:

(Rs. lakhs)

		General	SCP	TSP	Total
1987-88	Allocation	5.00	8.00	3.00	16.00
	Expenditure	2.80	7.19	1.50	11.49
1988-89	Allocation	5.00	10.00	5.00	20.00
	Expenditure	0.56	1.24	0.81	2.61

2. Sanitary Latrine Programme under NREP

Under NREP, the construction of sanitary latrines for SC/ST beneficiaries has been taken up. For construction of a two-pit latrine under this programme a family is eligible for an assistance of Rs.1200 per latrine. This latrine can be sanctioned only to those families living in a pucca house. The financial and physical achievements are given below:

Year	No.of latrines taken up	No. of latrine completed		Expenditure (Rs. lakhs)
		SC	ST	Total
1986-87	2850	--	--	2240 33.60
87-88	2163	1575	88	1663 12.55
88-89 (Upto 31-12-88)	920	319	20	339 2.13

The present policy is that no individual latrine will be constructed and the scheme has been modified 50 that only community latrines are constructed.

3. Sanitary Latrine under RLEGP

Under RLEGP the construction of sanitary latrines has been taken up from the year 1985-86 as an integrated programme. The objective is to assist the beneficiaries of SC/ST families below the poverty line. During the years 1985-86 and 1986-87 construction of 2850 latrines at a total cost of Rs. 34.05 lakhs in each year was taken up under the scheme. During 1987-88, construction of 1356 latrines at an estimated cost of Rs. 16.28 lakhs was taken up. The progress achieved under the programme is given below :

A.	Financial		B. Physical	Achievement		
	Allocation	Expenditure	Target	SC	ST	Total
1985-86	34.05	---	2850	---	---	---
1986-87	34.05	49.83	2850			3332
1987-88	16.28	15.00	1356	2144	80	2224
1988-89	---	3.59	---	782	69	851

During the year 1988-89 the Government of India decided to assist only the village level institutions like schools, anganwadis etc. for the construction of sanitary latrines and not for idividual latrines. Accordingly, a project for the construction of a total no. of 1335 latrines (352 school latrines and 1003 latrines for Anganwadi/Balwadies) at a total cost of Rs. 36.676 lakhs including a public contribution of Rs. 1.87 lakhs has been drawn up for implementation during 88-89. The cost per school latrine is Rs. 7000 per latrine including the local contribution of Rs. 350. The cost of the latrine to the balwadi is Rs. 1200. This is fully met from the RLEGP funds without any public contribution. In addition to the above sanitary latrine programme, the houses completed under the RLEGP have been provided with sanitary latrines.

4. Central Rural Sanitation Programme (CRSP)

During the year 1986-87, Govt. of India have approved a scheme for Rural Sanitation Programme in addition to the on going programmes. The new programme (CRSP) is for constructing sanitary latrines for individual households of SC/ST for people below the poverty line. The programme envisages 100% grant to SC/ST beneficiaries and people below the poverty line. The maximum amount of subsidy admissible will be Rs.1160 per latrine. During the years 1986-87 and 1987-88 an amount of Rs.15 lakhs per year was sanctioned for this scheme and the physical target fixed for each year was 1350. The progress achieved under the CRSP since its inception is furnished below:

	Financial (Rs. in lakhs)		Physical	
	Allocation	Expenditure	Target	Achievement
1986-87	15.00	6.77	1350	61
1987-88	15.00	21.78	1350	1359
1988-89 (31.12.88)	---	1.63	---	531
	30.00	30.18	2700	1951

The balance of 749 latrines is under construction and is expected to be completed during the remaining period of the current financial year.

5. Sanitary Latrine scheme taken up under PAD (K)

People's Action for Development (Kerala) is an organisation rendering assistance to voluntary organisations in the field of rural development.. The voluntary organisations avail the assistance from the CAPART. Among the large number of projects already cleared by the CAPART, sanitary latrine programme is a major one implemented by the voluntary organisations . The details of schemes sanctioned and implemented are given below.

No. of projects sanctioned by CAPART through PAD(K)

Year	No. of latrines Sanctioned	Allocation No. (Rs. lakhs)	Constructed	Expenditure incurred (Rs. lakhs)
1987-88	2109	28.30	650	7.15
1988-89	3785	45.84	1015	11.17

World Bank-Aided Rural Sanitation Project:

Considering the magnitude of the problem and the huge investment needed from the beginning of the 7th plan Government of India made an attempt to implement the programme with external assistance. As a result, the World Bank is assisting the rural sanitation programme in several states. In Kerala, the World Bank has agreed to finance the construction of 18,000 latrines in 37 project villages in 32 Panchayats in Trivandrum, Quilon, Pathanamthitta, Kottayam and Ernakulam districts during 1986-90.

The project is aimed at eradicating contagious diseases prevailing in the state due to the lack of proper sanitation facilities. The project was supposed to be a step in the right

direction in achieving the target of 'sanitation for 25 percent of the rural population' during the 'International Drinking Water Supply and Sanitation Decade (1981-91)'. The total outlay for this project was estimated to be around Rs. 4 crores.

The latrines constructed under this scheme is of two pit and pour-flush type in accordance with the UNDP/UNICEF type design. The approximate cost of one unit is calculated to be Rs. 18,40 in 1985-86. Of the cost, 75 percent will be provided as grant and the remaining 25% as short term loan to be recovered within 25 years at an interest rate of 8.75 percent.

During the first year, 1986-87, five Panchayats (Vilvoorkkal Kilikolloor, Adoor, Kumaranalloor and Chellanam) were selected. The project was launched on the 2nd of October 1986 with the aim of constructing 2500 units @ 500 units per Panchayats. The project was slightly delayed since the masons were not familiar with the new design and due to the drought situation. However, the construction of 2500 latrines was completed by the end of November 1987. A total number of 13323 persons benefitted from the scheme, of which 2932 belonged to scheduled Caste/Scheduled Tribe categories. The total cost of construction was approximately Rs. 45 lakhs.

The construction was carried out in three ways, viz., through contractors, through beneficiaries, and through committees consisting of a group of beneficiaries. In the second stage of the project, 12 Panchayats (Vilappil (Trivandrum), Sakthikulangara, Thrikkadavoor(Quilon), Ezhamkulam (Pathanamthitta), Vijayapuram, Nattakon, Panachikkad (Kottayam), Kumbalanghi, Maradu, Vadavucode-Puthencruz, Thrikkakara, Keezhmad (Ernakulam)were selected for the construction of 6000 latrines during 1987-88. As on 31-11-1988 construction of 4088 units was completed and 635 were at different stages of construction. 23,568 persons have been benefitted by the scheme, of which 3018 are from the Scheduled Caste/Scheduled Tribe categories. The total amount expended so far is Rs.77.98 lakhs.

On the whole, a total of 6588 units were completed till 30.11.1988 and covered a total population of 36,891 persons, including 5950 SC/ST population.

Integrated Approach is Necessary.

One of the major defects in the existing practice is that there is no integrated approach involved in finding a solution to sanitation problems. Financially, this is relegated to a low priority as is seen from the financial allocations and expenditures. Going through the actual situation, it can be seen that only from the Seventh Five Year Plan on is a shift in emphasis in the sanitation programme though the RLEGP, NREP and the General

Sanitation programme. It is seen that in Kerala around 20000 latrines are constructed every year now. But this touches only a fringe of the problem. According to 1981 census there were 42.97 lakh houses of which 35.49 lakhs were rural. At this present rate of construction, the problem cannot be even partly solved in another hundred years. The situation therefore calls for a massive programme integrated with water supply, housing etc. The funds flow to the programme has to be stepped up substantially in the coming year, if those concerned are really committed to rural sanitation.

In Kerala every year approximately 60 to 70 thousand houses are constructed under the different social housing schemes of the Government. Housing and sanitation should be seen together as a single programme and not as different programmes. The objective is to eradicate the housing problem by 2000 A.D. Therefore, latrine construction support programme should be a part of the overall housing programmes of the state. Unless a major and bold initiative is taken, even by 2000 A.D., we would not be able to achieve 25 percent of basic sanitation facilities for the rural population. Considering the resources required and administrative and other capabilities, "water to all" remains only a distant dream. Therefore, housing water supply and latrine programmes should have co-ordinated and integrated approach.

Sanitation - A Mass Programme

Sanitation is seen as a governmental programme and this is one of the reasons for its tardy progress. Though the participation of voluntary agencies and the people in the process have been by and large felt important, in practice this has not materialised. In this process awareness has to be developed. The sanitation programme should not be just seen as a construction distribution of mere latrines; essentially it involves human dignity, particularly the social dignity or women. In Kerala there are over 10000 Mahilasamajams and a large number of voluntary organisations working in different spheres. The resources available with them, both physical and financial, should be fully harnessed and tapped in this process. As is the case with family welfare, sanitation should become a massive people's programme. This is possible through motivation and awareness education programmes with the concerned efforts of the panchayats, voluntary clubs and mahila samajams and the governmental machinery.

SEU EXPERIENCE IN LOW COST RURAL SANITATION

ELIZABETH ZACHARIAH,
Head, SEU (North) Calicut.

The SEU Programme for Low Cost Sanitation was initially planned on an Evaluation Study conducted on similar programmes in Kerala and from discussions held at field levels. A few latrine units were constructed on an experimental basis with community participation and involvement accompanied by a Pilot Health Education Programme. This afforded a chance to find out first hand what was needed, and to plan for the larger programme. The ongoing sanitation schemes of the SEUs are based on that experience. (The hardware details are given in the brochure in the folders provided and there are photographic and model displays in the exhibition hall).

The SEU programmes gives importance not only the technical quality of construction but places equal, if not more, emphasis on the software aspects, namely information and conscientization especially of the beneficiaries. If it is not sufficient to merely provide their assets but also to inform them as to why and how these should be used so as to obtain the maximum benefits.

The beneficiaries selected belong to the poorest and rather backward sections. Informing, educating and involving beneficiaries in and about the various aspects of development programmes have been mostly neglected by many in a bid to achieve physical targets, because such a procedure in firstly time consuming, and secondly personnel intensive.

A major experience SEU share with you in this aspect is that the most satisfying results are where SEU involvement is highest, although this meant that high physical targets had to be brought down. This brings up an important question of whether to be number oriented or quality oriented - a difficult choice indeed.

The intervention, involvement and activities of the SEUs on the Sanitation Programme in six areas were varied, and these give some interesting and educative insights. Where people have been involved right from the beginning, there has been better opportunities to ensure quality of work as well as progress. SEUs have also used existing agencies and networks wherever possible at different stages to undertake this programme.

The procedures followed by the SEU is displayed in detail on the exhibition boards. The main steps are mentioned here briefly.

In the Pre SEU intervention period there were

- No latrines
- Temporary and unsanitary Latrines
- Latrines present but poorly maintained
- Latrines present but not used for various reasons

and the reasons for this situation were many.

1) The first activity needed, and undertaken, was to create an awareness among people about the dangers of open air defecation and environmental pollution, and about the co-relation of these with commonly occuring diseases and dangers. The Health, ICDS, Panchayat Departments, SEU and Social Workers were mainly involved in this.

People were encouraged to construct their own latrines and were informed of low cost models, their advantages, approximate costs etc. SEU provides financial help for only those who cannot construct their own latrines completely and for beneficiaries selected as per the criteria decided. The response to all this was overwhelming and thousands of applications received.

2) Selection of Beneficiaries is the 2nd step. Potential beneficiary lists are made from the surveys by Panchayat, Rural Department (VEO), SEU, Health and Social welfare Personnel and these shortlisted. Each household is visited and beneficiaries selected finally by the Panchayat and SEU.

It may be pointed out here that where SEU was not involved in beneficiary selections, ineligible households being selected have occured, with political considerations often creeping in. SEU role and stand had to be firmly insisted upon and followed. Where local agencies are not consulted SEU have made wrong selection on account of inadequate and non-verified informations. The ideal than is to do this tricky step of beneficiary selection together-the SEU and local agencies (ideally the Panchayat).

From the next step begins our efforts to involve beneficiaries in the programme itself.

3) In this step, beneficiaries when selected are acquainted with the conditions of the programme especially about their 25% contribution.

SEU has tried various combinations of this contribution and a consensus reached is that, of the beneficiary contribution, the pit digging and simple labour must be undertaken by the beneficiary.

The remaining component is insisted upon as cash, material or both. Exceptions here are made only for the really poor and deserving cases.

4) During the 4th stage, the actual construction has been undertaken in different ways and of these it is those done by the SEU directly and, or with Panchayats as Partner agencies that has given the best results qualitatively. The quality is also increased when beneficiaries have been encouraged to participate and supervise the worked themselves.

Voluntary Agencies and contractors being involved have more often indicated profit motivations, thereby shifting out the qualitative aspects. This is also where time factors and physical targets play leading roles, which contribute to further depreciation of quality, and most of all to the minimum involvements of beneficiaries especially where only cash contribution is made.

5) The next step, where beneficiaries are also involved are beneficiary meetings held to discuss and arrange to locally available labour, material and to reach these to the work sites. The material arranged by the beneficiaries are laterite, bricks, jellied granite and sand. This is helpful and needed especially where partner agencies are not involved, and also helps to create a feeling among people, of involvement and of being part of the programme. This is a very important need of the SEU activities which is difficult however, where Partner agencies are involved. The beneficiaries are our targets essentially, not the latrines themselves, which are merely a 'route' to reach the beneficiaries. Involving beneficiaries slows down the physical implementation but again experience shows that this is so only in the beginning. People learn and catch on to the programme fast enough, if given the required support and guidance.

6) The 6th step is taken to ensure the maximum involvement of the community/ beneficiary and local intervention and support are solicited. Locally active personnel and interested groups are found to be useful for lending support and impetus to the programme by encouraging and helping all round. Local beneficiary/implementation committees with ward members, beneficiaries and social workers are efficient units to organize work and people locally. Thus, the SEU is saved a lot of and otherwise impossible feat and formation of such committees at the advice of the beneficiaries. These committees ensure that pits are dug, contributions are made within the stipulated time in as far as this is possible, and that work goes on smoothly. They also subsequently help or organize field programmes and are contact persons between beneficiaries and SEU via the Panchayat.

7) The 7th step invoices the basic technical aspects being informed and shown to the beneficiaries during the stages of the construction by the supervisor and even at times the masons. During all parts of the construction it is seen to be best to involve the beneficiaries

as much as possible; to carry material, mix cement, cure concrete and cement work etc. They get, through such involvements, a feeling of having constructed their own latrines with our help (and not the other way round) besides getting familiar with the construction and different parts.

8) The stage of supervision of work generally in done by the beneficiaries and local implementation committees. Technical and quality supervision is undertaken by the technical personnel. Partner agencies involved schemes are greatly wanting in this aspect and seem to suffer more technical snags than in others. They are more in a hurry to finish the work somehow. Whereas, if beneficiaries and local committees are involved the snags and shortcomings are pointed out earlier, enabling better correction possibilities during construction stage itself.

9) The next procedure is after construction and before use of latrines where beneficiaries are informed about the correct use, maintenance and other important health habits and practices needed to improve health conditions. Stress is laid on cleanliness, both personal and environmental.

