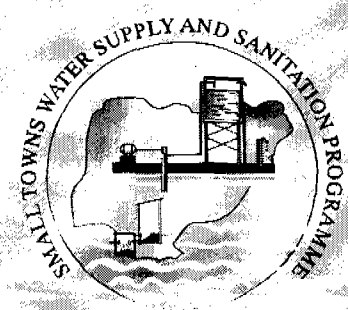
[Community water supply and sanitation conference, May 5-8, 1998, Washington, DC : various papers]

UNDP-World Bank Water and Sanitation Program
Washington, DC, USA

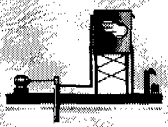
NIGERIA

FEDERAL MINISTRY OF
WATER RESOURCES AND RURAL
DEVELOPMENT

A BRIEF PRESENTATION ON THE PROPOSED SMALL TOWNS WATER SUPPLY AND SANITATION PROGRAMME

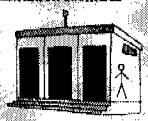


Examples of water supply



wells - boreholes - handpumps - motorised pumps - overhead tanks

Examples of sanitation facilities



improved pit latrine - public toilet

Preamble:

In the course of implementing the World Bank assisted National Water Rehabilitation Project (NWRP) it was discovered that there is a need to define strategy for the development of a nationwide programme that will act as a vehicle for accelerating the national water supply coverage. The Small Towns Water Supply and Sanitation Programme could provide the way to achieve this objective.

It is hoped that the programme will address the root causes to the problem with sector development so as to accelerate coverage of safe water supply and sanitation and to make future development sustainable.

What are small towns?

Small towns are settlements with about 5000- 20000 inhabitants. The term "Small Town" also refers to towns or peri-urban areas with limited infrastructure. It is therefore likely that "small towns" may include towns with more that 20000 people.

Why Focus on Small Towns?

Small towns have generally been overlooked in development programmes because they have fallen outside the main classifications of Urban and Rural areas. About 40 million people are estimated to live in 2000- 3000 small towns.

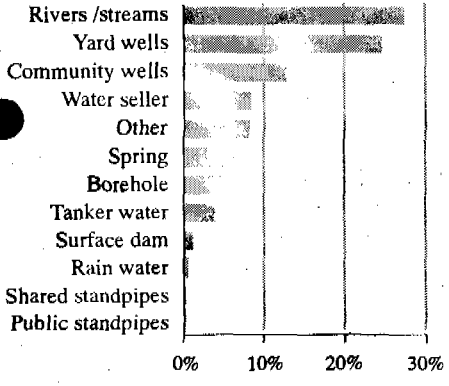
The population growth rate of small towns is expected to be higher than the National average as is the pattern elsewhere in Africa.

What is the water and sanitation situation in Small Towns?

The situation was feared to be bad. A survey carried out in 37 small towns (1 per state + FCT) proved that our fears were justified. People are very concerned about the poor water supply situation and they are ready to participate in nearly any activity that will help them to improve the water supply situation.

The results form the same survey (see figure below) showed that very few people have access to safe and protected water supply. Only 5% get water from protected groundwater such as boreholes and less than 0.5 % enjoy pipe-borne water. Communal wells serve 13% as shown in the figure. More than half of the population take water from rivers, streams and wells, probably of doubtful quality.

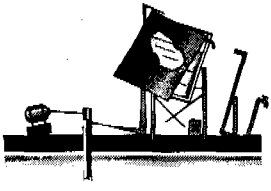
Main sources of water supply in small towns today



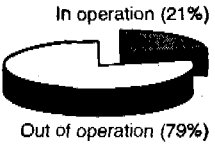
Serious problems with operation of existing schemes:

The survey of the small towns also looked into existing water infrastructures found in the towns. Of 29 completed motorised water supplies, 23 were out of operation. This is 79% of the motorised schemes. Sixteen additional uncompleted and abandoned water schemes were found in the same towns. This shows us that even the little efforts made in the small towns by the Government in the past have not succeeded because of the philosophy of management put in place. Another survey carried out in two states a few years ago for small water supplies in rural and semi urban areas, found that two out of three small water supplies were out of operation.

Broken pumps



Poor Performance of Water Supply



The Ministry (FMWRRD) is aware that something needs to be done to remedy the poor water supply situation in the small towns.

Where is the road forward?

We are not completely sure what the final answers are, but we are sure we cannot continue as we have been doing. A change in approach is urgently needed.

We have to find a new approach which will make constructed water supply schemes to work.

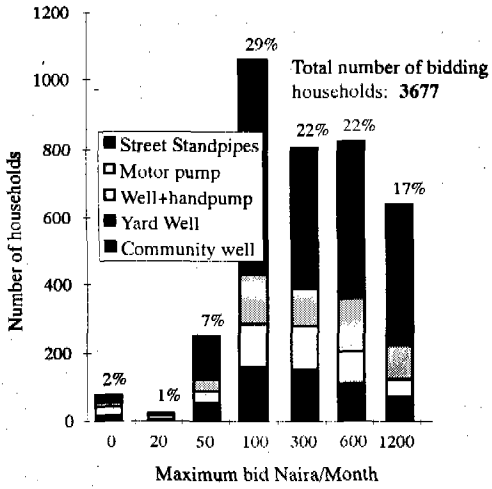
With the large and growing population and with shrinking public funds, accelerated development can only take place if the users or consumers pay their way while the government contributes as far as its resources allow.

Revision:12/11/97

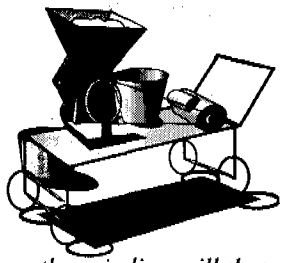
Any positive indication for improvements in the future?

A willingness-to-pay-study for water in 37 Small Towns clearly indicates that people are willing to contribute cash in order to get improvement in the water supply and that is good. The figure below shows that 90% of all 3700 households interviewed are willing to pay 100 naira or more per household per month.

People are willing to pay for water



That amount would cover all costs for construction and operation and maintenance for a well or a borehole fitted with a handpump. Furthermore, more than 60% are willing to pay 300 naira or more per month. This amount would cover the cost for a small scheme with a motorised pump and an overhead reservoir. This finding is very important and encouraging because it shows that it is possible to find desirable and technical solutions that should be fully financially viable and sustainable for small towns. Furthermore, for some people, the actual cost for buying water from a new water supply could be much less than many already today pay to water vendors.



- the grinding mill that always work!

It is also important to realise that there are many things in the small towns which work and which may guide us to find solutions for future sustainable water development. The village grinding mill is a good example of that.

Lastly it is pertinent to mention that the Ministry has now identified a need to plan a programme for these small towns.

A Small Towns Water Supply and Sanitation Programme is being developed

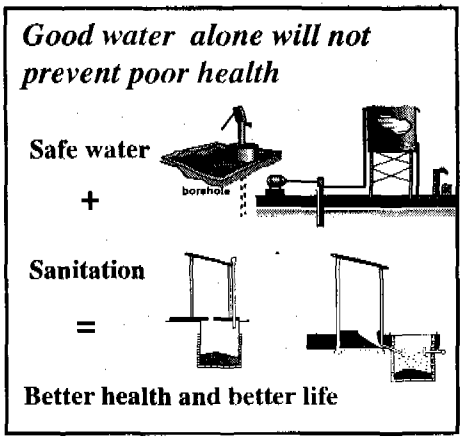
The Federal Ministry of Water Resources and Rural Development (FMWRRD) has

taken the initiative to develop a water supply and sanitation programme for small towns. A consultant was engaged to draft an outline concept. The concept was developed further with data collection during a field survey covering one small town per state to investigate what the situation was like in those settlements. The field survey consisted of a rapid engineering survey and a socioeconomic survey of 100 households per town. In addition to socioeconomic questions, the households were also asked for their choice of water supply in the future and about their willingness to pay for water supplies to be developed. This survey was completed in September 1997. Before the end of the year, a document proposing new policies to the programme will be prepared.

The next proposed step is to pilot and test the new approach over a two year period in a limited number of small towns and to find out what types of schemes people prefer and which they will be ready to put down their money for. It is hoped that a full scale nationwide programme will find support. The scale of such a programme could be to try to cover about 1000 towns by year 2010 (about 50% of the small towns). That will mean starting projects in 100 small towns per year, or 3 towns per state per year on the average. In other words, this is a large scale programme.