These are undertaken best by the Health Services personnel, followed by the ICDS. Pictorial illustrations, instruction booklets and pamphlets are distributed as added incentives and as part of the health education, brushes are also given. The quality of classes held are very important. Class for class sake does more harm than good.

10) The last step is not less important than the earlier ones where evaluation and monitoring constitute an important aspect of the follow up studies and in fact could be considered extension work. This is undertaken by every field based personnel of all agencies/departments. Any problem is immediately conveyed to, or via the Ward Member, to the Panchayat Committee. This network indicates any shortcomings, faults etc. which can be corrected, and taken care of in subsequent activities.

Presently fortnightly visits, then monthly and quarterly visits are made to each beneficiary household. These visits afford opportunities to the beneficiaries to raise any problem, ask for help and provide valuable feedback about the impact of the programme itself.

We have learnt many lessons from our programmes.

The positive aspects of SEU implementation are all there for this audience to judge.

The negative aspects pose important questions and points to essentially a need to change our own attitudes and approaches to these problems.

a) SEU experiences show clearly the inverse proportion of community participation and involvement, with physical targets achievement. Where can one draw an ideal balance? Both cannot be sacrificed. The involvement of community need time and manpower. How are these problems to be tackled when we are constantly being dinned and questioned about how many done so far. Are we prepared to start asking instead how well have these been done.

b) The technology used here, i.e twin pit pour flush latrines, have limitations in waterlogged and coastal areas, and congested habitations where space is an acute problem. Such places are very common in the Kerala context but unfortunately there is little or no solution presently known for this. Community latrines are not acceptable to people here and lessons learnt from the experiences of other agencies are that it creates more problems than solving any.

c) We have experienced surprised reactions from Govt. personnel to our programmes but there still persists a lack of Government interest and will to do their might for this programme - e.g in the allocation of funds, acquisition of levy cement, steel bars, aluminium alloy sheets, etc. How can officials be got to take this very badly needed interest. The neglect and non-importance ascribed to sanitation and related aspects by the Health Department and Panchayats is a sorry result of both circumstances and apathy. What can be done to get these very important departments sufficiently interested in the sanitation programmes, about how badly needed this is and to convince them about the workability of such a programme. The SEU has shown a way, of course not perfect. Can we improve on this? We invite your suggestions.

d) The political factor and underplays, which besides creating tensions and unpleasantness, lends to beneficiaries and people loosing faith in and good will towards our programme. The SEU has for a better part been able to withstand this. But can anything be done to negate this factor completely, especially in Government sponsored programmes. Of the many suggestions we receive is the constant one of perhaps undertaking a motivation and awareness campaign for politicians and politically motivated persons! A people's programme should be divorced from unfair politics. Are we prepared to do this and again is there the will to do it?

e) The next negative lesson is the absolute lack of coordination among various agencies who are doing the same thing, and those whose activities should be planned and coordinated together. It seems that it is a loss of status to even admit that another agency

is doing the same thing or to ask for help. Why? Wouldn't it be more sensible to pool our efforts, time and energy to achieve the same goals?

The SEU has made a start to bring all the relevant agencies on a common platform at the District and Panchayat levels but we certainly could do with more support, initiative and action. An often met with response to a need situation is, there never is any problem, everything will be done but in reality little is done, and that too with much prodding and efforts on our part.

Finally, the biggest lessons is that only a people based and oriented programme, not only in words but in deed can be of any success and merit. People are important, and considering them should have precedence over the assets provided. The community is our target not the scheme as such. Community participation cannot be achieved by any single agency, it is not the prerogative of any one department. To sum up, it is the efforts of all and the duty of everyone, including the community also, that is needed in a programme such as this. This is the strongest lesson SEU has learnt and, the best too.

5) A network must be established for an efficient feedback of situations in the field at every stage, not only of the construction but also for subsequent follow ups. One of the suggestions is to set up a Panchayat level committee, with representatives of all relevant agencies at that Panchayat. The progress and quality of the programme, the needs and changes required should be discussed at the committee meetings that are held at the Panchayats one works with.

In a short summary the following can be suggested as broad recommendations.

1) The communities must be made aware about the need and importance of the programme. This need an intensive campaign through all media and agencies present. The messages must be few, but clear and simple.

2) Inform the community and local agencies about our programme, the main objectives and how it is proposed to be done. Most important of all, invite their suggestions and contribution of ideas. Many valuable suggestions have been received thus.

3) Involve beneficiaries in all stages especially for physical labour, arranging for material purchase and local distribution, local labour, arranging meetings and other programmes. It is felt that they should be involved even for the evaluation and monitoring aspects.

4) Use the best of the existing local networks - at times more than one may be necessary, for the execution of each of the stages. For e.g the Panchayats, Health and Social Welfare personnel are best able to identify needy areas and beneficiaries, and to suggest the kind of interventions required.

Health and ICDS personnel are suitable resource persons to impart health education and information.

Local Youth Clubs, Mahila Samajams and Voluntary Agencies and Ward Members are good organizers for classes and other programmes.

Evaluation and monitoring work as well as reporting can be done by all these agencies systematically.

The hardware aspect is best dealt with a combination of the KWA, Panchayats, Local Voluntary Organizations and Socio-Economic Unit.

Thank you.

PARTICIPATION OF THE PEOPLE AND ORGANISATIONAL ALTERNATIVES IN RURAL SANITATION PROGRAMMES IN KERALA

T.A.Varghese *

Introduction

Participation, to be meaningful and effective, needs active involvement. Participation of the people thus means their active involvement atleast in the following 'stages' of a \programme:

- setting the priorities;
- selection of the target group;
- design of the methods of implementation; and
- selection of, and finding the resources required to attainment the objectives.

A discussion of the above vis-a-vis different organisational alternatives will be presented later. To start with, participation of the people in setting the priorities and selection of the target group is discussed, in general, in sanitation programmes.

(i) Setting the priorities

People have a list of priorities- housing, food, production, employment, water, sanitation, medical facilities, transport, and so on. While setting these priorities, in the order of importance, a few questions are raised:

-Who sets the priorities of the people?
The people themselves or others?
Or both together?

Setting priorities of the community is not easy. For, even in a household each member may have a separate list of priorities. For example, often latrines or drinking water may not appear on the list of men, while women may put these on top of their list.

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* Member, PASSS (an NGO participating in the Rural Sanitation Programme with SEU, people and Panchayat).

An illustration to verify the above observation: The author asked a group of men and women of the same locality, separately to list out the problems they faced in dairying. The lists of the groups, in the order of importance, are given below:

Women	Men
Collection of water for cattle	Procurement of Feed
Fodder collection	Marketing of milk
Procurement of feed	Collection of fodder
Marketing of milk	Breeding facilities

In the above community, fodder and water were mainly collected by women. Since men did not participate in these activities of the household they have not given them importance. It will be interesting to ask now:

- can active involvement of all members (of the household/community) be expected in a programme not in conformity with their list of priorities?

Since it is not feasible to set priorities of all members of the community for selecting the most important one for implementation, the services of experts who have first hand of a prior knowledge of the problems are sought. This arrangement seems alright. So far it works well. Nevertheless, it will still be interesting to ask:

- If the priorities are already set by 'others' and Participation of the people is sought only for subsequent 'stages', can active participation of the people be expected?

Now, how important are latrines according to the people? Do they think it unnecessary and wasteful? Or do they think it less important compared to housing or some other facilities? Or do they consider it a method of curtailing their freedom to move around? All these questions are important while discussing participation of the people. As an example few villagers are introduced below to get an idea of their perceptions of the need for latrine.

Let's first take the case of a mother and child. The child is only 4 years old, not yet able to use the latrine herself. Mere the child's using the latrine involves the following sequence of events:

- Child runs to the mother, from the place of play, reporting the need;
- mother abruptly stops her activity;

- mother helps the child undress;
- mother takes the child to the latrine, opens the door and helps the child in;
- mother collects water;
- child cries for mother's company, feeling lonely in the latrine;
- mother washes the child, cleans the latrine and washes her own hands with the remaining water;
- mother dress the child; and
- mother closes the door of the latrine and returns to her work.

(The author is not attempting here any family planning propaganda).

Mother returns to her activity and, if it in the kitchen, finds that either one or several of the following has happened during the period of her absence:

- rice/tapioca/fish has got over cooked;
- the fire in the kitchen place has got extinguished/spread out;
- the cat/dog/hen has entered the kitchen and upset the arrangements;
- the elder children have started crying, demanding breakfast before leaving for school;

One can go on adding to this list.

Suppose the child uses the traditional method, ie open space, for the purpose. The child feels less dependent on his/her mother. The mother feels less disturbed in her activities (for in this situation the mother's work involves only in calling the child to the place of water, washing him/her and cleaning her hands). If the child uses the open space outside the house, the mother can tell her to wait there. But it is very difficult to force a child to wait in the latrine. Perhaps a few colour chalks and a blackboard in the latrine may change the child's attitude! But then the costs may go up.

Now take the case of an agricultural worker. He/she generally does not return home to use his/her own latrine, even if one is available at home, since it involves stopping the work for a longer period, which may affect wages and employment. Therefore, traditional methods and facilities are used.

For a farmer, working in his farm away from home/latrine, using his own latrine involves loss of time. Moreover, he has the feeling of directly manuring his own farm at no extra cost!

Children, of 6-16 years old, belonging to normal farm households, spent a lot of their time in collecting fodder and fuel, and also engage in a number of other activities - collecting cashew nuts, harvesting seasonal crops, looking after cattle/goats etc. Most of these activities keep them away from homes/latrines. Running home from the place of occupation to meet the requirement will involve stopping the work. It may also be risky, depending on the urgency of the need and the distance to be covered.

Children, even without any work, also use the opportunity to get out of the direct control of the parents for a while. They enjoy the freedom of 10 or 15 minutes out in the field. It will be very difficult to make them enjoy that freedom in the latrine instead.

Housewives, with heavy work at home, may see the traditional methods/facilities as their only way of relaxing, away from the work and noisy surroundings of the household. The stars in the sky, the gentle breeze and the calm surroundings all add to their comfort, and refresh them for the next item of activities. It may be difficult to provide these facilities in a latrine, even if it is of high-cost and roof-less.

Couples in joint families may have other reasons for not using latrines. Getting out of the house for the purpose, is an important opportunity for communication. It may not be practical or advisable to ask them to move into the latrine to communicate with each other!

A traveller may also find the traditional methods more suitable, particularly if he is using his own feet. Though he can easily find many places to get a drink in Kerala (and some at Government's own arrangements) it will be very difficult to find a latrine for public use (even if he has the habit of using only latrines)

The Cases presented in the previous pages may not be representative enough. But the attempt was to simply show that preceptions of people, even in a small community, can be different. This, in turn, will affect their acceptance of and participation in the programme.

We may also consider the topographical characteristics and settlement patterns in Kerala:

- Most of the villages in Kerala are in the mid-land and highland regions, with undulating hills and valleys, wetland and small streams;
- Distribution of land is unequal, but midland and highland households have relatively larger holdings, on the average;
- The settlement pattern is scattered, most house having an area of land surrounding them;

- Dryland is covered by dense growth of seasonal / perennial crops; and
- Natural water points/ sources are abundant, at least during the monsoon seasons.

The above characteristics can affect community's behaviour and approach towards sanitation - disposal of wastes, drainage, use of latrines, etc. People often think they can manage without a latrine.

The People's acceptance of life without latrines or other facilities for disposal of wastes, is also related to other facilities available to them, ie their general standard of living. For a family living in a small hut, the immediate requirement is a better house. To them a latrine is of secondary importance. On the other hand, for somebody having a pucca house, a latrine may be important.

Another important point to note is the time and spatial dimensions involved. A latrine is at a particular place. People move around and their need for the latrine arises at different times. Both may not coincide, and this puts restrictions on the use of latrine. This is evident in the cases presented in the previous pages.

Now, who needs a latrine? We can immediately point the city dweller. His/her kingdom of 'ten cents and house', with or without compound walls, is not suitable, or advisable for use as a traditional facility in place of a latrine. For if he/she tries to do what the villagers do, he/she might be put behind the bars-in a prison or mental hospital!

But can we dismiss the sanitation programme with that? Can we allow the villagers to escape like that ? Can we let them continue the practises they have been following right from the beginning of humanity, all through the ages? So let's intervene, strongly, with all available equipments.

Now, let's imagine a gathering, consisting of an economist, a sociologist, an administrator, 2 environmentalists, a health expert, a psychologist, a politician, and an engineer got together to perceive a latrine programme for the villagers. It will be interesting to imagine their perceptions of the problem/programme.

Economist : Kerala has 50 lakh houses but only 8 lakh latrines. Thus another 42 lakh latrines are required urgently. This will involve an expenditure of Rs.7560 million at constant prices (at the rate of Rs. 1800 per latrine). But it will generate 105 million man-days of employment; 42 million mandays directly in construction of latrines and the remaining 63 million indirectly.

Latrines will definitely improve the health status of the population. Our position vis-a-vis other developing countries will be further improved in this respect.

Sociologist : The number of latrines per head is an important indicator of the socio-economic position of a country. I am happy to note that there are a few countries lagging behind us in this respect. But our position is nothing compared to the developed countries.

A latrine has other social dimensions. Our negligence of sanitation programmes can be related to our negligence of women and their needs, an indication of the sexual discrimination prevalent in our society. We must give a very active part to women in all programmes relating to rural sanitation, right from the beginning.

Administrator : 42 lakh latrines means Rs. 7560 million. To effectively spent the amount and supervise the programme there should a central office with necessary staff, telephones, cars, furnitures, computers, and related facilities. Since it is a popular programme there should be 4200 branch offices, one office for every 1000 latrines. Since monitoring and evaluation of the use of latrines are also important, there should be a follow-up programme. Better to retain the same senior staff for the purpose since they are experienced.

Implementation of the programme can be left to the branch offices, to be controlled by the central office. Actual construction of the latrines may be left with the 'contractors'. The maximum margin of profit allowed can be decided later.

Politician : One has to really find out whether 42 lakhs are necessary at present. But we have to give more importance to the 'weaker sections'. We should be consulted at all stages of the programme. Selection of the 'beneficiaries' should be left with our party leaders at the local level, since it is a popular programme. 'People's Committees', if needed, should be led by one of our people.

We will discuss separately the issue of whether a separate Ministry for Sanitation will help implementation of the programme better. For the moment the present arrangement is alright.

But one more thing. There should be separate inauguration and completion meetings. All our leaders from within and neighbouring villages should be invited and given proper positions at the meeting.

Environmentalist (A) : Providing latrines and implementing other sanitation programmes are an important method of cleaning the environment. Proper disposal of wastes should be made basic to all environmental programmes. People should be educated, preferably through the methods and languages of their own, on all aspects of the programme.

(B) : There are many more national and international issues, requiring our urgent attention. Don't try to divert the attention of people from these fundamental issues by providing/promising latrines. A priori we must agree that latrines are alien to our culture, environment and tradition. Anyway, let's have a proper and scientific study on all aspects of the programme, to start with.

Health Expert : There are many diseases already known/provided to be caused by insufficient sanitation facilities. The number of diseases may even go up. Studies are going on all over the world. But the point is that most of the already known diseases are prevalent in Kerala.

We should not, in fact, limit the programme to latrine only. Other aspect of sanitation are equally important. People should be taught right from the beginning. First let's start with children and schools.

We are often proud that our status of health is better compared to other States in India and some of the developing countries. But it is only one side of the story. More hospitals/hospital beds and medical workers also show that there more ill users and unhealthy persons. Otherwise how can the hospitals survive?

Psychologist : It will be extremely difficult to change the old practises of the villagers, without changing their environment, their outlook and approach. Sudden changes in practises can lead to serious imbalances. Thus by aiming for better physical health we may be contributing to deterioration in mental health.

So let's slowly make the latrine acceptable too the people themselves first. It may take perhaps generations. But don't be in a hurry. Traditions should be allowed to die only slowly.

Let's take the example of a child, who used to move around, before the latrine came. Now the mother insists, with a stick in her hand: "Come on, get inside and move out only after everything is over". Nobody knows for how long the child will have to sit inside the latrine. For fear overtakes the sense of need. So let's move slowly.

Engineer : 42 lakh latrines can be provided. But there are some questions. Firstly all these latrines require water. The present system of water supply is not adequate to meet the increased demand. So we must think about supplying piped water to all these 42 lakh latrines. This can easily be done. We have around 50 bag rivers. Hundreds of small rivers and streams. None of the villages is more than 25 kms. away from a stream/river. So let's have dams, pipes and water taps. There is also the issue of technology to be used in construction of latrines. Latrines should be compatible with our buildings. Most of our buildings are built using conventional methods. Thus low-cost latrines may not be acceptable to people. Or we may have to start a massive low-cost housing programme also for the sake of compatibility.

Another point is the location of latrines. Latrine pits can contaminate ground water. This problem can be overcome by having tapped water. Still it would be better to examine location of each pit, since there are difference in ground water levels, nature of soil etc.

It would be helpful to have an organisation/arrangement for mass production of the materials required for latrine construction-like bricks, roofing materials, and closets, to ensure quality of the materials. If not, all materials should be purchased only after the quality has been tested by us.

The above 'perceptions' may or may not be closer to the 'real' ones in each case. But they are given to show (a) the differences among the experts/ administrators involved in implementation of a programme, in their perceptions; and (b) how these 'perceptions' differ from those of the villagers, ie the target groups.

Participation of the people is related to their 'perceptions'. Since perceptions differ, participation can also be different. Not, need individual perceptions and priorities of the people be given importance in assessing the importance of a common programme like sanitation? And can one get a correct picture of a social/common problem by mere aggregation of the individual perceptions and priorities? Let's ask a question:

- Is boarding a bus to participate in a procession-cum-meeting in a distant city or burying the dead dog lying in the street more important to a group of people?

It can reasonably assumed that the dog will wait there for the group to come back after the meeting. (Let's pray for no more coincidences!). Here, do we think that an effort is required in re-setting the priorities of the community as a whole?

(ii) Selection of the Target Group:

The target group of a programme can be the community as a whole or only a section of it. If it is the later, there arise a few more questions:

- Who selects the target group?
  And on what criteria?

Suppose the selection of the target group is on the basis of clear and well-defined/ known criteria, there can still be conflicts between the selected and the rejected groups. One can assume and often agree that conflicts are inherent in any action programme. Still the following questions remains relevant:

- Is it desirable to leave out a section of the community completely from a programme like sanitation?

There may be general agreement that sanitation has an environmental or social dimension and that the full 'benefit' of the programme can be achieved only if there is participation by all members of the community. Therefore, it is also necessary to ensure, somehow, participation of the stronger and 'ineligible' groups also in the sanitation programme.

While discussing the rural sanitation programme of the selected Panchayats under the SEU programme, and participation of the people in the programme, it would be tempting to ask another question:

- Does selection of the Panchayats in the SEU programme involve a proper assessment of the needs and priorities of the communities concerned?

The participation of the communities showed differences across the Panchayats, judged by the number of 'targets' achieved. These can not only be attributed to different organisational arrangements but also to differences in socio-economic conditions and priorities of the communities.

People's Participation and Organisational Alternatives

For the SEU's sanitation programme in Kerala, the following organisational alternatives may be envisaged:

- Government
- Panchayats
- Non-Governmental Organisations
- Private Sector.

Roles of Government and Private Sector are not discussed here. We are confined to a brief examination of the roles of Panchayats and Non-Governmental Organisations in ensuring active participation of the community in th sanitation programme.

(i) Panchayats:

Panchayats are often found to be better placed to ensure active participation of the community in rural sanitation programmes for the following reasons:

- Panchayats may be more aware of the local situation - Socio-economic conditions and priorities of the people, availability and methods of getting the resources required to meet the priorities, etc;
- Panchayat Committees are elected by the people and therefore responsible to and dependent on the people;
- Panchayats may be the only readily available 'infrastructure' at the local level for implementing the programmes; and
- Panchayats can have a longer presence in the community.

Thus, in most localities in Kerala, Panchayats are better placed in implementing the sanitation programmes. However, Panchayats are also found to have the following limitations generally:

- Procedural/Bureaucratic controls;

- Political Affiliations/Interference;

- Lack of persons with proper outlook, approaches and the ability to implement the programmes; and

- Lack of experience in implementing the programmes with active involvement of the community.

A brief discussion on the above limitations are attempted below.

- Procedural/Bureaucratic Controls:

Though Panchayats have many advantages in implementing programmes with the active participation of the community and in understanding the local needs and priorities of the people, one of its important limitations is that it is part of a general system. In other words, its actions are controled by a general set of procedure applicable to the State as a whole. This limits its freedom in solving local problems using locally suitable and appropriate methods.

From the points of view of the people, there may not be any appreciable difference between a Panchayat office and a Government Office. They approach the officials in the Panchayat to something done, just as they go to any other government office. The feeling and reality that it is part of a general system, without much freedom of its own, make the Panchayat itself be perceived as another office of the State at the local level.

Thus changes are required in the existing system to make the Panchayats more effective and acceptable to the people in implementing programmes with their active participation. The following changes may be considered now:

- Changes in the existing procedures and controls;

- changes in approach of the Government towards the Panchayat;

- more changes in the approach of the Panchayats towards the people; and

- more importantly, changes in the approach of the people towards the Panchayats.

All these changes are inter-related.

- **Political Affiliations / Interferences.**

Panchayats are also influenced directly by policies of larger political organisations because representatives of the Panchayat Committees are generally elected on the basis of political affiliations and directives. Local priorities and the ability of the candidates to solve them with active participation of the people may often get only secondary importance. Linkage between political organisations and PanchayatCommittees raises another question

- Can Panchayats be effective in ensuring participation of the people, if there areconflicts between local priorities and general policies of the political organisations?

Even if there are no such conflicts, implementation fo the programmes through Panchayats may allow political organisations to convert the programmes to strengthen their bases and power at the local level. Political organisations are often accused of taking credit for programmes, (only of those found beneficial to the people), even if their roles in different stages of the implementation of the programme are minor. For example, it will be interesting to see the political organisations trying and succeeding in turning the "latrines" into "votes" by taking credit for all the activities done by some body else.

The composition of the Panchayat Committee is also very important irrespective of its political affiliations. Generally, members of the Panchayat Committee are "senior" members of the political organisations they represent at the local levels. This seniority is based on different critieria prevailing in different political organisations. Often, the President of the Panchayat of the Panchayat Committee may be the most "senior" among the local leaders of the major organisation. He/She may be closer to the higher leaders of the organisation and to the seats of power. This may result in making the Panchayat President authoritarian and arrogant, which if combined with ignorance, will prove to be the most important hurdle in implementing the programme. Here, "awareness' creation may have to be started first with the Panchayat Committee itself before trying for people's participation.

Even if the Panchayat Committee comprises and knowledgeable persons, willing to fully co-operate with the programmes, gradually there may be a shift in their attitudes as the programmes near completion. They may show a paternalistic approach towards the beneficiaries of the programme, which in the final analysis, will be against the spirit of participation.

Now, the roles of the elected representatives of the Panchayat Committee in ensuring participation of the community may get less effective, if they are supported by, or

considered as leaders of, only a section of the community. This section may be a political, religious or caste group. It will be very difficult for the representatives to rise above these considerations, at the local levels.

If the Panchayat Committee/Member is supported by the socially and economically weaker sections, who would become 'beneficiaries' of the programme the participation rate can be higher and more effective. Here, the programmes can be implemented more 'smoothly'. However, it is generally found that support of the socially and economically weaker sections may also get distributed among different political organisations. In other words, though political organisations are generally known for their support bases among different socio-economic groups, at present the divisions/polarisations may not be very clear or neat, at the local levels. This results in the participation of people with the same socio-economic status, but different political affiliations, as target groups in the programme. Now the question is :

- Can the Panchayat Committee, ruled by representatives of the major political organisation(s), ensure active participation of all members of the target group having different political affiliations;

Generally, the numbers of known supporters of an elected representative of the Panchayat Committee and the target group may be more or less equal - about one-third of the total. This results, in the absence of any polarisation, inclusion of supporters of other candidates/political organisations in a common programme. It will be very difficult for the Panchayat Committee, under the circumstances, to strictly observe the objective criteria for selection of the target group due to pressures from both within and outside the village. Dilution of the objective criteria for selection may adversely affect participation.

Lack of personnel/Experience :

In addition to bureaucratic and political controls and interferences, Panchayats also do not have technically qualified and capable persons of their own to undertake the rural sanitation programmes. As such, they often implement programmes through 'contractors'.

The sole objectives of the contractor is to make profits. This will result in, for example, in the case of a latrine construction programme.

- use of low quality materials@

- use of technically less qualified/capable workers;

- low quality of workmanship, more concerned with completion of the work at the earliest;

- no communication with the community in general, and the beneficiaries in particular;

- no scope for participation of the community and the 'beneficiaries' in the programme@

- higher costs due to addition of profit margin;

- no 'follow-up' activities; and

- conflicts among the Panchayat Committee on various issues involved in the 'contract system'.

Participation is possible only if there is trust among the participants. Trust is possible only if there is proper communication. In the case of, for example again a latrine programme, there should be proper communication among the participants atleast about the following :

- Criteria adopted for selection of target group;
- materials to be used in construction of latrines;
- specifications of the latrines @
- labour employed/requirement in construction of latrines;
- details of contributions to be made;
- details of cost of construction; and
- follow-up programmes required, if any.

The present structure and system of operation of the Panchayats, especially in implementation of development programmes, make them less respective and appreciative of the activities of the Non-Governmental Organisations. Here it is interesting to ask:

- If the Panchayats are given the choice of employing the 'contractors' or collaborating with a non-governmental organisation not inerested in profits, in implementation of a programme, who will be selected ?

It may be reasonable to think that most Panchayats will select only the profit seeking/making contractors ! It may be interesting to ask why?

(ii) Non-Governmental Organisations (NGOs)

Non-Governmental organisations are different from one another in terms of their size, contact with people, commitment, internal structure, approach etc. These can contribute to their advantages as well as weaknesses.

Advantages of NGOs.

- NGOs have the following advantages in ensuring active participation of the people in any programme:

- Often they are very small, or can have small units of their own, in different localities;

- they are closer to local conditions - priorities of people, their responses, etc - which help them communicate better with the people;

- workers in NGOs can be more committed, they are not guided by bureaucratic controls;

- they can design and implement programmes exclusively for certain sections of the society in a better way compared to Government/Panchayat organisations:

- they can make adjustments better - depending on the responses/ feed back from the community - and quicker;

Let's have a brief discussion on the NGOs in Kerala in respect of the above.

- Women's Organisations - Mahila samajam;
- Organisations of the Gandhian approach;
- Organisations dominated by religious groups;
- Others;

Mahila Samajams are spread out all over Kerala. Mostly they function with Government funds. Again, most of these organisations are involved in activities relating to women and children - feeding programmes, training programmes for women, etc. There are differences among them in terms of - size, ability to implement programmes, rapport with people, rapport with Government, internal structure etc.

Mahila Samajams can play a very important role in sanitation programmes in Kerala for the following reasons:

- they are spread out all over the State;
- they are women's organisations - mostly dominated by women-and engage in activities for women & children; and
- most of them have their own buildings, staff and experience in working in a particular locality for years;

The activities, which can be undertaken, by these Mahila Samajams in the sanitation programme depend on their characteristics as an NGO mentioned in the previous page. However, it can be assumed that they can mostly collaborate in awareness building, communication, and related programmes. Some of them have acquired the ability for physical implementation of the programmes too.

However, Mahila Samajams, have certain weaknesses. Important among them are:

- they may be less receptive to changes;
- they may be dominated by a few people/group; and
- they may lack adequate facilities/staff for implementation of the programmes;

But once we agree that sanitation is an important topic deserving the attention and concerted efforts of all, Mahila Samajams can also play/be given certain roles.

Gandhian Organisations are generally known to be pioneers of the sanitation programmes in India. However, in Kerala, they are not numerous. They are not able to attract the younger elements of the society. They are generally dominated by 'seniors', who can be less receptive to changes/new ideas. Their acceptance among the community also depends on the acceptance of Gandhism as such by the people. However, as in the case of Mahila Samajams, their services can also be accepted/sought in the sanitation programme.

NGOs dominated by religious groups are at present the most powerful in Kerala. They have the following advantages.

- better infrastructure facilities;
- more qualified staff;
- established links with funding organisation, especially outside the country;
- backing of certain communities/interests/groups; and
- strong links with Government/Non-government organisations both within and outside the State.

These religious are mostly of two types: (a) supporting and supported by the 'hierarchy' (of the religion) and (b) those opposing and opposed by the 'hierarchy'.

The second group is claimed to be more 'progressive' compared to the first. But to a commoner both may be close and dogmatic organisations and involvement in their decision making process may not be open to others.

The religious NGOs have been showing a shift in their approach. They now engage more in action programmes and less in charity. Thus there may be greater scope for participation of the people. But even in action programmes involving people, their active participation in different stages of the programme, is minimum. People are not allowed to participate in the development 'process' right from the beginning. Instead they are treated as 'beneficiaries.'

The 'secular' approach, if any, of these religious organisations is confined to including some members of another religion as 'beneficiaries' in the programme. This is especially the practise in the case of programmes funded by the Government. The hold over the organisation will never be allowed to pass on to other groups.

Religious NGOs may, therefore, be not in a position to ensure active participation of all members of the community. However, since they have better infrastructural facilities and qualified personnel, they may also be included in sanitation programmes, especially in awareness-building activities.

- **Other NGOs** are mostly secular in outlook and are becoming dominant. Unlike the other three types, they are not a homogenous group. They differ in size, availability of technically qualified manpower, approach, perception, links with NGOs within and outside the country, sources of funding and contact with funding organisations, rapport with the Government, rapport with the people/sections of the people, internal structure etc.

Generally, these organisations are found to have the following constraints:

- they may not have qualified hands, competent personnel due to low salary structure, recruitment policies, etc.;

- they may not be able to continue programmes due to inadequate support for funding organisations;

- they may get personalised and paternalistic, with one or a few individuals dominating; and

- they may get influenced by funding organisations, either Government or non-Government, Indian or Foreign.

Thus, the ability and success of these NGOs in ensuring active participation of the people in sanitation programmes differ from organisation to organisation.