Need for a new approach

The programme suggests that it is time we look at things that currently work in these towns. A good example is the village grinding mill. It works for years while the water pumps have stopped working. Why? The same can be said about motorbikes and cars. Many are very old but are still running. So, keeping the water supply in operation is not a question of the technology being too complicated. We believe it is a question of management and division of responsibilities which again is directly linked to ownership of the facilities. Some programmes have tried community participation in the past. The results have not been encouraging because this require a complete reorientation of all the people involved in the implementation of the programmes. One of the major



problems associated with big programmes in the past, has been difficulty of a single focus of sustainability by all sector participants including Community, Consultants, Contractors and the Government. As a result some programmes have changed from being demand driven to supply driven. The challenge is to find how to strike the right balance here so that the water consumers or the users are kept in the centre throughout the development process.

Objectives of the new programme

- to develop a sustainable service for provision of water supplies;
- provide safe water for a large population not adequately serviced by existing programmes;
- accelerate coverage of safe water supply;
- improve public health;
- develop a private sector that can actively assist in sustaining water supply and sanitation interventions in the small towns.

Strategy

(how to achieve the objectives)

- consumers will have the choice of the type and service level for their water supply based on their willingness and ability to pay;
- community based, managed and owned water supply;
- consumers will be responsible for the total operation and maintenance costs, repairs, extension of services and replacement of equipment;
- to build a few sanitation demonstration units in each town to promote better practices;
- to train builders on construction of sanitation facilities for further promotion in the town;
- as owners, the water consumer groups will pay in cash a certain percentage of the construction costs as (a precondition) for taking over ownership of the scheme;
- the Government would be the key facilitator during the planning and implementation phases while after the construction, its role will be limited to monitoring and to give technical advice;
- to encourage the private sector's increased involvement in the water supply and sanitation sector for long term sustainability;
- to review and amend the legal framework to make it legal for communities to own and manage their water supplies.

Key programme elements

Construction of small water supplies such as protected wells and boreholes fitted with handpumps, or with motorised pumps. A basic distribution system with standpipes may be included depending on the consumer choice.

Construction of improved sanitation facilities for demonstration purposes.

Conducting health and hygiene education

Establishing Water Consumer Associations (WCAs) as legal bodies which can manage and stand as owners of the facility. (Thus in one town there may be one or many WCAs.)

Establish a Water Supply and Sanitation Development Committee in each town for coordinating activities if a similar body does not already exist.

The biggest change of all may be that the people making key decisions would now be the consumers or users themselves, with the different public agencies playing a key role as facilitators. This may, for many, be seen as turning the development upside down. Perhaps this is what it is. It is a drastic move, but we believe such a bold move is required to get the development onto a sustainable approach.

Who can benefit from the programme?

A set of eligibility criteria or qualification criteria has been outlined defining key conditions aimed at securing long term sustainability of the schemes.

For any small town seeking programme support, the community must agree to form a water consumer association which on behalf of the consumers will:

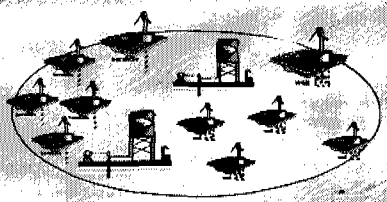
- take full responsibility for all costs and resource requirements for operation and maintenance of the scheme as owner and manager or the same;
- agree to appoint qualified personnel to operate and maintain the water supply;
- agree to pay a part of the construction costs in cash when ownership is legally transferred to the water consumer association (WCA);
- collect revenue on a regular basis and keep the funds collected in a bank account set aside solely for the management of the water supply.

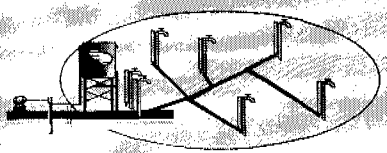
Revision: 12/11/97

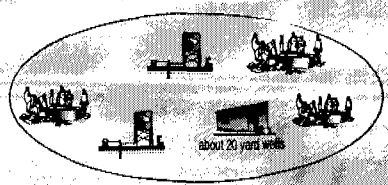
Examples of possible technology mixes

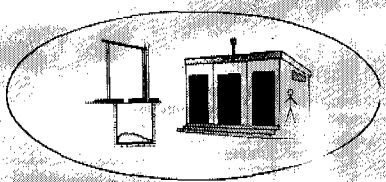
- one scheme with street standpipes, or
- combination of handpumps and motorised pumps, or
- combination of wells, hand/pumps, and motorised schemes

Plus sanitation facilities constructed for demonstration purposes.









Small towns could have one or many small water supplies in the future, depending on people´s choice and their willingness and ability to pay for the services.

Good advice is welcome!

Development of a sustainable and successful water supply and sanitation programme is difficult. We are therefore seeking advice, support and corporation from key stakeholders in the water sector from states, LGAs and interested organisations before the proposal is presented by the Ministry to the Government. We are also interested in your constructive suggestions and advice.

For further information, contact:

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Community Based Sanitation and Health in Uzbekistan:

Lessons Learned from a Pilot Project in the Aral Sea Disaster Zone

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March 1998

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Uzbekistan Water Supply, Sanitation and Health Project, Aral Sea Program 5, Project 5.1:

Consulting Services for a Community Based Pilot Demonstration Rural Sanitation Health and Hygiene Project

Community
Water and Sanitation
Conference
May 5-8, 1998
Washington, DC

HANDOUT: HYGIENE & SANITATION

2 Introduction

2.1 Background

Uzbekistan - a newly independent state in transition

In 1991 Uzbekistan became an independent state and started the cumbersome transition to a market economy. As in many other former Soviet republics, Uzbekistan's economy has suffered from the dissolution of the USSR and the disruption of trade ties with other former Soviet republics. The country's population growth rate is relatively high (about 2.3 % per year). The economic restructuring has negatively affected both health and nutritional standards, primarily for financial reasons, such as the lack of foreign currency for drugs, low salaries for health care workers and constantly low household income under limited and more and more expensive state services (in disruption with the former socialist regime).

Aral Sea depletion due to irresponsible water management

The climate in the project area is arid continental with high yearly temperature fluctuation (-20° in January to 45° in August). Precipitation is scant, and irrigation is indispensable for crop production. The two largest contributaries of the Aral Sea, the Amu Darya and the Syr Darya, have been heavily tapped for irrigation. As a result, the surface of the Aral Sea has declined by more than half in recent decades, with severe environmental damage to the surrounding biosphere and livelyhood systems.

2.2 Guiding principles and underlying concepts

The Consortium's working principles

In its strategy for project implementation, the Consortium takes guidance from its working principles which address primarily the poor and disadvantaged strata of the population, fostering self-help, social justice and reduction of external dependencies in partnership collaboration.

Balanced development for sustainability

The principle of a balanced development is adopted, which postulates that sustainability can only be achieved, if all aspects of human livelihood, social, institutional, economic, technological, educational and the field of rules and regulations are jointly developed in an integra ted appproach.

The concept of health: Good health is physical health, mental health and emotional health, it covers all aspects of human life

According to WHO, good health is not just absence of disease. It involves physical health, mental health and emotional health. But it goes beyond the individual to social and environmental health. Pollution, aggression, greed, "ethnic cleansing" are important manifestations of poor health, just as much as poor physical condition or the spread of epidemics.

What are sanitation and hygiene?

Sanitation refers principally to the safe handling, treatment and disposal of excreta, although the handling, treatment, disposal and recycling of wastewater, solid waste, and industrial waste are related and equally serious functions. Hygiene practices, such as the safe storage and handling of food and drinking water are part of sanitation.

In sanitation projects goals have tended to focus on the number of latrines built, without considering the effect of the many behaviours (hand washing, safe excreta disposal, personal and household hygiene, food handling, avoidance of unsafe water resources) that determine whether new facilities bring health benefit.

Water supply and sanitation - the unseparable twins

Studies[2] have shown that health effects from sanitation are much larger than from improved water supplies, and the effects for improved water supplies are not always found. Therefore, for improving health, sanitation should be accorded the same priority as drinking water supply.

3 Project overview

3.1 The project and its environment

3.1.1 The project area

Karakalpakstan and Khorezm

The region south of the Aral Sea, with a basically agrarian economy, is the poorest region of Uzbekistan, with a significant percentage of the population below absolute poverty. Most of the rural households have no access to potable water of reasonable quality and use inadequate sanitation infrastructure. Between 80 and 90 % of the household budget is spent for food. Average monthly income (incl. family plots and livestock) was about 25 USD in 1994.

The Khorezm Oblast[3] has a smaller rural population living in relatively better conditions than in Karakalpakstan. In contrast, the area has to contend with a high population density (185 persons per km^2 compared to 8.3 persons per km^2 for Karakalpakstan). Surface water from irrigation canals and shallow wells is commonly used for drinking.