Since the NGOs are playing an important role in development activities in Kerala, SEU may consider collaborating with some of the selected ones, in implementation of the sanitation programme, to start with. These organisations may require collaboration of the SEU especially in -

- equipping themselves with qualified manpower, who have the correct approach towards people's participation;
- ensuring relatively continuous collaboration for a specified period;
- making them aware of various issues involved in sanitation.
- helping them maintaining their independence in an effort to make them more aware of the local priorities of the people and the prevailing socio-economic conditions and relationships.

Conclusions

The following observations may be made on the basis of the discussion/arguments made in this paper:

- the active participation of the people is essential in sanitation programmes;
- the participation of the community is closely related to its perceptions and awareness of the problem/programme;
- the success of an organisation in collaborating with the community is dependent on the rapport between the two;
- though Panchayats have many 'advantages', their 'weaknesses' and 'constraints' may prove to be more crucial in their efforts/ability to ensure people's participation;
- NGOs are not a homogenous group, and therefore they may not be equally successful in participatory programmes with the people;
- finally it mays still be too early to arrive at 'conclusions' and the efforts for understanding various aspects of sanitation programmes should be continued.

SANITATION PROGRAMME - CHINNALAPATTI (TAMIL NADU)

Experiences and Findings

V. KANDASAMY
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This project represents a pioneering attempt to demonstrate a Sanitation Programme in rural area. This project activities are construction, maintenance and evaluation of community latrines with bath facilities, improved waste water disposal through upgraded maintenance of drains at various levels and provision of oxidation pond/sullage farm, improved refuse collection and disposal and health education related to latrine usage, waste water disposal, personal hygiene and refuse collection and disposal.

This project envisages the improvement of sanitation in a big village having 25,000 population with reference to disposal of waste backed up by systematic programme of health education to ensure the participation of community for acceptance and use of the facilities on the one hand and assuming responsibility for the future maintenance on the other.

This Project was conducted from 1982 to 1987 with financial assistance from International Development Research Centre, Canada. The objective was to study the impact of Community toilets, upgraded drainage with oxidation pond/sullage farm, improved refuse collection disposal and health education with special reference to faecal borne diseases and skin diseases, in a rural community.

The methodology of the project implementation has the following components :

a) Evolving a comprehensive plan of action

b) Formation of Area Sanitation Committees and specification of their functions.

c) Deciding on the financing pattern and maintenance of accounts.

d) Functional or operational aspects of the implementation including selection of sites, procuring of lands for construction, construction, construction of toilets and

bath-houses, water supply, mode of utilisation, maintenance, technical coordination and refuse disposal system.

e) Health Education through Project staff, Community Leaders, mothers and youth leaders and trainees.

f) Evaluation of action implementation and its impact on morbidity and mortality patterns.

In this programme Sanitary facilities were provided with 10 toilet complexes having 160 latrine seats 40 bathrooms with washing facilities. Each complex is provided with a compound, well with electric motor and pump and water storage tank. Residence of the sanitary workers also included in this structure. Provision of 150 dustbins and one rubbish cart, construction of drainage were the other facilities provided in this scheme.

COMMUNITY PARTICIPATION

Achievement of the objectives of any public project is possible only if there is community participation at all levels. According to WHO, "Community participation entails the creation of opportunities that enable all the members of a community and a larger society to actively contribute to influence, the developmental process and to share equitably in the fruits of development.
Ultimately it leads in :

1) contributing to the development efforts
2) sharing equitably in the benefits and
3) decision making in respect of stated goals and;
4) formulating policies and planning and implementing".

This project itself was designed in such a manner that it facilitated community participation at all levels and encouraged the community towards self-reliance and self-help.

Experiences have shown that health programmes often have poor acceptance among the people. They are always given less improtance by the community rather than community acts as passive receiver in accepting and practicing health behaviour. The assistance in terms of men, money and meterials is usually put froth by the provider. But a developing country like India cannot afford to provide everything to the community in programme like sanitation and personal hygiene etc., Only self-help and self-reliance can

make the community improve the health status. In this study one of the objectives is that the community should be able to maintain the latrine units by themselves through the community representatives and become self-sustaining even after the completion of the Project.

Mobilization of Health Resources and Alternative resources

According to a WHO document, among all other resources the human resource is the untapped resource. Hence, this project aimed at mobilization of resources in terms of man, money and materials for the people's own health development. The available health resource within the community like services of the existing Primary Health Centre and of sub-centres were made available for this project. Alternative resources like the local medical practitioners, existing social organisations such as the Devanga Narpani Mandram and other Caste organisations were all made participants in the project. Resource like land for unit constructions was provided to the project through community contribution in each unit. The available health resources in the Institute like laboratory, library, media and external agencies which included public health laboratory, National Environmental Engineering Research Institute (NEERI) and Anna University at Madras were also utilised to the possible extent in the implementation of the project.

The managerial aspect of the supervision of construction, maintenance of sanitation facilities were mainly done by the community itself. The functioning of the toilet units were independently managed by the people of the particular area through their area committees. 10 such committees were taking care of the management of the units. Appointment of the workers, supervision, financial management, and attending to repair work were some of the responsibilities of these committees. Since they were available very close to the units, effective supervision was possible.

As stated earlier community participation is the only way to make the community assume responsibility for its own health and the community becomes active and is no longer a passive beneficiary. This study has demonstrated the self-health care concept. The leaders were able to appreciate the situation, identify the problem, attempt solution through appropriate decision making process with the help of project officials. This paved the way for better motivational efforts, improved communication among the beneficiaries and sharing of responsibilities by all individuals due to the increased awareness created by health education and providing sanitary facilities.

This study provided all opprotunities for the community to play an important role in decision making process. Eventhough the study covers a limited population, the leaders

of the village who represented the action committee were involved in planning and construction of units, education, evalution maintenance and follow-up.

Action Committee

The action committee constituted members from Devangar Narpani Mandram (Youth committee), Executive Officer of town panchayat, sanitary inspector, Medical Officer of Primary Health Centre, Chinnalapatti. The functions of the committees are as follows:

- Selection of sites for construction of units and their procurement.
- Assisting the project staff in formation of area committee.
- Assisting the project staff in conducting educational activities.
- Guiding the area committees in maintenance of units and follow-up.

Area Sanitation Committees

The area Sanitation Committees have been constituted by utilising the existing infrastructure. At present the village has street-wise/area-wise caste committees for the celebration of festivals and other religious activities. These committees were reconstituted to form 10 area Sanitation Committees.

The functions of these committees are as follows:

- Providing free lands for construction of units of their purchase by them.
- Construction of units.
- Collection of money from all individual families.
- Maintenance of the units.
- Participation in educational activities.
- Helping the project staff in all other activities.

INTERSECTORAL CO-ORDINATION

One reason for the successful functioning of this project is the intersectoral co-ordination between the Institute and other agencies like Khadi and Village Industries Commission (KVIC), Town Panchayat, Kasturba Hospital, Primary Health Centre etc., KVIC has supplied four bio-gas plants at subsidised rates for two units. The Executive Officer of the Town Panchayat is a member of the Action Committee. The Town Panchayat was involved in giving technical advice for construction of toilets, drainage and maintenance. Data on faecal-borne disease and skin diseases were collected from Kasturba Hospital and Primary Health Centre periodically by the Sanitary Inspector and statistician for the project area.

TRAINING OF COMMUNITY LEADERS/STAFF

Orientation programmes were conducted for the action committees members in the beginning of the study to discuss on following aspects:

1) Objectives of the study
2) Activities to be carried out
3) Methods - Strategy to be followed
4) Formation of area committees
5) Role of action committee and area committee
6) Sanitation information; and
7) Health Education programmes.

They were conducted again and again on several occasions. The action committee members participated in all the area sanitation committee meetings which were conducted separately in each locality.

The area Sanitation Committee members were oriented to the project objectives, activities, mobilization of resources, sanitary practices, their role in the project etc.

In addition to this orientation, 3 leaders' training camps representing approximately 100 men and women leaders from all streets were conducted at the Institute and the salient features of the project and their role were explained.

Training of Sanitary Staff

Sanitary staff working in the town panchayat numbering about 50 were given one-day training programme about the project, excreta disposal, sullage disposal, refuse disposal, personal hygiene, clean environment, use of public toilets etc., with the help of the Executive Officer and Sanitary Inspector of the town panchayat.

Training for toilet attendants

The selected toilet attendants (men and women) from all the units were trained for 2 days by the project sanitary inspector, on cleaning of latrine seats, bath rooms and the surroundings. They were also explained about collection and disposal of sullage water, development of banana/coconut garden, collection and disposal of rubbish inside the campus and personal hygiene practices.

The training was followed with on-the-spot guidance during the unit visits.

HEALTH EDUCATION

Health education is made as integral part of the total project. The responsibility of health education is a joint venture which is shared by all the project staff, Institute trainees, town panchayat officials, PHC staff and leaders of the village.

The 6 community organisers divided the whole village into 6 areas for health education activities. All the afternoons and one full day in a week was allotted for health education activities. They were helped by the project co-ordinators and project sanitary inspector in conducting mass level, group level, family level and individual level contacts. Educational aids like charts, filmstrips, pamphlets, leaflets and posters were prepared and used in the educational sessions.

MASS APPROACH

Mass educational activities were conducted to create awareness about the service facilities available in the project and for obtaining strong social support for the project activities. 26 film shows were conducted in different areas of the village on sanitation, personal hygiene etc., Slides are being projected in the two cinema houses about the facilities at community toilet units. 24 mass meetings were conducted to create awareness among the people on construction and maintenance of the units.

GROUP APPROACH

Both formal and informal group meetings/discussions were conducted in every week to reinforce and they were followed up by mass approach and individual contacts. Public gathering places like tea-shop, chavadi etc., were of the places for informal discussions. Houses of influential leaders are also utilised for conducting the meetings discussions. Importance was given in area where new constructions are being carried out. Streetwise group meetings were conducted in the area of units for social support and to use new units. Flash cards/flannel graphs charts were used to create commitment among the community. Need and importance, of using the units continuously, use of card/token system and problems related with maintenance were discussed. Area committee members were involved in group meetings and group discussion. Separate sessions were conducted for males and females.

INDIVIDUAL APPROACH

Home Visits

The project staff and trainees made home visits to discuss with the families regarding the usage and maintenance of units, keeping the homes clean, collection and disposal of refuse and keeping the drainage clean. Family members were requested to express their difficulties/inconveniances in using the bath rooms and latrines. Necessary clarifications are given to keep up their interest in using the facilities. Audio visual aids such as flash cards and charts are used to communicate effectively and to facilitate for easy understanding.

Audio Visual Aids

To make health education more meaningful and convincing, use of appropriate educational aids becomes important. The available health education aids at the Institute were utilised to the maximum. Films, leaflets on faecal borne diseases, personal hygiene were mobilized from the district public health officers. A film produced by IDRC on water contamination also was borrowed and used in the community. Aids like leaflets, folders, charts were prepared by the staff, trainees and media section were also used.

The following are the aids used for different methods of Education:

1) Mass method	- Public hoardings - Information board - Film shows - Slides in the cinema halls - Public meetings - Posters etc.
2) Group level	- Flash cards - Flannel graph - Specimens - Models - Demonstration - Booklets
3) Individual contact	- Picture cards - Specimens - Leaflets - Booklets.

HEALTH EDUCATION IMPACT

The baseline survey was conducted between 23-3-'83 and 21-6-'83 among 555 respondents selected on the basis of systematic sampling procedure to assess the knowledge, attitude and practice of utilising latrines and other personal hygiene methods.

The final evaluation survey was conducted between April and May, 1986 among 557 respondents selected on the basis of systematic sampling procedure to assess the knowledge, attitude and practice of utilising latrines and other personal hygiene methods.

The two survey findings are compared in this Chapter to know the changes that have occurred in the habits of personal hygiene and defecation places.

BOWELLING HABIT

Open field

From the Baseline survey it was found that 84%, 53% and 68% of males, females and children (respectively) had the habit of open field defecation. In the final evaluation survey it was found that only 35%, 30% and 49% of the males, females and children had this habit.

PUBLIC ENCLOSED PLACES AND OPEN DRAINAGE

In the Baseline survey, 17 percent of the males used public enclosed places for defecation and 0.2 per cent of them used open drainage, whereas in the final evaluation survey only 1.28 per cent of males used public enclosed places for defecation and it was 1.2 per cent in open drainage among females nearly 29 per cent and 0.40 per cent of them had the habits of defecation in public enclosed places and 1.23 per cent, open drainage. During final evaluation survey, only 1.15 per centage and 11.9 per centage of children had the habit of defection in public enclosed places and drainages respectively (Table 14).

PROJECT LATRINES

Since the latrines were not constructed during the period of baseline survey there was no one utilising project latrines. In the final evaluation survey, it was found that nearly 26% of males, 23% of females and 12% of children were utilising project latrines (Table 14)

REFUSE DISPOSAL

Maintenance

i) Frequent non-functioning of electric motors of the units due to various reasons such as inadequate training of attendants, fluctuations in the voltage of electricity.

ii) Inadequate water in shallow wells/borewells due to drought condition.

iii) High cost of electricity charges revised in par with commercial establishments.

(Reduction for electrical charges to 50% was made by the Institute by approaching Chairman, Tamilnadu Electricity Board through former Chief Secretary, Government of Tamil Nadu)

iv) Improper accounting of the attendants working in the units also affected the maintenance. (The Committee members corrected this practice by close supervision).

v) More expenditure was incurred since non-functioning of leach pit resulted in frequent emptying of contents of leach pit in some units. (Dispersion trench for 150 to 200 feet were provided later for the safe disposal of effluent).

vi) Non-willingness of the attendants to continue in the latrine units for longer time due to factors such as feeling of low status, low salary etc.,

vii) Non-payment of charges for usage by the relatives of the committe members also affect the income.

viii) The functioning of the units was disturbed by the activities of a few users such as removal of taps, bulbs etc., damaging buckets, latrine seats, doors etc., disposal of sanitary napkin and waste clothes in the latrine seats etc.,

ix) The misunderstanding among the committee members due to personal conflict or political ideologies also contributed for improper maintenance of the units.

x) Inspite of continuous education input, considerable number of families do not use the community latrines due to various factors such as non-affordability to pay the charges, nearness to the open field, availability of water in ponds very close to open field and frequent repair of motor pump etc.,

CONCLUSIONS AND RECOMMENDATIONS

1) Before starting the project in the village, only 24% of the population was utilising household latrines and no public toilets were available at that time. After implementation of this project, users of public toilets and household latrines have increased from 24% to 34%. The substantial increase in the usage of project latrines and household latrines is mainly attributed to the provision of public latrines with all facilities and intensive health education offered by the project co-ordinators and project staff.

2) It is found that there is improved adoption of personal hygiene among the population between baseline survey and final evaluation survey. For example, the habit of taking bath everyday among the people has increased from 76% to 79% between baseline survey and final evaluation survey. Similarly, 90% of the people had the habit of throwing the rubbish outside the house during baseline survey. After provision of dustbin with health education this habit has been changed considerably and most of them (nearly 70%) dispose the rubbish only in the dust bins.

3) Repair of motor pumps (jet motors) and water scarcity are the main problems impeding the successful functioning of toilet units. Care should be taken to instal powerful motors (other than jet motors and ensure adequate water for toilets and bathrooms).

4) The contruction cost for each sanitary toilet seat varies averaging from Rs. 3,698/- to Rs. 5,835/- It was less in the earlier construction than the recent constructions. Delay during construction also increase the cost of the unit. Supervision of project staff and area committee leaders helps to reduce the wastage resources. To reduce the cost still low, bulk purchase of materials and use of locally available materials are recommended.

5) Community involvement is found appreciable in the implementation of this project. They have donated the required land for the construction of project latrines the entire completion of construction work was done only by the community. Each unit is maintained by an area committee which is also looking after the income and expenditure of the unit. All the units are maintained self sufficient. The income from these units sufficient and paid as salary for the workers, Electricity fee, minor repair etc., even after 3 years. Few units started setting some among towards income from coconut trees.

6) Two units were provided with Bio-gas plants. The toilet seats are connected to the plants. In addition to this cow dung is mixed regularly. The gas produced is used for heating water for bath purposes. Still we are unable to make use of this gas for household use.

7) From the household survey, it is found that incidence rates of faecal borne disease and skin disease have decreased sharply between baseline survey and final evaluation survey. For example, incidence rate of diarrhoea and dysentery was 9.62 during baseline survey. It has been reduced to 1.6 during final evaluation survey. Similarly general skin diseases have declined from 10.91 to 1.04 between baseline survey and final evaluation survey. Similar declining trend is also observed from the data collected from hospital records. Thus one can say there is overall declining trend in the incidence of faecal borne diseases and skin diseases and between baseline survey and final evaluation survey.

8) Students of Health Education and Sanitation gained field experiences through this project. They conducted many health education programmes. They observed the sanitation improvements on functioning of dispersion trench, leach pit, septic tank, sullage farm, drains etc., Many short term and long term trainees also got first hand experience by observing the functioning of toilet units, functioning of the area committee and community participation.

9) The cost effectiveness could not be calculated due to lack of expertise.

REFERENCE SECTION

RURAL SANITATION PROGRAMME

GEORGE K. GEORGE B.Tech (Hons). ME (PH) D, San E (Delft)
Retired Chief Engineer, KWA.

Better sanitation is considered a necessary requirement for better and Socio-economic development of the people. It is also found that improvement in sanitory conditions is more effective and less expensive than any other preventive health measure to combat water-borne and excreta related diseases which are responsible for about 80% of sickness in India. With proper disposal of the human excreta, these diseases can be reduced considerably and sanitation in the country can be improved. It is also established that without adequate sanitation, full benefits of projected water supply can not be achieved.

The International Drinking Water Supply and Sanitation Decade (1981-1990) target is to provide 25% of the rural population with sanitation facilities. Not even 1% of the rural population in India had access to these facilities in the beginning of the decade. The coverage in Kerala may be higher than above figures. Still, the situation requires more action. Only a mass construction programme of sanitary latrines in the rural areas can improve the situation.

Pour-flush water seal leach pit latrines were first developed in India in the mid' 1940s at Singur field centre of the All India Institute of Hygiene and Public Health Calcutta. It was a single leach pit with a squatting pan placed directly over it. The same system was adopted in the Research cum Action Projects at Poonamale (Madras) and Najafgarh (New Delhi).

Later during the 1905s WHO sponsored two projects, one at Lucknow and the other in Trivandrum. The Trivandrum project known as Environmental Sanitation Project (ESP) started in 1957 under PHED, Kerala. It was a single leach pit type with the sqatting slab and the waterseal bowl placed over the pit. To reduce the cost, the slab was constructed with ordinary gravel instead of the granite metal with bamboo reinforcement. First it was for the rural project area around Trivandrum. But in 1959 there was a scavengers' strike in Trivandrum city and the entire dry bucket type latrines were replaced by the ESP latrines in a record time by the PHED. Thus Trivandrum become the first city in India with only Sanitary Ltrines. The city had not one dry latrine. Later, ESP latrines were popularised in other parts of Kerala through NES Blocks with 75% government subsidy. At the same time, the cost of the slab with the bowl was only Rs.12/- without lining slabs. In water logged

areas Rs. 36/- was the cost inclusive of lining slabs. Beneficiaries constructed super structres. The supervision of ESP latrine construction programmes was later entrusted with the Health services department. From 1964, Public Health Training School was in charge of the supervision. After some time, the initial momentum of the programme was lost and there was no follow up work either.

Now with the World Bank Water Supply Schemes, Sanitary latrine construction programme has been started in Kerala. The World Bank Sanitation programme is executed by the KWA through the municipalities and Panchayats the present programme is carried out in 10 towns and 32 Panchayats. The design adopted is the pour-flush water seal latrine with the twin pit. The approximate cost of the above type of latrine is Rs.2000/- including the cost of the super structure. Before the World Bank Programme, some sanitary latrines were constructed in Kayamkulam and Alleppey municipalities with UNICEF assistance. Apart from the World Bank, the Netherlands and the Denmark governments are also helping Kerala in the implementation of various rural water supply schemes in 73 panchayats, covering a population of 20 lakhs. Socio-Economic Units established under the above programmes has plans to start sanitation programmes also in the project areas. They propose to have a large scale sanitation programme after some pilot sanitation studies. The type and design of latrines to be adopted will be decided after the pilot programme, after ascertaining the views of the people, various organisations and technical experts. Any programme will be a failure without peoples involvement and participation. The people of Kerala should co-operate with various agencies in the implementation of sanitation programme for better health.

Before starting on any large scale sanitation programme in the state, we have to ascertain why ESP latrine programme lost its initial momentum. Is it because of the lack of follow up work by the NES Blocks or poor supervision by the health services Department or the poor quality of the ESP latrines. The Technical Advisory Group and other committees recommended twin-pit latrines in India. One of the arguments against single pit latrines is that the second pit was not constructed by people after the first pit had filled up. They again started going out to the open fields for defacation.

Subsidised latine construction should be only for the economically poor section who can not construct latrines on their own. My opinion is that latrines costing Rs.2000 will not be fully utilised by this section of the community. We should rather go for low-cost with low-cost super structure. People should be made to use these latrines so that they do not pollute water and soil. Subsidy, health education and motivation should be taken care of this.

Readers and public are welcome to send their views on the types of latrines to be constructed in Kerala.

FIELD REALITY:
EXPERIENCE OF SANITATION PROJECTS (QURT)

Summary:

Four months of field experience in experimental sanitation projects at Kundara, Cheriyanad and Anjengo Panchayats in Quilon are discussed.

Mutual interaction (amongst SEUs, panchayats and/or partner agency) revealed some problems. Partner agencies had different strengths and weaknesses in different areas. Panchayats were largely un cooperative, probably out of fear of a loss of power. This affected project management, even though SEUs' attempt to create organisational structures and procedures at panchayat level were recognised as unprecedented.

SEU found it tricky to reconcile opposing political/power groups. But the consistency of its approach opened people's eyes. Neverthless, suspicion and cynicism continue to cloud development projects. This has curbed spontaneous involvement and robbed people of a sense of responsibility for the development of their own localities. To compound the problem, panchayat functionaries equate people's participation with people's representation. Yet sanitation projects have the added advantage of being linked to drinking water projects--a primary felt need

Besides cost, the construction of a latrine should consider scientific specification, durability and cultural acceptance. Discussions with the people did lead to some changes, but misconceptions about materials and construction practices prevail, mostly due to cultural factors. SEU needs to be well versed in the market for materials. The partner agencies' expertise and organisational ability in construction varied. If one showed speed and organisation, the other displayed a more satisfactory overall construction.

The pressure on space is changing the people's felt need for ltrines. The pride of those who own one will have a demonstration effect. But for the very poor, housing is more important.

The issue most discussed was how beneficiaries should contribute in terms of money and labour. In Anjengo and Kundara contribution was sought as money. In Cheriyanad, however, it was combined with labour due to local (including cultural) peculiarities. Nowhere were other alternatives (eg. bank loans) tapped.

The lack of health education/hygiene in the coastal panchayat of Anjengo is so large and long-standing a problem that only new planning to realign habitation can solve it. New beneficiaries continue to neglect and misuse their latrines. Health education classes are of no use. Government/voluntary agencies are viewed with suspicion. SEU, Quilon has therefore planned to locate a `secret team' of `neighbourhood teachers' to educate fisherfolk from within.

Things are only slightly better in Cheriyanad and Kundara. But the dry summer means no water to clean latrines. Experience says that health education exhibitions for children (with visual media) would be useful.

Suggestions:

- administrative procedures should be fixed at the very beginning
- SEU must be thorough with the market prices of construction materials and their fluctuation
- Implementation Committees should not ignore health education aspects.
- pre-project socio economic survey necessary
- political issues should be tackled not just locally (eg, joint statements by political parties)
- think of alternatives to cash contributions from beneficiaries
- Anjengo's suspicion of officialdom can be overcome only by `inconspicuous' neighbourhood teachers
- use visual educational media in schools
- panchayats themselves should take up sanitation activity
- follow up through house visits
- inauguration of a project (not its completion) should be the big event - to mobilise larger participation

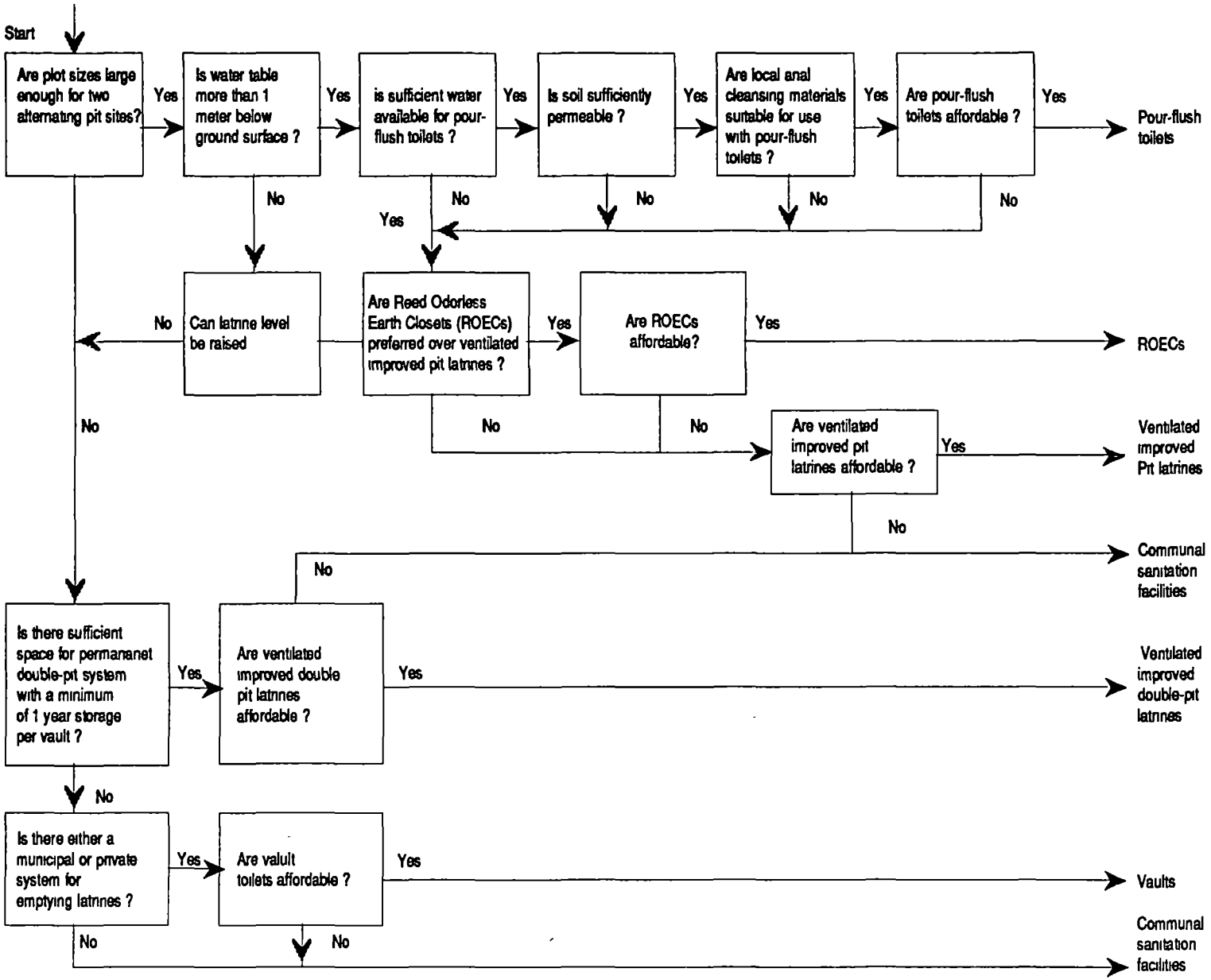
Main themes/issues:

- Panchayats: attitudes, power, proprietary feelings, their perception of `people's participation' as equal to 'people's representation'
- Varying strengths/weaknesses of partner agencies
- Reconciling opposing political groups
- Motivational significance of results
- General apathy/disinterest amongst people
- Problems in latrine construction: technical, cultural
- Importance of local (including cultural) specificities in determining beneficiary contribution
- Problems in imparting health education

Some take-off points for discussion:

SUE's efforts viewed by the people as unprecedented. Couldn't this be turned to the projects' advantage?
Importance of consistency of SEU's stand (non-political approach) and its perseverance in following it through
Should sanitary projects always be linked to drinking water projects?
General disinterest/apathy. Do the villagers themselves recognise this? How to overcome?
If panchayats are so problematic, can they be bypassed at all?
Why alternatives like bank loans not taken up?
Feasibility of `secret team' of `neighbourhood teachers'.
In a small panchayat how long will/can they remain secret?

Selection of Sanitation Technology : A logical activity chart



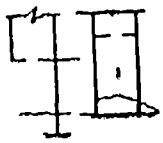
Sanitation Technologies - A comparison of alternatives

Sanitation technology	Rural application	Urban application	Construction cost	Operating cost	Ease of construction	Self-help potential	Water requirement	Required soil conditions	Complementary off-site investments a/	Reuse potential	Health benefits	Institutional requirements
Ventilated Improved 1st (VIP) latrines and Reed Odorless Earth closet (ROECs)	Suitable	Suitable in low/medium density areas	L	L	Very easy except in wet or rocky ground	H	None	Stable permeable Soil: ground water at least 1 meter below surface b/	None	L	Good	L
Pour-flush (PF) Toilets	Suitable	Suitable in low/medium density areas	L	L	Easy	H	Water near toilet	Stable permeable soil: ground water at least 1 meter below surface b/	None	L	Very good	L
Double-vault Composting (DVC) Toilets	Suitable	Suitable in very low-density areas	M	L	Requires some skilled Labour	H	None	None (can be built above ground)	None	H	Good	L
Self-topping Aquaprivy	Suitable	Suitable in low/medium density areas	M	L	Requires some skilled labour	H	Water near toilet	Permeable soil:ground water atleast 1 meter below ground surface b/	Treatment facilities for sludge	M	Very good	L

Septic tanks	Suitable for rural institutions	Suitable in low/medium density areas	H	H	Requires some skilled labour	L	Water piped to house and toilet	Permeable soil:ground water at least 1 mt. below ground surface	Off-site treatment facilities for sludge	M	Very good	L
Three stage Septic tank	Suitable	Suitable in low/medium density areas	M	L	Requires Some Skilled labour	H	Water near toilet	Permeable soil:ground water at least 1 mt below ground surface2/	Treatment facilities for sludge	M	Very good	L
Vault Toilets and cartage	Not Suitable	Suitable	M	H	Requires Some skilled Labour	H (for Vault construction)	Water near toilet	None (can be built above ground)	Treatment facilities for night soil	H	Very good	VH
Sewered PF Toilets Septic tanks and aquaprivy	Not Suitable	Suitable	H	M	Requires skilled engineer/ builder	L	Water piped to house	None	Sewers and treatment facilities	H	Very good	H
Sewerage	Suitable Suitable	Very	M high		Requires skilled engineer/ builder	L	Water piped to house and toilet	None	Sewers and treatment facilities	H	Very good	H

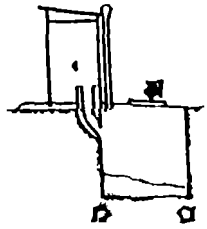
a/ On or of site sewage disposal facilities are required for non sewered technologies.
b/ If ground water is less than one meter below ground, a plinth can be built.
c/ low, M: medium, H: high, VH: very high.