The pilot communities

Base line information on the six pilot communities was collected mainly by the local field team members. Discussions, surveys, community profiles, household visits were some of the ways of collecting information on sanitation and hygiene. Examples of community profiles as drawn by the field teams are annexed (annex 2).

A kolkhoz (or sovkhoz) is basically an administrative and production unit with 4'000 to 12'000 inhabitants, usually strongly reminding feudal structures. It is headed by a director (appointed by the central government), who is at the same time political and technical chief of the kolkhoze. The poeple are organised in auls or kishlags (villages) of typically 30 to 40 households with 5 to 7 members each. All the means of production belong to the kolkhoze. There is no base for private business. All necessary infrastructure, goods and services are provided by the kolkhoze, if well organised. Main source of income of the households are pensions for elderly and invalid people.

Cotton production still fully dominates life. E.g. during harvesting, all other activities come to a standstill. It is then useless to make household visits or to organise training courses, also transport for construction material is difficult to find.

3.1.2 Stakeholders and community participation

In each kolkhoz the project is acting through a locally recruited field team, consisting of a nurse, an epidemiologist and a builder (usually the head of a construction br i-gade). The field teams act as the pivots between the "project" (including the superior government levels) and the community members. The quality of their work and their role as sensors for community needs are extremely impo rtant.

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[2] Steven A. Esrey: Multi-country study to examine relationships between the health of children and the level of water and sanitation service, distance to water and type of water used
McGill University, Québec, 1994

[3] Oblast = Province

What is participation in this context?

As a definition of community participation tailored to the context of the pilot communities, the following can be tried:

Informed and free decisions

support individual and community action

Participation happens, when the individual households can explore, discuss and decide what they want to do concerning sanitation and health. The local people must have the feeling, as well as the confirmation, that it really depends on them, whether things get organised and changes initialised.

This of course also implies, that they are allowed to decide not to invest any efforts.

People in the project region are used to the hierarchically oriented instruction giving/receiving type of communication; it is difficult to find out, what people really want or think. Usually their answers reflect the opinion of the superior or the prevailing state policy (in the case of civil servants). "Traditional" participation methodologies (as developed in the last twenty years of western technical cooperation) must be applied carefully.

3.2 Health and hygiene in the project area

Common diseases

Acute respiratory infections, diarrheal and parasitic diseases, tuberculosis, hepatitis A, typhoid and paratyphoid are important problems. Anemia is very commonly diagnosed, whereas malnutrition or diseases like cholera and hepatitis are politically hot issues, and therefore registration unreliable. The main causes of infant mortality (about 30 per 1'000 births) are acute respiratory infections, diarrhoeal diseases and perinatal causes.

Priorities and perceived needs as identified by the population

A mini-KAP study and focus group discussions provided information on perceived needs for sanitation and health, and an insight in local health practices and knowledge on health.

The main findings were:

Basic rules are known

- Men, women, children, health workers and teachers in general know the basic rules. The people in the pilot communities are aware that they themselves and their children can be healthier if they improve their sanitary facilities and the personal and domestic hygiene.

Priority: food and water

- The population perceives food as the main problem in their day to day life, but has also a keen interest in improving health through improved water supply (concern: salinity and fear of polluted water) and sanitation (bathrooms).

Seasonal effects

- Intestinal diseases, anaemia and skin diseases prevail in the summer season; in winter time, acute respiratory infections and hepatitis A are the main concern.

Causes and effects are unknown, also by health workers

- Health and hygiene education is carried out by health workers in hospitals, feldscher/midwives stations, through home visits and at schools. However, the knowledge of the issues and the health education skills of the health workers is limited.

Lack of attractive educational material

- There is little attractive and up-to-date health and hygiene education material available in Uzbek or Karakalpak language.

Focus on curative care

- A strong belief in medical treatment (drugs, interventions) made that the expectations of the population were focused rather on curative than on preventive care.

Current on-site sanitation practice

In rural and semi-urban areas households usually rely on unlined and unventilated dry pit latrines of doubtful construction and poor maintenance. Except for densely

populated zones, where the available space is not enough, the latrine superstructures are simply moved to a newly dug pit nearby, once the old one is full; communal pit emptying facilities are either out of order or too expensive, even in urban areas. The unlined pits usually reach down to the shallow ground water table, thus posing a threat to drinking water resources. Hand washing facilities (bucket and soap) are not commonly available. Maintenance and cleanliness of public facilities leave much to be desired.

Economic decline and communist heritage

Evidently some of the unhealthy practices can be attributed directly to the worsening economic situation and the lack of initiative to try out alternatives, e.g. soap is very expensive, but there is no informal production or use of alternatives. In general, people expect health workers and government authorities to take care of their health and seem to take little responsibility for their own health.

3.3 Project activities and outputs

Three-tier approach: social marketing, education, demonstration

The Consortium used a three-tier approach for promotion of health and behaviour change: social marketing (promotion), training and education, sanitary construction (for demonstration purposes). A mix of social marketing (as opposed but complementary to participation, targeting a wide audience for little costs involved) and community participation (keeping in touch with reality, adjusting communication strategies and assessing project impact) has proved effective. At the same time, the approach aimed at a new, self-help oriented attitude towards community development.

Promotion of hygienic pratices and building confidence in project actors

For effective health promotion, the focus was on prevention and treatment of dia r-rhoea and skin and eye diseases during the summer and of respiratory diseases du r-ing autumn and winter. Also, the project rather based its messages on traditional values and skills instead of new and commonly unknown practices.

A wide range of various promotional tools have been explored, from the traditionally used mass media to the unconventional theatre and pop group. Among other activities, attractive events like soccer games were organised to lay a positive background to project activities; "play-days" for school children during holidays promoted a positive attitude towards hygiene (for a full list of activities see annex 3).

One-way information is the lowest level of participation; it has been considered as appropriate under the prevailing circumstances. Information dissemination has been supported by

- regular orientation meetings at different government levels (central, provincial, district, kolkhoze level)
- mass media involvement (interviews and reports on TV and radio, newspaper articles)
- broad dissemination of the bi-weekly Newsletter (target audience: communities and local government)
- monthly progress brief (target audience: sector related organisations and gover n-ment structures, project management)
- contractual reporting (inception report, quarterly progress reports, final report).

There is room for innovation

The health system in place is a large organisation with strongly fixed working methods and organisation. Overall policy developments in public health in Uzbekistan offer a

context for innovations but there is as yet no critical mass of health staff able to manage the change and trained to meet the new requirements.

The Centres of Health play a central role in health education within the population and among health workers. However, their working conditions are minimal (transport, equipment, skills), prestige is low, educational material is old-fashioned and boring and the centres are usually understaffed in relation to their tasks.

Sanitary construction for demonstration purposes

Toilet construction by the project had essentially two objectives: first as an eye-catcher for promotional activities, then to identify best suitable types and techno logy.

Main criteria: acceptance, hygiene, economy

Main criteria for the toilet design were acceptance by the users, prestigeous yet low-cost constructions, possible contribution in labour and locally available construction material (weed, mud bricks); maintenance: easy to clean, easy to remove (removable latrine) or to empty. Difficult ground conditions had to be considered: aggressive ground water, unstable soil (fine sand), high water table.

"Er-uste" is most popular of four types of latrines

Of the tested four types of latrines, the ventilated "Er-uste" [4] type has become the most popular one. Nightsoil composting is not commonly practised and would require sp e-cial training and promotional input.

Handwashing basins

As a standard, all demonstration latrines have been equipped with handwashing b a-sins, and the owners advised to make sure there is water and a soap [5]. Regular checks by the field teams should motivate for their good use.

No conditions for private business

The development of a private enterprise out of the trained construction brigades has failed, not for lack of business opportunities, but mainly lack of enabling factors. E.g. transport and raw materials would have to be purchased on the black market or against bribes.

Health monitoring

Objective: assess health status and impact of project activities

Health monitoring during the pilot project aimed at assessing the health status of the pilot communities with regard to sanitation and hygiene related diseases, to monitor improvements to be attributed to the pilot project, and to provide recommendations for the current Uzbek health information system.

Health data unreliable for various reasons

Despite certain corrective measures taken after a first run, the quality of the data remained doubtful. The project was successful rather in showing obstacles and limitations to health data collection.