Overhung latrine

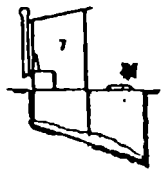


Trench latrine

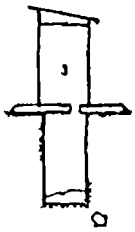
Reed odourless Earth closet



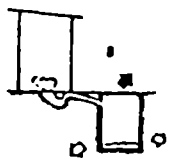
Continuous composting latrine



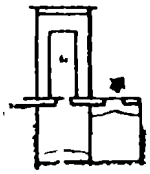
Pit latrine



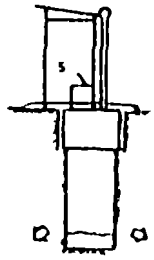
Pour Flush latrine soakaway



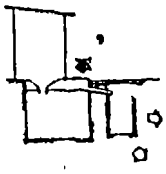
Batch Composting latrine



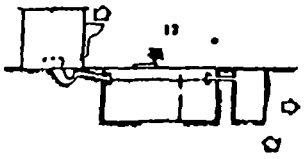
Ventilated improved Pit latrine



Pour Flush latrine Aqua Privy Soak away

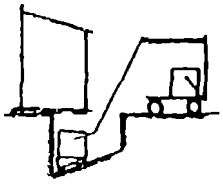


Sullage Flush Septic tank soak away



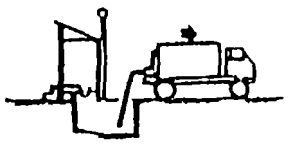
Vault manual removal truck or cart

Mechanical bucket latrine



Bucket latrine

Vault and vaccum tank



Factors affecting water supply and sanitation in developing countries

Factors Affecting Water supply and sanitation	Rural		Urban		
	Scattered Population	Nucleated Communities	Squatters (unauthorised)	Slums (authorized)	Urban developments
Political pressure	very low	low	medium-to-low	medium-high	high
Political awareness	very low	medium	medium-low	medium	high
Man power availability					
- high-level staff	unlikely	very limited	limited	limited	available (limited)
- medium-level staff	unlikely	very limited	limited	limited	limited available
- voluntary labour	possibly available	often available	usually not free	usually not free	not free
Maintenance arrangements	extremely difficult	very difficult	very difficult	difficult	reasonably difficult
- repair skills	low level	low/medium	medium	medium/high	medium/high
- spare parts		generally absent	-	sometimes available	sometimes available
- back-up support	not available	very limited	-	sometimes available	sometimes available
Income:					
- potential for revenue collection	very low	difficult but existing	low and difficult	possible	existing and often applied
Non-public options available:					
- for water supply	unprotected surface impoundments and shallow wells	unprotected surface impoundments and shallow wells	water vedors	water vendors	water vendors and private wells
- for sanitation	open field defecation	open field defecation	street/open areas	limited/street	limited
public land utility					
- availability	available	often available	not available	very limited	limited
- quality			low	low	
Requires user-involvement in decision making and implementation	high	high	high	moderate	limited
Required government input	back-up support and advice	back-up support advice and coordination	back-up support advice and coordination	coordination/ organization	coordination
Power supply	not available	limited available	limited available	usually available	usually available
Road and communication	difficult	possible with major time lag	possible but difficult	relatively manageable	relatively easy
Legislation and control	very difficult	difficult	very difficult	difficult	possible
Industrial developments	none	very limited	very limited	considerable	substantial
Literacy level	low	low	low	low	medium/high

Low-Cost Latrines: A Cost-per-unit comparison at SEU pilot project

Materials	Cheriyanad	Kundara	Anjengo	Ramanattukara	Mala	Edathuruthy	Gujarat*	Guarat**
1. Brick	509.65 (1082)	23.500 (600)	265.00 (600)	85.700 (380 latrite)	416.00 (260 latrite)	676.50 (950)	282.60 (628)	234.00 (520)
2. Cement	241.05 (3 bags)	526.00 (6.5 bags)	410.00 (5 bags)	245.00 (3.5 bags)	337.50 (4.5 bags)	296.00 (3.7 bags)	187.50 (2.5)	112.50 (1.5)
3. Sand	50.55 (70 Vsl)	85.76 (64 Vsl)	135 (75 Vsl)	NA (60 Vsl)	NA (120 Vsl)	NA (60 Vsl)	19.50 (10.3 M^3)	32.50 (10.5 M^3)
4. Closet fitting	126.50	121.27	110.00	92.00	107.00	102.00	115.00	NA
5. Metal	22.75 (7 VSl)	97.12 (32 Vsl)	136.00 (40 Vsl)	65.00 NA	49.00 NA	65.00 NA	NA "	NA "
6. Iron Rod	61.25 (7.9 kg)	166.10 (22 kg)	137.00 (15 kg)	NA NA	86.40 (10.8 kg)	104.00 (13 kg)	36a (6 kg)	18a (3 kg)
7. A C pipe	30.00	10.00	48.00	33.60 (4x8)	54.00 (5x10.4)	44.00 (4X11)	20 Mb (2)	112.50d (2.5m)
8. Door fitting	175.75	112.50	207.00	142.00 (door+roof)	130.00	140.00	NA	NA
9. Roof	119.00	NA	NA	NA	250.00	244.00	NA	NA
10. Redoxide	10.50	NA	NA	by	NA	NA	NA	NA
11. Rubble	NA	NA	90.00	NA	NA	NA	NA	NA
12. Glass stopper	5.00	5.00	5.00	15.00	5 00	5.00	NA	NA
13. Brush Skilled labour	5.00 225.00 (4.5 days)	NA 228.00 (4 days)	NA 325.00 (5 days)	NA NA	NA NA	NA 200.00 (4 days)	NA 150.00c (3 days)	NA 150.00 (3 days)
14. Unskilled	245.00	225.00	250.00	NA	NA	180.00	120.00 (6 man days)	120.00 (6man days)
	1827.00	1825.00	2106.00	1818.00	1995.00	1931.00	1080.35	891.50

* TWIN PIT POUR FLUSH LATRINE
** VIP LATRINE

a 6mm. dia m b 75 mm dia m pipe c skilled labour mason d AC Vent pipe

Note: 1. In Cheriyanad and Edathuruthy bricks were extensively used for all construction work which includes the lining of pits.
2. In Ramanattukara and Mala laterite were used for the construction of pits.
3. In Kundara, Anjengo and Mala R.C.C. rings were used for the pits.
4. Vsl. local measure which can be used for measuring sand, metal etc. Gandhigram evaluation team will suggest a standardised measurement,

Source for cost details in Gujarat: International reference centre for Community water supply and sanitation, Rural Latrine Project, Gujarat, India.

SANITATION AND HEALTH CARE

Safe water and sanitation have been recognised as two essential ingredients of sound health. Following a resolution adopted by the United Nations Water Conference in 1977, the Third World Health Assembly proposed that the 1980's be designated as the International Drinking Water Supply and Sanitation Decade. Supply of safe water and sanitation is one of the essential component of primary healthcare.

Following is an excerpt from the book 'Health Status of Kerala' by **Dr.C.R.Soman & P.G.K. Panikar.**

Sanitation

The coverage of sanitation is even less than that of protected water supply. This in turn aggravates the pollution of water sources and therefore, infection. For the present decade the target set is 100 percent coverage of all Class I towns. 80 percent of the population in the remaining towns and 25 percent of the rural population. As against this the Sixth plan has provided Rs. 1335 lakhs towards sanitation of which Rs. 1200 lakhs is for urban sewerage schemes and Rs. 135 lakhs for rural areas. Evidently, this provision is inadequate to reach the target. The case of a critical scrutiny of the technology in vogue seems to be more pressing in the case of sanitation than that of housing.

The existing waste disposal systems have been developed in the western industrialised countries. In recent years, considerable thought and effort have gone into developing alternative more appropriate systems:

A sanitation system should satisfy : (1) The surface soil should not be cotaminated, (2) There should be no contamination of ground water that may enter springs or wells; (3) There should be no contamination of surface water; (4) Excreta should not be accessible to flies or animals; (5) There should be no handling of fresh excreta, or when this is indispensable, it should be kept to a strict minimum; (6) There should be freedom from odours or unsightly conditions; and (7) The method used should be simple and inexpensive in construction and adaption. In the context of developing countries (i) the daily operation of the system should only require a simple and safe toilet routine, (ii) the construction cost should not exceed 10% of total investment in housing, (iii) the facilities should mainly be made of local materials and require minimal maintenance, (iv) the use of water to dilute and transport excreta should, if possible, be avoided. Of the various types of latrines now available, in terms of the criteria listed above especially use of local materials, low cost minimum surface pollution, the pit latrine and bored-hole latrine appear to be the most appropriate to situations like ours.

In Kerala, sanitation in the urban areas is based on the water-borne system. Of late, serious reservations are expressed on the suitability of water-borne sanitation system. Water-borne sanitation does not offer a viable solution especially in the context of countries like ours. This is so because (a) of the prohibitive costs of infrastructural facilities needed for water-borne sanitation; (b) the scarcity of water in many regions preventing its use as a means of tansport of human waste; and (c) the shortcomings of conventional sewage methods in terms of pathogen elimination and in terms of recycling valuable components. A recent development in Bihar in the spread of low-cost flush latrines is worth mentioning in this context. The Sulabh Shauchalaya is an improved version of the standard hand-flush latrine. A specially designed pan and water seal trap is connected to a pit, three feet square and four to five feet deep. Normally an extra pit is also provided. The excreta undergoes bacterial decomposition and is transformed into high quality manure. Once the pit gets filled (three to five years for an average family), the manure is dug out and the pit becomes ready for use again. The total cost of Sulabh latrine comes to Rs. 700, excluding the cost of superstructure. In response to the mass compaign by the Sulabh International and liberal financial assistance from the Bihar State Government - half of the cost as grant and the rest as loan - the Sulabh Sauchalaya has cought on; over 50,000 units have so far been installed. The activities of the Sulabh International have been extended to several other States, and to Sri Lanka. A more interesting aspect of this venture is that the organisation has built some public baths and toilets at vantage points in the City of Patna where the common man, even the poor, are willing to pay for the use of the facility. It is reported that the daily intake of the public comfort stations as Patna often exceeds Rs. 300 more than sufficient for their upkeep and maintenance. It is worthwhile exploring the suitability of this model to local conditions.

However, before introducing any new model, its suitability to local condition and its acceptability to the people must be thoroughly investigated. The identification of socio-cultural factors relevant to sanitation is a crucial step. Even though individuals recently had toilets brought into their houses many did not use them. The men especially, continued to use the fields and the old privies that remained near their houses. The reason ... one man ... said that he just did not feel comfortable responding to nature in the home. To him this was an act that could not be satisfactorily carried on within the confines of a house because it was something that was rated as unclean and he felt compelled to get away from living quarters to carry out such functions. Such problems can however, be overcome through proper health education and introduction of toilet habits at an early age, at schools pre-school training centres etc.

Health Education

It is needless to say that the success of the healthcare programmes - preventive, promotive as well as curative measures - would depend upon the health consciousness of the people, their willing cooperation and proper use of the facilities. It has been widely recognised that health education plays a crucial role in these respects. We have also to appreciate that health education is different from general education,and that the latter does not necessarily ensure the former. Health education involves the translation of what is known about health into desirable individual and community behaviour patterns through educational means. Thus, it includes both knowledge on health-related matters and behaviour in line with that knowledge.

Kerala has a long tradition in this field initiated in the princely State of Travancore. Despite limited manpower resources and communication aids, the Department of Public Health reached out to a large segment of the population.

In 1960, the Government of Kerala set up the State Health Education Bureau. The State Health Education Bureau has at present several wings such as editorial unit, audiovisual unit, arts and photography, student health education unit, field study and demonstration unit, etc. at the headquarters under an Assistant Director of Health Service. Each District has one health education unit under a district Health Educational Officer with a minimal, full time, supporting staff like health educator and cinema operator. The activities of the Bureau include intensive health package programme, health education study projects, film shows, group discussions, seminars, etc. The Bureau carries out these programmes utilising the services of the medical and paramedical personnel under the Directorate of Health Services. The Bureau in collaboration with the CARE has been bringing out some useful publications like Guide Book for School Teachers, Guide Book for Paramedical Staff, etc. Written in non-technical language, these cover all health related matters including personal hygiene, environmental sanitation, communicable diseases and nutrition. The publication of short leaflets in the vernacular is another innovative exercise.

Thus the basic infrastructure for health education is already built up. The level of general education in the State is also high. However, the health education programme has not got wide and deep enough to after the behavioural pattern of the vast majority with respect to personal hygiene, environmental sanitation, exercise, and life style. In this context, the school health education programme appears to hold great promise. It can reach a sizeable proportion of the population and catch them young, when they are most receptive and their behaviour pattern is being moulded. Along with strengthening the health content in the general education curriculum, additional inputs needed for translating such health knowledge into practice can be introduced through the health education programme.

SANITATION PLANNING: AN HISTORICAL REVIEW

Now that the stage for a State level sanitation conference is set, a retrospective of the Sanitation scene at the National level calls for a literal brain-storming. Planners, decision makers and implementors had better start thinking of a well defined futuristic strategy.

Sanitation Planning in India is only 46 years young. Although prevailing technologies of the west were brought to India after the British took over the country, it was only in 1943 that a Health Survey and Development Committee, also known as the Bhore Committee was appointed to look into sanitary problems on a national scale. In 1945, the committee submitted its report. Recommendations of the Committee included suggestions to provide safe and adequate piped water supply to all towns with a population of 50,000 or more within 35 years and installation of drainage within 10 years. Most of these recommendations went unfulfilled.

The Environmental Hygiene Committee (1948-49) appointed by the Central Government of independent India to undertake the over all assessment and planning of environmental sanitation, recommended a 40 year plan to cover 90% of the population. The fate of this committee's report was just the same as that of Bhore Committee.