Supporting activities:

Pollution by latrines

Private production of handwashing basins

A number of supporting activites have enhanced project strategies and local ownership exploring at the same time locally available expertise. For instance, a comprehensive study was carried out by the Academy of Sciences on the contamination of the subsurface water by pit latrines, the production of handwashing basins was ordered at different local artisans, and the impact assessment on project activities has been monitored by a local sociological consultant [6].

[4] "Er-uste" in Karakalpak language means "elevated" toilet

[5] In many places the households were proud to dispose also of a towel, however of rather doubtful hygienic benefit

[6] EXPERT Sociological Centre, Tashkent

Project impact:

- reduction of diseases

- good information strategy

- popular latrines

This impact assessment carried out after six and twelfe months in the pilot areas states that "officials, specialists, healers, the community noticed, that as a the result of project activities, the number of acute intestinal diseases and diarrhoea decreased twice in 1996 compared to the previous year". And further: "Respondents say, that the main source of information on healthier life, sanitation and hygiene for them is the project newsletter". And last: "when the foreigners go away, and people are paid subsidies for the latrines, they will start themselves building them. They cannot be stopped already..."

4 Focus on key components

4.1 The Coupon system as subsidizing scheme

The Coupon (voucher) system (see sample Coupon in annex 4) has been designed to cover as many aspects as deemed necessary to assure

- ownership through the selection of the type of toilet and of the kind of cost-sharing arrangement by the users;
- quality of the construction,
- transparent accounting, and
- good sanitary practice by the users.

A kind of egg-laying woollen milk-pig was born. It has hence become too complicated to be understood by the users, including the field team members, kolkhoz accountants and household members.

After the rather complex Coupon system other, simpler ways of monitoring latrine co n-struction have been identified and tested. In addition, aiming at high geographical coverage with a limited construction budget, subsidies must get cut down to an optimum level. Possible forms for less administrative effort and lower subsidies are co m-pared below:

1. Coupon system
The substructure is subsidised by the project by 90 %, the superstructure by 50 % (cost for the project: approx. 100 USD)
→ *too complicated*

2. Free slab plus
The concrete squatting slab and technical assistance are provided free of charge; 40 USD for material are given to the household after finishing the toilet; less administrative costs involved.
(project: approx. 50 USD + technical assistance)
→ *popular (cash income)*

3. Substructure only
The substructure is subsidised 100 %, the superstructure 0 %; this could be a possibility for mobile mobilisation teams (project costs: 70 USD)
→ *doubtful finish*

4. Shared subsidy
This is a kind of Coupon system for very poor areas, whereby the kolkhoz

administration contributes with a bigger share in kind: according to its possibilities, it can provide labour and transport, bricks, sand, gravel, cement and concrete bars; the project contributes with handwashbasins and technical assistance and those items that the Kolkhoz cannot make available; the household provides roofing, labour and the door, as well as any decorative adds-on.

4.2 Social marketing

4.2.1 Strategy formulation

A sociological study with the objective to lay the basis for a promotional strategy was carried out by a local sociologist. The consultant proceeded by individual in-depth interviews with villagers, selected at random in different groups of sex, age, social status. The report of the consultant was completed by a enquiry on the use of mass media, to find out, what would be the best emission times and programmes to "attach" our messages.

The study was expected to clarify the following issues:

- Description of the system of values of the interviewed and possible extension to the whole community; indicate the priorities.
- Identification of social, professional, political or other groups in the community which need to be addressed differently in a promotional campaign
- Recommendations on ways of propagating our "message" (channels, e.g. opinion leaders, TV, posters, pamphlets, traditional healers, etc.)
- Recommendations on the form (authoritarian, conducive, educative, etc.) and the contents (personal hygiene, use of toilet, waste disposal, etc.) of the "message".

In a follow-up workshop involving education and communication specialists from TV, radio, theatre, etc. and project team members a strategy was designed. The workshop participants came to the conclusion that as an immediately realisable action, the local children's theatre, accompanied by a popular music group would be hired to tour in the villages and perform funny sketches on correct hygiene behaviour. These theatre group performances had great success in the communities, and gave an excellent background for hygiene messages.

4.2.2 Dissemination strategies

The following strategies are based on the experience that

- communication is easiest within groups with more or less specific, common interests: young women, sportsmen, professional groups, schoolchildren, mayors, etc.
- poeple can be mobilised when things really matter to *them*, when they are touched *personnally*.

a) Neighbour-to-neighbour

Basic assumptions:

In order for people to be able to adopt something new,

Information

1. They must know about it:
Various channels of information, simultaneously and repeatedly used, stimulate an active interest for a new idea.

Get the feeling

2. They must be able to explore its usefulness physically and mentally (demonstration and group discussion).

Nobody can explain the details and implications of a new thing or behaviour in a more convincing way, and discuss possible adaptations to their own situation back home etc., than an experienced fellow villager.

Enabling factors

3. They must have the means to implement it; adverse circumstances can be addressed by offering local income generation opportunities, small credit schemes, assistance of the kolkhoz administration, etc.

Social behaviour

4. The effect of social pressure towards (or against) a certain behaviour in a given context - especially in a rural village - must not be underestimated.

Organise neighbour-to-neighbour events

Once a kolkhoz has been selected based on mutually agreed terms of collaboration, activities start within a pilot aul. As a first practical measure demonstration latrines at semi-public or other easily accessible places are built. During or after construction, different promotional events are organized, involving people from the same community, or visitors from neighbouring kolkhozes. The dissemination principle by neighbour-to-neighbour events is visualised in annex 5.

b) The Child-to-Child approach

A child-oriented, practical process

Child-to-child is a way of learning about health which encourages children to participate actively in the process of learning. In the approach there is a strong link between what is learned and what matters to children, their families and communities. Things learnt at school are immediately put into practice. It can not be learnt in one lesson and forgotten because the learning and development takes place over a longer period of time, and applying the new knowledge and skills becomes part of the day-to-day life of the children. More details and the concept of this method is given in annex 6.

Children learn easily from each other

Children can be great and enthousiastic communicators; they copy and learn from other children more easily than from adults, for these reasons, children can be best partners in promoting better health.

5 Conclusions and lessons learned

5.1 Communication and participation

▪ Inter-cultural communication is more than merely translating one language into another;

this by the way applies not only for the language but also for the rural/urban culture and communication barriers within a country.

▪ Corruption and bribes, or incentives and respect for local traditions?

With the new anti-corruption paragraph in the World Bank standard contract, this is a controversial issue. In traditional society, it is generally accepted that the leader has to get some token, this is only due respect. If you don't comply, your project may face all kinds of unexplained difficulties and failures.

▪ Decentralise project organisation and live with the communities as much as possible

Share common experiences (weddings, national holidays, etc.) with the communities; this is time-consuming but gives very rewarding insights, essential for your project

strategy, and promotes mutual understanding. The "Boeing-experts" are - very rightly so - looked at with suspicion by locals.

■ Participation of households in the project should be voluntary and all members involved should know about their rights, duties and options.

Conviction through understanding is the base for self-promoted and sustained action.

The "instructive" way of communication is common not only to the communities, but also to the field team members; therefore, it will need more time and experience than covered by the pilot phase, to first change the attitude of the field teams towards the villagers, before a change in communicational behaviour at the "grassroots" can be expected

■ Participation in centrally planned economies?

Participation needs a flexible and process-oriented approach

The World Bank and Uzbekistan being centrally planned economies, the question of community participation is somehow looked at differently by an NGO. Based on a participatory approach, the implementation of the project must be process-oriented, rather than target-dictated, in order to adapt the development process to the rhythm and the absorption capacity of the communities, or else, to the wish to change the situation in a way which is expressed by the communities themselves. Such processes need time, and cannot be rigidly planned in terms of quantities, deadlines and fund allocation.

Participation leads to self-reliance - a hot issue in a country in transition

The top-down concept of community involvement is still strongly shaped by the former communist regime; participation in the new, self-reliant way leading to more autonomy and independence would not be understood by the population, nor accepted by local political leaders. A pragmatic balance between traditional and modern methods needs to be adopted.

5.2 Social Mobilisation and Promotion

■ For best results address identified needs of the communities and use modern PR methods

People deserve it to be taken seriously

The people can more easily be motivated and mobilised also for activities that were not their first priority, when they see that they and their problems are taken seriously. Projects should provide a little fund for "marginal" purposes (e.g. reopening kindergartens) dealing with problems identified by the communities. These can become important entry points for project activities.

Address people's needs and develop popular promotional tools

People's reaction first showed surprise and sometimes irritation about the projects' emphasis being given to sanitation and hygiene. At the same time, however, the attention of the project staff for the well being of the population was perceived positively. This in combination with activities to address needs identified by the population and promotional activities resulted in a positive attitude towards the project and willingness to participate in project activities.