In 1961 the Health Ministry appointed the Natural Water Supply and Sanitation Committee. This committee recommended that a sum of Rs. 900 crores be allotted to the completion of water supply and sanitation programmes. This was according to the prevalent 1961 rates. Coming to five year plans, the allocated funds turned out to be much less than those required to meet the target. Meanwhile, the problems of sanitation and water supply increased and the situation got aggravated by the growth of new urban centres.

An all India seminar held in 1962 at the Planning Research and Action Institute, Lucknow recommended that 500 sanitary latrines be constructed in every block every year, together with extensive work in rural and urban water supply. Earlier, a conference of Health Ministers held in 1957, gave the highest priority to the provision of safe drinking water supply. The Central council of Local Self Government in 1958 had expressed similar views.

In 1964 an All India Seminar on water and sewerage works, suggested the formation of autonomous water and sewerage boards to deal efficiently with the problems. How far this has been effective requires definite conciusions. Sanitation and drinking water as complementary components require due treatment as the sole responsibility of one specific institution.

The National Conference for Drinking water Facility, held at Sevagram-Wardha, in 1969 resolved that as part of Gandhi Centenary Celebrations, which were to take place later that year, one lakh from those 565,000 villages throughout India which were identified as having water supply problems, would be provided with drinking water by October 2, 1969. These resolutions could not be implemented. The number of villages with drinking water problems has not decreased either.

Gandhian Institutions in India had undertaken much work to promote better sanitation. The National Committee for Gandhiji centenary through the Gandhi Smarak Nidhi and Harijan Sevak Sangh launched massive programmes of intensive propaganda in favour of low-cost sanitation. Promotion of audio-visual programme, extension work through volunteers, exhibitions, publication of pamphlets, books, literatures etc., were some of them. Planners began to realise that low-cost options should also be tried as solution to sanitation problems.

The World Health Organization and UNICEF sponsored the National Seminar on sanitation held in Patna in 1978. This seminar organised in collaboration with the Government of India, did, apart from evaluating the Gandhian programme in Gujarat and Bihar, recommend extensive work on leaching pit model. Similar views were expressed at the International seminar on low cost techniques for disposal of human wastes in Urban communities. This was at Calcutta in 1980.

The National Sample survey of 1973 came up with a finding that only 20% of urban house-holds in the country use toilets connected to the sewerage systems. Of these, only 7% have exclusive use of toilets. 14% of the households have water-borne latrines connected to septic tanks. Nearly one third of the urban population is served by bucket latrines. Households having no toilets account for the removing one third of the population.

From this vantage point, a glance backward or forward gives a grim view. Behind, there is the back log of work, pending due to non-availability of funds. Ahead, there is the awesome task of meeting the needs of an increasing population.

COMMUNICATION SUPPORT IN SANITATION PROJECTS

"Communication Support" is a concept dealing with changing the behaviour of people. This concept essentially is planned information, motivation and education activities along with training, monitoring and evaluation activities which are specifically designed to

1. encourage certain kinds of people to participate in the project.
2. make sure that they obtain full benefit from their participation; and
3. help to ensure that the project makes an overall positive contribution to development.

Heli Perret of the Technology Advisory Group in a technical note to the United Nations Development Programme has extensively discussed on the Planning of Communication Support in Sanitation Projects and Programmes.

This article is an excerpt which spells out the special considerations in planning Communication activities for Sanitation programmes.

Special consideration in Planning Communication Activities for Sanitation Programmes

There area number of special considerations which must be kept in mind when planning communication components for low-cost sanitation projects of programme. Those discussed below are general enough to allow the engineer/mission leader or project officer to satisfy himself that they are adequately covered in the work of the communication specialist.

Cost need to be kept down

These sanitation programmes are designed to benefit the poor, and every effort is being made to reduce the costs of the physical installations. A corresponding effort should be made to keep the costs of communication support activities within reason. However, no clear rule-of-thumb has yet been developed which indicates what is "reasonable" in this context, and costs will, of course, vary according to the problems communication activities have to deal with. There may be a tendency, particularly at a time when there is relatively little hard evidence to support one level of expenditure rather than another, for project managers to regard the "additional" costs of communication support as excessive. Such an

attitude ignores two important aspects of sanitation projects. Firstly, that communication support is an essential element if the overall project package is to have the desired impact, it cannot be regarded as an optional extra component. Secondly, on-site sanitation will in most cases remain by far the least-cost solution to a community's needs irrespective of communication support costs. For example, if in a particular case the costs of providing on site sanitation were 15% of those of conventional sewerage and disposal, then the addition of a communication support component costing 20% of the "hardware" costs-percentage that might at first alarm planners-would still only increase the cost of the on-site option to 18% of the off-site alternative. Further research and case studies on this question are needed. Meanwhile, it will normally be useful at an early point in planning to prepare several proposals, estimate the costs and likely impact of each, and, as with most engineering problems, select the most cost-effective.

The communication plan should be simple

This is important for several reasons. More often than not, the implementing agency for communication support is, institutionally weak and unable to hope with an ambitious and managerially complex activity, or it may give low priority to software (as would often be the case where the agency responsible for latrine construction is also the one that will take responsibility for communication support). While institution-building activities may be desirable, time constraints frequently do not allow proper staff training, motivation, or hiring of new staff. Also, the leverage that a comparatively small component can have on enforcing major institutional changes will be limited. It is therefore usually advisable to try to adjust the component to existing organizational structures and management and technical skills, together with any additional skills that can be brought in temporarily through short-term consultants or technical assistance. Minimizing managerial complexity also requires that the number of agencies involved in implementation should be limited.

Impact has to be rapid

This is particulary the case where pre-construction and construction stage communication activities are concerned, since otherwise they may hold up the building process. In order to serve the project effectively, communication activities not only have to affect what people think or know, but how they act. This implies

a) putting primary emphasis on reaching adults directly through non-formal activities rather than trying to reach adults through children; and

b) wherever possible, relying on person-to-person contacts reinforce by media or materials, but not on media alone, since the former strategy is more likely to effect rapid changes in people's behaviour.

Timing has to be carefully worked out and accurate. That is, the information, motivation and education activities have to be carefully tied in with construction, and operation and maintenance activities. Firstly, this means that they have to be ready in time, even though the lead time available is often very short. Therefore they should, to the extent possible, build on already existing structures, activities and materials, rather than attempt to set up new ones (this also keeps costs down). Secondly, the emphasis on timing requires that every communication activity be specifically related to stages in construction or operation and maintenance in as much detail as possible (and the project engineer, therefore, needs to make the construction schedule available as soon as possible to the communication speicialists). Thirdly, good coordination in term of timing calls for a degree of flexibility in the communication strategy to adjust to any changes in the construction schedule; this is usually achieved better with field workers than with a mass media-based approach;

Primary emphasis is on out-of-school activities

Unless there is heavy involvement in school sanitation, is usually more important to reach adults than children, because (a) adults are the main decision makers on sanitation in the community and the household; (b) it is usually important to encourage an immediate response or change; the next generation is not soon enough.

Phasing is usually a good idea.

At this stage in our knowledge of the subject it is advisable, when possible, to start with some sort of a pilot test of the communication strategy, to evaluate and adapt the design as needed, and only then to expand.

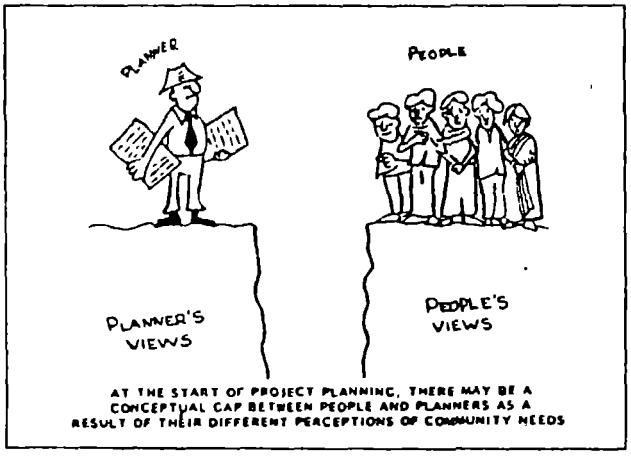
Main difficulties Likely to be Encountered

Experience so far suggests that there are three main problems which can be expected in planning and implementation of communication activities to support sanitation projects or programme. These are: (a) the question of institutional responsibility; (b) lack of interest of understanding about the subject; (c) difficulties in coordination with construction or upgrading activities.

Institutional responsibility

The question of institutional responsibility may well involve the project in a series of difficult decisions. Typically, the agency responsible for construction will be a "hardware" oriented agency with little experience of software support. Should it go to the trouble of establishing a new unit to deal with the software aspects of its work (a unit which

may become partially or totally redundant after completion of the project) ? Or should it, on the other hand, seek to enter into collaborative agreements with the traditional software agencies - in particular the Ministries of health and education which may involve delays while these agencies are reoriented to sanitation programme support, may lead to loss of control over essential project components, and can result in difficulties in budgeting, staffing and coordination generally ? At present there is no final solution to this question, with each case decided individually. As in the case of costs this is an area about which we are still learning.



AT THE START OF PROJECT PLANNING, THERE MAY BE A CONCEPTUAL GAP BETWEEN PEOPLE AND PLANNERS AS A RESULT OF THEIR DIFFERENT PERCEPTIONS OF COMMUNITY NEEDS

Lack of interest or of understanding

Sanitation and water supply agencies, Ministries of Planning, municipalities, or others involved in sanitaition frequently have little understanding of communication support, or appreciation of its importance. This is particularly the case where most of the experience in the past has been with conventional sewerage rather than low cost alternatives. It is therefore another obstacle to be overcome: the first action in communication support is often to change the views and attitudes of decision-makers about the need to include it in a programme.

Statistics of Sanitation - 1986-87
Percentage of households in income groups

Monthly income (Rs.)	Flush type	ESP type	Covered Pit	Other	N
1	2	3	4	5	6
Urban					
0 to 250	20.9	34.7	2.5	41.9	527
250 to 499	32.1	32.2	2.6	33.1	736
500 to 749	38.4	23.1	2.4	36.1	1084
750 to 999	57.2	22.3	1.5	19.0	1166
1000 to 1999	80.9	11.7	0.7	6.7	1365
2000 & above	96.9	2.7	0.1	0.3	1122
All	60.4	18.7	1.4	19.5	6000
Rural					
0 to 250	2.2	9.0	1.9	86.9	5088
250 to 499	5.8	14.6	2.6	77.0	8687
500 to 749	19.6	20.4	2.9	57.1	5460
750 to 999	36.1	22.4	2.3	39.2	1883
1000 to 1999	51.7	17.9	1.3	29.1	2246
2000 & above	73.7	13.4	1.0	11.9	632
All	16.6	15.6	2.4	65.4	23996
All					
0 to 250	5.5	13.6	2.0	78.9	5615
250 to 499	10.5	17.7	2.6	69.2	9423
500 to 749	23.0	20.9	2.8	53.3	6544
750 to 999	39.9	22.3	2.2	35.6	3049
1000 to 1999	57.0	16.8	1.2	25.0	3611
2000 & above	77.9	11.5	0.8	9.8	1754
All	24.4	16.2	2.2	2.2	29996

Statistics of Sanitation - 1986-87
Percentage of households in each locality

Locality	Flush type	ESP type	Closed Pit	Other	N
1	2	3	4	5	6
Urban					
TVM	61.1	29.0	--	9.9	2000
KTM	66.6	21.4	1.7	10.3	2000
MPM	53.4	5.6	2.6	38.4	2000
All	60.4	18.7	1.4	19.5	6000
Rural					
VPM	10.5	18.1	--	71.4	2000
TKR	8.4	67.2	6.0	18.4	2000
TKA	5.7	2.9	--	91.4	2000
PMM	36.5	16.9	2.0	44.6	2000
RKI	1.0	5.1	1.3	92.6	2000
KBM	16.0	20.1	2.4	61.5	1996
TLR	37.5	1.7	2.6	58.2	2000
VKM	16.2	0.2	2.8	80.8	2000
CNR	14.8	20.9	9.1	55.2	2000
PTA	10.0	24.6	0.2	65.2	2000
MDI	40.8	9.9	1.7	47.6	2000
BDA	2.2	--	--	97.8	2000
All	16.6	15.6	2.4	65.4	23996

Urbans areas: TVM - Trivandrum city corporation
KTM - Kottayam municipality
MPM - Malappuram municipality

Rural areas (Panchayats)

VPM - Vembayam, Trivandrum.
TKR - Thrikkadavoor, Quilon.
TKA - Thrikkunnapuzha, Alleppey.
PMM - Pramadam, Pathanamthitta.
RKI - Rajakumari, Idukki.
KBM - Kumbalam, Ernakulam.
TLR - Tholur, Trichur.
VKM - Vaniyamkulam, Palghat.
CNR - Chelannur, Kozhikode.
PTA - Pozhuthana, Wayanad.
MDI - Madayi, Cannanore.
BDA - Bedadka, Kasargod.

Excerpted from 'A Development Monitoring Service at the Local Level', Vol:II, Scott, W and Mathew, NT, United Nations Research Institute for Social Development (UNRISD), Geneva, 1983.

Drinking Water and Sanitation

The distinction as regards drinking water is first between piped water, well water (the well being protected by a parapet) and unprotected sources such as streams or ponds ow wells without parapet, and the second, according to whether the pipe and well is private inside the premises, or shared outside the premises. Protected water may be considered adequate whether the source is pipe or well and private or common. Open sources are generally considered inadequate.

(piped water was assumed to be protected, but, in fact, neither piped water nor water from wells with parapets are necessarily safe. Wells, for example, may be subjected to seepage from pit latrines or bore holes in densely populated areas. If simple, inexpensive tests of the purity of water existed, they should be applied).

As table 4/3 suggests, three areas, TKM, KBM and RKI have serious problems, with 40 or more percent of the households having no protected water. VPM, ALM and KLA have minor problems with between 10 and 20 percent households without protected water.

If standards are raised, for example, a private well or piped supply to each household, the problem is correspondingly greater. The difference between the areas is in part associated with the groundwater level. TKA and KBM, both on the coast, have very low levels and wells can be sunk only at great expense. TKA has met this problem partly through communal piping, but - a fact not formally covered in the schedule until round three - at times of low supply between monsoons, piped water may not be available and open sources or communal wells may be used to a greater or lesser extent that in indicated in the table depending on when the interviewing took place. (From round three onwards, interviewing is evenly spaced over the seasons).

Lack of sanitation is considered a formidable problem in Kerala because of the density of settlement and risk of infection. Flush toilets are rare (even though the term is broadly used to include toilets that are flushed by bucket into a pit or drain). The government has encouraged the E.S.P. (environment sanitary protection that consists of bore holes with water seal) type of sanitation and has supplied stone slabs (in one of the areas, however, the stone slabs were used as stepping stones on a muddy slope). In all the rural areas, however, the great majority of households have no sanitary facilities, and use open spaces, over 40 percent even in the small town of Malapuram (MPM). There is a sizable problem to be overcome.