■ The crucial role of the enabling environment

The private sectors role in sanitation services provision can be expanded only if the government creates a supportive institutional, legal and financial environment; also, willingness to pay for such services is low, unless a high public awareness of the health and social benefits of improved sanitation can be created.

■ Insist on and ensure application of agreed standards of quality

Good quality is crucial to demand creation. If a product does not meet the customers' expectations, it cannot be sold; this applies to consumer goods as well as to latrines or training courses.

■ Subsidising schemes: simple and transparent

When designing subsidising schemes first strive for straight-forward and easily understood mechanisms rather than for social equity and differentiating complicated systems. This might at the end be a better service to the poor, than something they reject because they don't understand how it works.

5.3 Health education

■ The crux with the public facilities

No public latrine without accompanying measures for efficient and hygienic operation

Public latrines in rural areas cannot be decently operated on a cost-recovering base. No public latrines - paid or unpaid - should be built, without accompanying measures (awareness-creation/surveillance/ sanctions).

■ Combine fun and education

Education should be joyful and creative

Entertainment has proved effective to prepare the ground for the project's messages; apply internationally recognized concepts in education, in which for example learning can be a joyful and creative experience rather than an endured obligation.

■ Use innovative health promotion

Let people talk to their folks

Include and make use of "unprofessional" lay health promoters (neighbour-to-neighbour, child-to-child, mothers, colleagues, teachers, mullah's, traditional healers, etc.).

5.4 And finally...

■ Make sure that the bridging from the pilot to the full scale programme is assured before starting the pilot

This pilot ended in February 1997. Subsequently the initiated processes collapsed, burrying with them the hopes and expectations of the communities, and not least the good faith that had been built in the project actors.

ANNEX 1

THE SWISS NGO CONSORTIUM MANAGEMENT **Karl Wehrle-SKAT** **Antoine Weber-Swiss Red Cross** **Hans Schaltenbrand-HELVETAS**

SKAT-St. Gallen **Swiss Centre for Development Cooperation in Technology and Management**	**HELVETAS-Zurich** **Swiss Association for International Cooperation**	**SWISS RED CROSS-Berne** **Association as part of the international Red Cross and Red Crescent Movement**
Technology Networking with techn. organizations in Germany, England, France (GATE/ITDG/CRATerre)	Networking with other int. NGOs and with own experience in 20 Country Programme activities & its vide pool of professional experts 100'000 members and private contributors within Switzerland	Red Cross and Red Crescent Societies Networking Services
Sanitation Backstopping Specialized in: • Technical Water Supply & Sanitation • Building & Building Materials • Small and Medium Enterprise Development • Hydropower Energy	**Institutional & Approach Management** Participatory and partnership-self-help-oriented approach in: • Rural Infrastructure • Sustainable Use of Natural Resources • Education and Culture	**Health & Hygiene Backstopping** Specialized in: • General and Primary Health Care & Hygiene • Health Services & Structures
Expatriate field staff: Heini Mueller & Erwin Schelbert, Sanitary Construction Specialists Ato Brown, Sanitation Planner Karl Wehrle, Directorate member	**Expatriate field staff:** Frank Haupt, Teamleader (Infraconsult) Ueli Scheuermeier & Bruno Strebel, Participatory Development Specialists Kerim Volkovyskii, Information Processing Specialist (Infraconsult)	**Expatriate field staff:** Denham Pole, Health & Information Specialist Adèle Beerling, Health & Hygiene Promotion Specialist

ANNEX 2

Khorezm Oblast:	**dustlik**
Rayon:	**Shavat**
Kolkhoz:	**Makhtumkuli**
Department:	**dustlik**

(the following information on the community has been collected and edited by the field team members themselves)

1 ENVIRONMENT

1.1 Political organisation

The Makhtumkuli kolkhoz is situated in the South-West of Khorezm Oblast, Shavat rayon. In the South and West it borders on Turkmenistan. Kolkhoz Makhtumkuli is divided into four departments: Dustlik, Akkul, Aribek, Ishankala. Each department consists of a number of brigades: Dustlic - No 13 to 18, Akkul No 11 and 12, Aribek No 6 to 9, Ishankala No 1 to 5. The project is working in Dustlik department, brigade No 16. Every brigade is led by a brigade leader. The shirket aksakal is elected by the community and approved by the kolkhoz rais [1]. The aksakals of each kishlaq constitute the kishlaq soviet, headed by the aksakal of the Kishlaq Soviet. The Makhalla Committee (chief Radzapov Mashrip) discusses all kinds of social and economic problems and supplis the population with flour and oil.
The board of the kolkhoz meets every day in the evening at 7 o'clock to discuss the process of cotton picking campaign.

1.2. Transport

The main transport is a bus. 14 households in the project area own a private car and more than 50% have motocycles.

1.3. Agriculture

Agriculture: the main crop is cotton, but also wheat, rice and sorgho are important agricultural products. The fields are watered from the Shavat canal. There are some collector channels as well. Wheat is sown in autumn and harvested in july. Cotton and rice are sown in may and harvested in mid-september. From october till the end of november, sometimes well into december, the farmers are assisted in harvesting by students of higher and secondary institutes and by school children. This means that cotton picking and rice harvesting have the priority and all other work is slowed down.

1.4. Infrastructure

The houses are lined in the streets. People live in their own houses, usually one or two storey buildings. The houses in the centre of the kolkhoz are supplied with gas, electricity and water, but still many houses in the project area have neither gas nor electricity. Dustlik is a recently settled area, which is still growing very quickly. The construction of new private houses is going on, more than 35 houses are being built in the project area.
There is one general shop, a butcher and a small enterprise producing cool drinks.
Sanitation: None of the kolkhoz public or private buildings have a sewage system. Most of the houses have pit latrines, most of them are full and old. The private and school latrines are not well maintained or cleaned. There is no sewage disposal truck available in the kolkhoz, it has to be ordered from the rayon, and is payable. Animal excrements are taken to the fields for fertilizer.
Waste: There is no refuse collection place in the kolkhoz, therefore it is burnt in the house yards. Every spring the kolkhoz administration provides the population of the kolkhoz with transport facilities for disposal of waste from their courtyards. The waste is taken outside the dwellings to some place which is not under cultivation.

[1] the kolkhoz director

Drinking water: In the kolkhoz tap water is supplied three times a day during 1 hour, but in the project area there is no piped system yet, and people drink well water. The quality of the well water is not good and the population of the project area says that the project would better supply them with good drinking water, gas and electricity and then they will build new latrines.

2 HISTORY

The kolkhoz was founded in 1933 as a part of 11 kolkhozes. Then in 1961 it was named *Communism*, and in 1991 it was renamed *Makhtumkuli*.The inhabitants of the kolkhoz are very interested in the history of the area. There is a building in the kolkhoz where Khiva Khan had his residence, which now it is the kolkhoz hotel.

3 GENERAL POPULATION DATA

There are 86 households in brigade No 16 with a total population of 534 people; the average household consists of 6-7 people.
Age distribution: Children under 5 years - 61; under 14 - 232; under 65 and older 302. Turn over of the population is slow, only few people leave the kolkhoz or move to it. From january till september 8 children were born. There are 8 pregnant women in brigade No 16.
Vulnerable groups: No information.
Ethnic groups: There are not any ethnic groups in the kolkhoz. The bulk of the population is Uzbeks.
Religion: All the people are Muslims. Many men gather in the mosque on Fridays to pray (namaz), tois and funerals.
Social classes: The population is not divided according to their social belonging. They live in makhallas, mainly farmers, but there are small number of teachers, doctors, engineers, businessmen and they do not differ much from the farmers who grow cotton, rice, wheat, sorgho, because they themselves have plots of kolkhoz land where they grow these products.
Employment: Due to Uzbekistan's shift to the market economy, there are no unemployed people in the kolkhoz, everybody is engaged either in agriculture or in business.
Recreational activities: There is a football team in the kolkhoz and other sportsmen who participate in the rayon competitions. The women's committee is not very active. People of the community often meet each other at the weddings, funerals and other gatherings where they discuss all kinds of social, economic and political problems.

4 Health and other services

4.1 Health services

There are 3 FAP (Feldsher Midwifery Post) and 1 SVA (Ambulatorium) in the kolkhoz. The nearest hospital is in Manak (kolkhoz Khorezm, 15 km.) There are no private practitioners, clinics or health services. One traditional healer in the pilot area (a girl of 20 years old) treats mainly children, sometimes adults but she is not very popular.
Sanepid is based in the rayon centre, and an epidemiologist visits the kolkhoz two times a week.
Previous government activities on health: Vaccinations, health education of the population, sanitary checks by Sanepid, distribution of ORS in summer for treatment of diarrhoea.

4.2 Social services

Social services are provided by the insurance agency who takes care of invalids, elderly and lonely people who have no family to help them. Also school children support people in need, as well as the health workers who visit them regularly. There are neither alcoholics nor drug addicts registered in the area.
It is fairly new makhalla, very many new houses are being built, but many houses have neither gas nor electricity, therefore the nurse said that a latrine is not their priority. Some of them have new latrines and they can be improved by a sanplat and ventilation pipe.

4.3 Education

Adult education: For professional updating the doctors go to Tashkent every 5 years and nurses to Urgench.
Schools: There are 3 schools in the kolkhoz, one in the project area with more than 1000 children. The appearance of the school is very glummy, it was not repaired for many years, the school latrine is in a very bad state, it cannot be rehabilitated.

5 Perceptions in the area

Issues that the community has expressed concern about in the past and present are money, building houses, marriage of their children, lining water, gas and electricity to their community, especially to the brigade No 16.
The main problem in the project area is the infrastructure. Residents complain of the bad quality of water.
The population lives in friendship, there are not any conflicts between the residents. The attitude of the local population towards officials is respectful and towards the politicians neutral. Peoples Democratic Party of Uzbekistan is not very popular in the kolkhoz (5 members).
Attitudes and beliefs concerning health: Most of the people trust in health services, but they do not consult a doctor until they feel very sick, for lack of money to pay for the medicine.
Felt needs for health education and health care services: People are keen to know more about their health; they would welcome to have modern equipment in their FAPs and SWAs for analyses.

6 COMMUNITY STRUCTURE, NORMS AND TRADITIONS

The usual family structure: father-in-law, mother-in-law, father, mother, children (5-6), there are few young families.
Opinion leaders: Rais, aksakal, shirkat leader, mullah in every makhalla.
Power structure: Kolkhoz board, kishlaq soviet. The main power in the kolkhoz is in the Kolkhoz Board. They decide all the economic and social problems in the kolkhoz. The kishlaq soviet committee also solves social problems. There is a Trade Union Organisation, but it is not so powerful as it was before.

7 ORGANISATIONS

The **makhalla committee** meets at least once a month to solve some social problems (e.g. to organize a wedding party etc.)
Women's groups are grouped according their age, they often meet at weddings, birthday parties and other celebrations.
Youth groups, like the former Young Communist League now Camolat are popular only at schools.
Trade Union Organisation
Clubs: There are sports clubs at schools and a National Ensemble in the kolkhoz.
There is **one NGO** - Fakhrialar Kengashi (president: Yuldash Artikov), the committee of elderly people.

8 COMMUNICATIONS

Two houses in the project area have telephones. The brigade has no telephone. A radio is functioning in the kolkhoz office.
Sources of information are TV and radio (almost every house has a TV set and a radio), newspapers of the oblast and rayon, kolkhoz radio stations and social gatherings. Only a few people subscribe to local and oblast newspapers because they are very expensive. The project Newsletter is distributed only to the project area (about 70 households).

ANNEX 2.1

karakalpakstan:	**MATEKE DJUMANAZAROV**
Rayon:	**kegeyli**
Kolkhoz:	**MATEKE DJUMANAZAROV**
AUL:	**karasirak**

(the following information on the community has been collected and edited by the field team members themselves)

1 ENVIRONMENT

1.1 Political organisation

Kolkhoz M. Jumanazarov is situated in both West and East sides of the road Kegeyli - Chimbai. The kolkhoz lands are watered by the Kara Sirak canal. Cotton plantations are spread along the both sides of the tarred road. There are several drainage channels among the cotton fields which discharge their waters into a big collector channel.

1.2 Transport

Formerly, the main source of transport was a bus, but now it doesn't come to the aul. Two people have private cars, and there are 5 motorbikes and 3 bicycles.

1.3 Agriculture

Cotton, rice, wheat, corn and sorghum are the most important agricultural products. Wheat is planted in autumn and harvested in July. But it should be mentioned that this year the kolkhoz could not get wheat because it was frozen in winter. Cotton and rice are planted in May but they were planted very late because of the late spring. The farmers are assisted by students of higher and secondary institutions and by schoolchildren from october till the end of november. This year the students of the Agricultural Technical School from Nukus are helping with cotton picking. In october and november cotton picking and rice harvesting are the priorities and all other work is slowed down.

1.4 Infrastructure

The houses in the aul are lined in the streets. The majority of people live in the houses built by the government, but then they had privatised them. Some live in the houses which they themselves had built. Usually all the houses are one storey buildings. The houses are supplied with gas, electricity and ECOS water. There is a two storey school, a two storey kindergarten, a shop, a library. There are departments of the rayon post office, telephone/telegraph and a savings bank in the aul.

Sanitation: None of the kolkhoz public or private buildings have a sewage system. The private and school latrines are badly maintained and all of them are dirty and full of excrements. There is no sewage disposal truck available in the kolkhoz, it has to be ordered from the rayon and is payable. Animal excrements are taken to the fields as fertiliser.

Waste: There is no refuse collection point in the kolkhoz, therefore it is buried or burnt in the house yards. Every spring the population of the kolkhoz cleans the surroundings of their houses and take the waste outside to the fields which are not under cultivation.

Drinking water: The population of the Karasirak aul use piped water for drinking. There is ECOS-50 in the aul which supplies the aul with water three times a day during 1 hour.

3 GENERAL POPULATION DATA

There are 157 households in Kara Sirak aul with total population of 1046 people.

Age distribution:

children under 1 year of age	31
children between 1 and 2	22
children 2 - 3 years	30
3 - 5	29
5 - 7	89
7 - 14	208
15 - 19	121
20 - 29	206
30 - 39	107
40 - 49	73
50 - 59	69
60 and older	68

Lonely people - 3
II group invalids - 18; all of them get pension from the government.

Most of the inhabitants of the aul have higher or secondary education. The majority of the aul population work for the government. There are no people who are registered at the rayon employment office.

3.2 Occupation of the population

school children	240
health workers	16
tractor drivers	28
workers	300
drivers	1
teachers	33
house keepers	6
retired workers	120
invalids< including war veterans	18
children who does not go to school	196
others	4
artisans	5

Turn over of the population: very few people leave the kolkhoz or move to it. This year ten families have left the kolkhoz.
The **birth-rate** is 31
The **average family** size is 7-10 people.
Ethnic groups: there are no ethnic groups in the kolkhoz, the majority of the population are karakalpaks and kazakhs
Religion: Muslim.
Social classes: dehkans (farmers), intelligentsia (teachers, doctors, health workers) but they do not differ from each other and live friendly in their community.

4. HEALTH AND OTHER SERVICES

4.1 Health services

There is one ambulatorium (SVA) in the kolkhoz with one doctor and 8 nurses. There is an ambulance in the SVA but it is broken. There is a toilet in the yard of the SVA. It was built long ago and was not emptied since that time. There is a FAP in the Karasirak aul. It is accommodated in a very old building together with the rayon post office department. It is very difficult to carry out health education and health promotion work in a building like that. It has no telephone connection. Three health workers work in the FAP (one feldsher, a midwife and a children's nurse).
The main occupations of the midwife in the FAP are: to register pregnant women, to control their health up to delivery; family planning; of a children's nurse: home visits to mothers with children under 1 year and control of other diseases.
There are no private doctors or clinics .
There are two traditional healers in the aul. They are popular in the aul. Mothers often visit them if their children fall ill.

Morbidity data of the Karasirak aul as for 1995-1996

	1995	1996
dysentery	3	4
typhoid fever	1	-
hepatitis	1	-
acute respiratory disease	7	4
tuberculosis	4	5
bronchitis adults	1	1
bronchitis children	-	-
rheumatism	2	2
anaemia	87	87
mortality rate including children under 1 year	10	6
birth rate	31	

4.2 Social services

There is a post office department, a savings bank department, a shop, a telephone exchange, a house of culture, a library and a public bath which is not operating at the moment.

4.3 Education

Adult education: Adults update their knowledge either in Nukus or in Tashkent. There are no evening school or any other educational institutions in the aul.
Schools: There are two schools in the aul. One is in the centre - 2 storey standard building with central heating. Another one is accommodated in a small building and heated by wood and coal. 20 pupils study in it.