Percent households by type of sanitary facility

	1	2	3	4	5
VPM					
W.C.	1.5	4.0	3.5	4.0	5.5
E.S.P.*	6.3	6.9	9.0	9.5	15.0
Pit**	1.5	--	--	0.5	1.0
Open spaces	90.7	89.1	87.5	86.0	78.5
Total - percent	100.0	100.0	100.0	100.0	100.0
- number	204	202	200	200	200
TKA					
W.C.	0.5	1.6	2.5	2.5	3.5
E.S.P.	2.7	3.2	1.5	1.5	0.5
Pit	--	--	--	--	--
Open spaces	96.8	95.2	96.0	96.0	96.0
Total - percent	100.0	100.0	100.0	100.0	100.0
- number	186	124	200	200	200
ALM					
W.C.	0.7	2.5	3.5	5.5	6.5
E.S.P.	--	0.6	0.5	0.5	--
Pit	0.7	--	0.5	0.5	--
Open spaces	98.6	96.9	95.5	93.5	93.5
Total - percent	100.0	100.0	100.0	100.0	100.0
- number	141	159	200	200	200

* Pit with water seal

** Pit without water seal.

Table 4/3

Drinking Water and Sanitation

	RURAL									URBAN		
	TKA	CNR	KBM	RKI	VPM	MDI	TLR	ALM	KLA	TVM	MPM	KTM
	(PERCENT OF HOUSE HOLDS)											
DRINKING WATER:												
Pipe inside premises	-	-	-	0.5	0.5	0.8	-	-	0.5	53.9	18.5	55.9
Pipe outside premises	46.2	0.6	17.1	13.5	-	4.6	1.0	0.6	0.5	24.3	24.5	28.8
Prot. well inside premises	2.2	66.3	16.1	4.3	66.8	63.4	80.6	60.4	52.6	19.9	40.0	14.1
Prot. well outside premises	8.6	33.1	24.4	2.9	20.8	31.3	17.8	26.4	30.7	1.9	15.0	0.6
Other (unprotected, open source)	43.0	-	42.5	78.7	11.9	-	0.5	12.6	15.6	-	2.0	0.6
TOTAL - Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	186	175	193	207	202	131	191	159	192	206	200	177
SANITATION :												
Flush toilet	1.1	4.0	1.6	1.0	4.5	38.2	-	2.5	1.0	38.8	46.5	78.0
E.S.P.	3.2	12.6	9.8	7.2	6.4	-	26.7	0.6	10.9	55.3	6.5	16.9
Covered pit	-	8.0	14.0	17.9	0.5	6.1	1.6	40.3	19.8	-	5.0	-
Other (woods, fields...)	95.7	75.4	74.6	73.9	88.6	55.7	71.7	56.6	68.2	5.8	42.0	5.1
TOTAL - Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	186	175	193	207	202	131	191	159	192	206	200	177

APPENDIX

ORGANISING COMMITTEE FOR KERALA SANITATION CONFERENCE 1989

1. Shri. A.K. Appootty, Director (Panchayats)
2. Shri M. Kamaluddin Sahib, Jt Development Commissioner (Rural Development)
3. Dr. K.V.Sarvanandan, Asst Director (Health Services)
4. Dr. C.R.Soman, Professor, Medical College
5. Shri. P. Ramachandran Nair, Superintending Engineer, Kerala Water Authority
6. Shri. Jaju Jacobs, Secretary, Association of Public Health Engineers, Kerala
7. Shri. K. Balachandra Kurup, Executive Co-ordinator, Socio-Economic Units Kerala

CONFERENCE SCHEDULE

16th March 1989

0830	Registration
0915	Welcome by Mr. K.Balachandra Kurup, Executive Co-ordinator, Socio-Economic Units Kerala
0930	Presidential Address by Mr. V. Venugopalan, Conference Chairman
0945	Inauguration by Sri. Baby John, Hon'ble Minister for Irrigation and Water Supply, Government of Kerala
1000	Keynote Address by Mr. K. Ramachandran, Chairman, Kerala Water Authority, Trivandrum
1020	Vote of thanks by Mr. C.J. Mathews, Managing Director, Kerala Water Authority, Trivandrum
1030	Tea Break
1045	State of the Art Presentation : A summary of the advancement in sanitation, and the issues awaiting resolution Policies on Rural Sanitation and their implementation: Mr.Martin de Graaf, Senior Advisor, SEU (K) Technologies in Sanitation -Options and Costs: Mr.O.D.Gonzalez, Project Officer, UNICEF (Madras) Sanitation as a People's Movement -Approaches and Ideas: Mr. S.T. Khare, Advisor, Sulabh International, Bombay
1245	Lunch

1400 Sanitation Activities in Kerala - A Review:
Dr.C.Harichandran, Chief, State Planning Board, Trivandrum

Participation and People's Involvemant in Sanitation programmes - Views from the field

Sanitation Implementation: Problems and Options by:
Mr. Mohammad Najeeb, Municipal Commissioner, Alleppey
SEU Experience in Low cost Rural Sanitation by
Ms. Elizabeth Zachariah, Head, SEU (North) Calicut
Participation of the People and Organizational Alternatives in Rural Sanitation Programmes in Kerala by:
Mr. T.A.Varghese, Pazhakulam Social Service Society, Adoor
Programme for Community Organisation:
Mr. John Fernandez, Training Co-ordinator.
COSTFORD: Mr.Johnson George, Engineer, Trichur
People's Action for Development (Kerala):
Mr. N. Bhageerathan, Member Secretary, PAD Kerala.
HUDCO: Mr. V. Suresh, Zonal Chief, Madras
Gandhigram Institute: Dr. J.K. Dhas,
Director, Gandhigram INstitue of Rural Health & Family Welfare Trust, Anna District, Tamil Nadu

Division of delegates into specific groups to discuss the issues further, under the following heads: Technical & Financial Issues, Social Issues, Institutional & Policy Issues, Training and Motivational Issues, and, Monitoring & Evaluation.

1530 Tea Break

1600 Group Discussions to be coordinated by the following Chairpersons
Technical & Financial Issues:
Mr. Gopalakrishnan Nair, Addl. Development Commissioner, Commissionerate of Rural Development, Trivandrum
Social Issues: Prof: Leela Gulati, Associate Fellow,
Centre for Development Studies, Trivandrum
Institutional & Policy Issues : Mr. A.K. Appootty,
Director, Directorate of Panchayats, Trivandrum
Training& Motivational Issues:
Dr.K.V. Sarvanandan, Ass.Director of Health Education, Directorate of Health Services, Trivandrum

	Monitoring & Evaluation: Mr.N.T.Mathew, Chairman, Kerala Statistical Institute, Trivandrum
1800	End of Deliberations on Day 1

17th March 1989

0915	Group Discussions to continue under respective Chairpersons
1030	Tea Break
1045	Presentation of Group Resolutions by respective Chairpersons. Coordinator: Dr.C.R. Soman, Prof:of Nutrition, Medical College, Trivandrum
1130	Placing Rural Sanitation within the framework of Kerala's development: A Synthesis and Presentation of the ideas presented by the different groups: Dr.C.R. Soman and panel
1300	Lunch
1400	Formulating an Action Plan: A discussion on the elements to be included, the institutions which will implement it, coordination and collaboration, and mobilising the resources for the task. Chair: Mr. M.P.Mohan, Kerala Water Authority, memebers of State Sanitation Cell and others Response to the Resolutions by Prof: I.S. Gulati, Vice Chairman, Kerala State Planning Board, Trivandrum
1415	Tea Break
1430	Veledictory Session: Chief Guest: Dr. M.Thangavelu, Dean, P.S.G. Institute of Medical Science & Research, Peelamedu, Coimbatore Vote of Thanks: Mr. Martin de Graaf, Senior Advisor, SEU (Kerala)

LIST OF PARTICIPANTS OF KERALA SANITATION CONFERENCE 1989.

SL.NO.	*NAME*	*DESIGNATION*	*ADDRESS*
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3.	K.Anil Kumar	Asst.Executive Engineer	Kerala Water Authority Office of the Mnaging Director Kerala Water Authority Trivandrum
4.	P.S. Abdul Lathief	Asst. Executive Engineer	Kerala Water Authority Water Works North Sub-Division Trivandrum
5.	T.N.N. Battathiripad	Executive Engineer	Kerala Water Authority Thekkedathu Mana, Kadangode, Trichur.
6.	K. Bhaskaran Pillai	Asst.Engineer	Kerala Water Authority Head Quarters Section W.W.Campus Trivandrum - 695 033.

7.	P.Chandrika Kumari Devi	Asst. Executive Engineer	Kerala Water Authority Headquarters Trivandrum - 695 033.
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12.	C.J.Mathew	Managing Director	Kerala Water Authority Headqauarters Trivandrum - 695 033.
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14.	K.M. Ninan Thrakan	Executive Engineer	Kerala Water Authority Headquarters Trivandrum -695 033.
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16.	K. Padmanabhan Achari	Executive Engineer	Kerala Water Authority Headquarters Trivandrum -695 033.

17.	A. Rajappan	Chief Engineer	Kerala Water Authority M.I.Jawahar Nagar, Trivandrum - 695 041
18.	P. Ramachandran Nair	Suptg. Engineer	Kerala Water Authority Observatory Hills Trivandrum
19.	R. Ramanujam	Executive Engineer	Kerala Water Authority P.H.Division Trivandrum.
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21.	K. Sudha Devi	Executive Engineer	Kerala Water Authority Project Management Unit Trivandrum - 695 033.
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23.	R. Satheesh	Asst. Executive Engineer	Kerala Water Authority Office of the Chief Engineer Southern Region Trivandrum- 695 033.
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25.	P.K. Sahadevan	Executive Engineer	Kerala Water Authority Water Supply Division Trivandrum.

26.	A.. Veeran Pillai	Suptg. Engineer	Kerala Water Authority Office of the PH Circle Opp. Sakthan Thampuran Market Trichur- 680 001.
27.	G.H. Yacoob Sait	Suptg. Engineer	Kerala Water Authority Malaparamba Calicut - 673 009.

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32.	E.C.Kesavan	Director of Municipal Administration	Directorate of Municipalities Public Office Buildings, Museum Road Trivandrum - 695 033.
33.	Dr. K. G. Radhakrishnan	Joint Director	Directorate of Municipalities Public Office Buildings, Museum Road, Trivandrum -6 95 003.

34.	Dr.K.V. Sarvanandan	Asst. Director of Health Education	Directorate of Health Services General Hospital Junction Trivandrum - 695 001.
35.	Dr. K. Venugopalan	Director (Family Welfare)	Directorate of Health Services General Hospital Junction Trivandrum - 695 001.
36.	Mohammed Najeeb	Municipal Commissioner	Municipalities Dept. Municipal Office Buildings Alleppey - 688 001.
37.	P.J. Joseph	Extension Officer	All India Radio Bhakthivilas, Trivandrum - 695 004.
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39.	S.Ratna Kumaran	Engineer	Kerala Ceramics Ltd Sanitaryware Division, Mundakkal, Quilon.
40.	K.I. Thomas	Works Manager	Kerala Ceramics Ltd Sanitaryware Division, Kundara - 69150.

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49.	G.Sasikumar	I st Grade Overseer	Kundara Panchayat Kundara P O Quilon.
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51.	E.C. Porinchu	Panchayat Ex-Officer	Mala Panchayat Mala PO Trichur - 650 732.
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67.	Mrs. Prativa Mishra	Health Education Executive	DANIDA ORISSA Drinking Water Project 1406/3748 Samantrapur Bhuvaneswar - 751 009.

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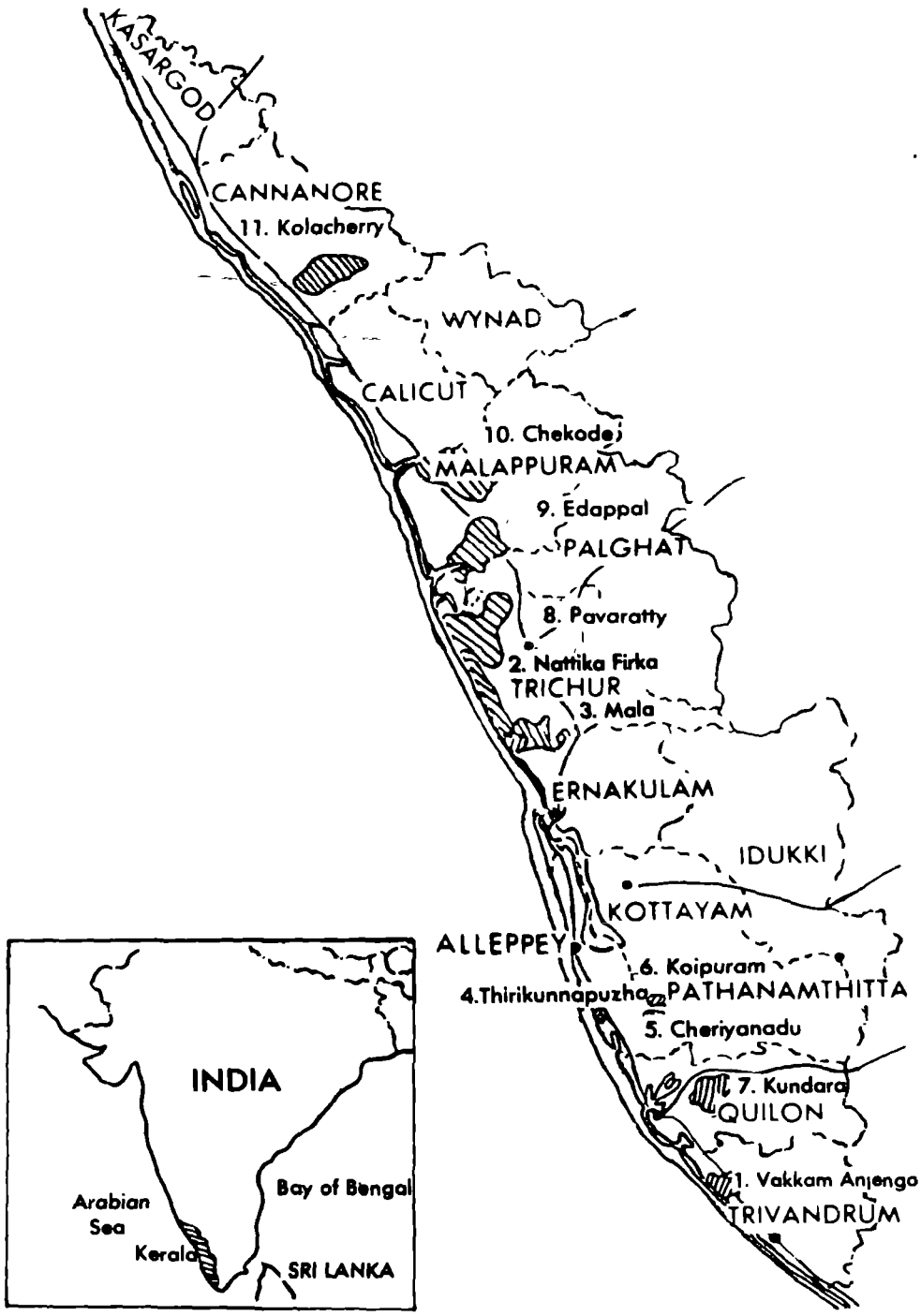
DUTCH - DANISH SUPPORTED WATER SUPPLY SCHEMES



SOCIO ECONOMIC UNITS, KERALA
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