5 Perceptions in the area

1. The main problem of the population is the drinking water quality. They have an ECOS plant in the aul but it doesn't treat the water properly.
2. The kolkhoz is unprofitable and the workers did not get their wages for two years.
3. Not a single house in the aul has a bath.
4. The health workers complain of bad working conditions. Their FAP is in an adapted building, very cold inside and it is very difficult to serve the patients especially small children.
5. Lack of food products, soap and detergents.

Attitudes and beliefs concerning health: Many people in the aul understand the importance of health promotion but some mothers do not fully understand the usefulness of immunisation in prevention of many diseases. The health

workers have to visit them several times and ask to bring their children for immunisation. Some people visit traditional healers justifying it by the fact that they have no money to buy medicine.

Felt needs for health education and health care services: The FAP is poorly equipped. There are no even simple facilities such as scales, containers for keeping cotton wool and bandages. The health workers need books, booklets and posters on health education and health promotion in the Karakalpak language. They need disposable syringes, needles, first-aid kits, medicine etc.

6 Community structure, norms and traditions

The usual family structure: Families in Karasirak aul are large. Usually they consist of a father, a mother, married children and small children. If there are two sons in the family one of them builds a house of his own and separated from the family.

Opinion leaders: The aul has its own aksakal whose opinion is respected by the population. Also people respect the rais and aulsoviet aksakal. Elderly people and a mullah are the most respected people in the aul.

Power structure: The power is in the hands of the kolkhoz board. Some problems can be solved by the aksakal of the aulsoviet. The the department head is responsible for the work on the cotton fields.

7 Organisations

There is a Trade Union organisation. The chief of it is Seidametova Venera. She is very active and helps to organise many activities in the kolkhoz (football match, concert, controls the work of the kindergarten).

There is the Youth organisation but it is active only at schools.

There is no data about the members of the People's Democratic Party.

8 Communications

Almost every household in the aul has a TV and a radio. About 30 houses have their own telephones. People in the aul do not subscribe to the newspapers because they are very expensive. They read the newsletter published by the project with great interest.

ANNEX 3

Promotional Activities

Target groups:	Women	Men	Children	other
Strictly promotional:				
Soccer game		■	□	authorities
Play days at schools	□		■	
Puppet theatre with schoolchildren	□	□	■	teachers
Children's poetry (drawing booklet)	□		■	
Reopening Kindergartens	□	□	■	teachers
Child health chart	□		□	nurses
Cleanliness competition	■	□	□	
Theatre performance and concert	■	■	■	authorities
Lottery	■	■	□	
Demonstration of toilets	■	■	□	authorities
Newsletter	■	■	□	
Cartoons on sanitation and the project	■	■	■	
Newspaper articles, TV/radio emissions	■	■	□	
Logo (competition with artists; project promotion: stickers, T-shirts, balloons, etc.)	■	■	■	great public
Posters	■	■	■	great public
can be used for promotion:				
Focus group discussions	■	■		
Child-to-child training/teaching	□	□	■	teachers
Household visits	■	■		
Community profiles	□	□		authorities
Seminars for field teams/health workers/Centres for Health				specific groups
Production of sanplats and toilets	■	■	■	authorities
Handwashing basins	■	■	■	
Contacts with authorities				authorities
Studies, surveys (e.g. KAP, sociological survey, health data collection, use of public baths etc.)	□	□	□	

ANNEX 4

Coupon Nr	Date of issue by the project: Stamp and signature To accountant:

1. Item sold:	☐ A - Er Uste	☐ Sanplat 60x60
	☐ B - VIP	☐ Sanplat 120x120
	☐ C - Moveable	☐ Substructure
	☐ D - Double pit	☐ Superstructure
Name of beneficiary:		Household number:
		Catalogue Price: som
		Contribution of beneficiary: som
☐ cash	☐ deducted from my account in the kolkhoz	☐ in kind
Date:	Signature of beneficiary:	

2. Buying of SanPlat/Toilet:	**Received contribution of beneficiary:**	som
Date:	Number of SanPlat:	Stamp and signature of accountant:

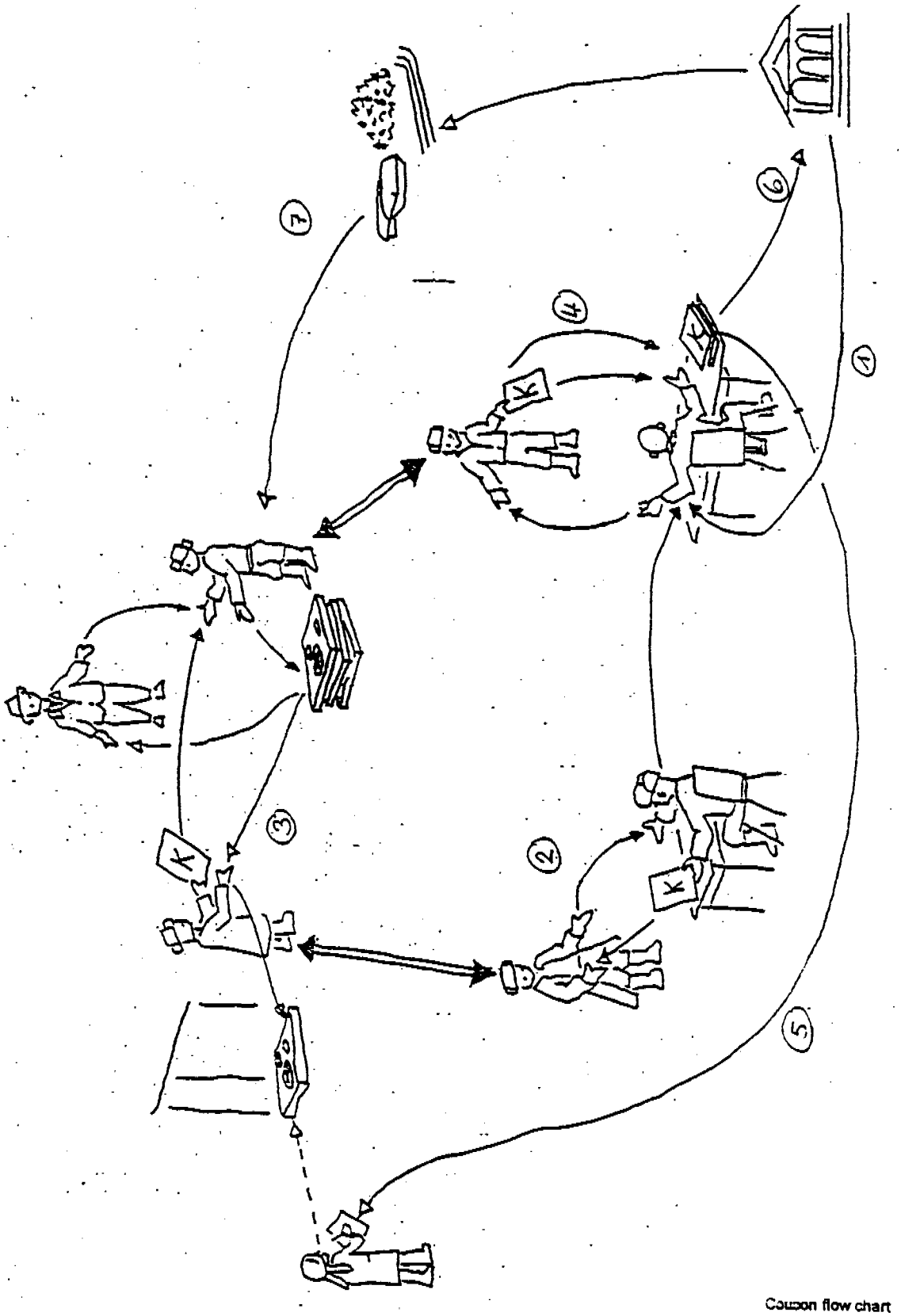
3. Quality control by supervisor Comments: Approved (quality conrol form is attached):	
Date:	Signature of supervisor:

4. Cashing the coupon: Name of builder: Reception of above sum confirmed:	Received:	som
Date:	Signature of the builder:	

5. Quality check by the field team		
Name of checking agent:		
This SanPlat/Toilet has been installed at the household of the beneficiary	☐yes	☐no
This Sanplat/Toilet has been installed correctly	☐yes	☐no
There is a handwashing-basin with/without soap near the toilet.	☐yes	☐no
The household members know how to clean the toilet.	☐yes	☐no
The household members can name the danger of dirty toilet	☐yes	☐no
Date of checking:	Signature of checking agent.	

6. Financial check by the project: This coupon has been checked and credited for by the project the sum of som. Reception of above sum cashed:	
Date:	Stamp and signature of the accountant:

ANNEX 4.1



Coupon flow chart

ANNEX 5

NEIGHBOUR-TO-NEIGHBOUR PRINCIPLE

Once a Kolkhoz has been selected, activities start within a pilot aul. As a first practical measure demonstration latrines at public or easily accessible places are built. During or after construction of the demonstration latrines a series of different events will be organized and conducted. They are visualised on page

Initial demonstration-event

Target: Some of the selected households install and use an improved latrine.

Some households of the pilot aul are invited to see and discuss the demonstration latrines. They may immediately order the required materials for installing such latrines from the nearest builder. The project should provide technical advice if required.

A: Aul-level event

Target: Most households in the pilot-aul decide to install improved latrines.

The other households of the pilot-aul are invited to a discussion about the new latrines at the selected households which have already installed them. The already established latrines are looked at, and the visitors may ask questions about installation and use. Household members and the field-team members are present to answer these questions.

K: Kolkhoz-level event

Target: Many of the visiting households will install improved latrines.

This type of event takes place among people within the same Kolkhoz. Selected households from a neighbouring aul are invited to discuss with the experienced households of the pilot-aul. Further, authorities and opinion leaders are invited from other auls, ie. Aksakal, nurse, schoolnurse, teacher, etc. After this, aul-level events can take place, organized by the local nurse.

R1 Rayon-level event type 1: Households

Target: Many of the visiting households will install improved latrines at home in the neighbouring Kolkhoz.

This event takes place among people within the same Rayon. From various auls of a neighbouring Kolkhoz interested people are invited to an excursion to the pilot Kolkhoz, where they visit the pilot aul or demonstration latrines and construction sites. There they may see and discuss the whole program with the experienced households. Nurses, teachers, etc. from the neighbouring Kolkhoz are also invited to participate. After this, aul-level events may start there also.

R2 Rayon-level event type 2: Local authorities

Target: The local authorities in the neighbouring Kolkhoz decide to support the program, and to invest the required efforts for its administration.

This event takes place among local authorities within the same Rayon. The authorities of the neighbouring Kolkhoz (the members of the future Health Comittee, the accountant, the head of the construction brigade etc.) who would have important functions to fulfill for the successful implementation of the program there, are invited to visit the aul soviet office and demonstration latrines of the pilot-Kolkhoz. They discuss with their respective counterparts in the pilot-Kolkhoz the functioning of the program and its implementation procedures (with special care to the administrative management of the subsidizing system).

D: Visit-events as platforms for health sensitization

The events are designed to give people the opportunity to exchange ideas and experience concerning a particular practical thing, which can be seen and discussed, in this case latrines. In the future maybe bathrooms and drinking water supply schemes will be the "hard" things which can be seen and discussed. However, all these events are regarded as platforms on which health sensitization and hygiene-education can be built, ie. each such event should be used to discuss health related issues with the participating people. On the other hand, talks and meetings without something practical to be seen and discussed will be largely a waste of time for both project staff and villagers.

The effect of all these events will be enhanced, if they happen in an informative environment, i.e. if most people already know something about the program and its objectives. For this purpose particular media for mass-spreading appropriate messages will have to be developed (posters, radio, TV, stickers, etc).

Specific materials will be required for handing out to interested people during above mentioned events (leaflets, instructions for installations and their use, specific health behaviour, etc).

ANNEX 6

Child-to-Child Learning Method

The concept behind Child-to-Child learning and teaching methods

Child-to-child is a way of learning and teaching about health, which encourages children to participate actively in the process of learning and to put into practice what they learn. But what do we mean by health?

Good health is not just absence of disease. It involves physical health, mental health and emotional health. But it goes beyond the individual to social and environmental health. Pollution, aggression, greed, "ethnic cleansing" are important manifestations of poor health, just as much as poor physical condition or the spread of epidemics.

Everyone of us has a responsibility for health promotion for our own sakes, and our families and our community. Children make up half of population. They also have rights and respo nsibilities. Child-to-Child is a way of learning about health by encouraging children to participate actively in the learning process and to put immediately into practice what they learn. The approach is being applied in more than 70 countries in the world. The objective is to promote and preserve the health of communities world-wide by giving children an active and responsible role to play in adapting and developing consciousness and adequate health behaviour of themselves, of other children and their families.

Children can be **partners** in promoting better health.

- Younger children will copy and learn from older children
- Children have enthusiasm and can be great communicators
- Children are 'our conscience'and'our future'.They are tomorrow's parents

BUT...

- Children need time to play and discover things for themselves. We must not burden Children with adult responsibilities. They need support from adults. Children need to be seen as partners within families and communities. They need to perform their health role alongside adults.

Remember: partners deserve respect. They have their own ideas and need to take responsibility within the limits of their age. If we use children as 'loudspeakers' to deliver our messages we are not sho wing respect, and we are not benefiting from all they can offer us.

Basic concepts

- Health is a very important part of every child's education. Unless we learn to be healthy we cannot live happily or study well.
- Health is everyone's concern - not just that of doctors and other health workers. Children have just as much responsibility as adults to keep themselves healthy, and to help others become healthy and stay healthy.
- The most important way of remaining healthy is to prevent illness from taking place. But even when children and adults are ill, there are simple things which all of us can do to help them get better.
- There are also important signs of illness which we can learn to recognise. In this way we may be able to get help quickly so that it is easier to treat sickness.
- Health does not only mean being well in body. It also means having a bright and active mind, and a happy, healthy life. Children can also help themselves and others towards this kind of health.
- Good health is based upon sound knowledge about health. Unless we know and understand there are important facts, ideas and skills necessary for good health, we cannot spread our ideas properly.

Once the Child-to-Child approach to health education in schools is accepted, its important effects on the way of teaching and learning become evident, because:

- the Child-to-Child approach links **what we learn now** with **what we do now**
- **the** Child-to-Child approach links what we do **in the classroom** with what we do **out of class** and **at home**
- the Child-to-Child approach can not be learnt in one lesson and then be forgotten. The learning process is developing continuously over a longer period of time and applied for the rest of our life.

How can children spread ideas and practices on health?

There are many different ways in which children can spread ideas and teach others good health practices, for instance:

Older children can help younger ones

They can:
- care for them
- teach them
- show them the good example

Children can help others of the same age
They can learn from each other by doing things together

Children can pass on health messages and take health action in their families and commun ities
Sometimes they can

- spread knowledge they have learned in school (e.g. about washing hands and fruits)
- teach by example
- tell parents "what I have learned at school"
- work together to spread ideas and take action in the community (e.g. clean the sur roundings of a well and have a party afterwards)
- make posters, plays and songs for the community.

How to introduce Child-to-Child activities

Activities can be introduced in 5 steps:

- STEP 1: *Choose the right health idea and understand it well*
  the selected activities must be important for children, do-able by children and fun to do. For better understanding or making ideas clear, practical exercises (e.g. mixing rehydratation drinks), role-plays, story-telling or paintings about a subject (e.g. creating a comic on handwashing) can be used.
- STEP 2: *Finding out more*
  Health problems and related activities have to be put in relation to day-to-day life: use local names, practices and beliefs. Children can find out by themselves, how many children have had an accident in their family and why? how are accidents treated? where do flies breed, etc.
- STEP 3: Discuss what has been found out and action planning
  in groups or individually, the children discuss, what possible action can be taken, chose the best option and draw an action plan:

  - WHAT can we do?
  - WHEN can we do it?
  - WHO can do what?
  - HOW can we start?
  - WHO can help us?

- STEP 4: *Taking action*
  put the action plan into action: in school, at home or in the community.
- STEP 5: *Discuss results*
  after action, children discuss how their ideas have been received, who listened to them, and who not, what happened, what where the results.

Dry Sanitation in Morelos, Mexico:

An NGO Perspective

George Anna
Espacio de Salud
A.C. Mexico

Community
Water and Sanitation
Conference
May 5-8, 1998
Washington, DC

HANDOUT: HYGIENE & SANITATION

Summary

Inappropriate and inadequate sanitation causes severe water pollution problems in the valleys of Morelos, Mexico. Espacio de Salud (ESAC), a small non-governmental organization in Morelos, Mexico, works with communities in sanitation programs using a modified version of the Vietnamese double-chamber dry toilet and demonstrates how to improve sanitation conditions through demand-oriented, participatory approaches and institutional cooperation. Forced to find the most efficient use of their limited resources, ESAC uses multiple strategies for sustainability, including organizational support for community groups, environmental education, training in the construction and maintenance of dry toilets, job creation, and gender sensitivity. ESAC's latest focus is to collaborate with local and international NGO's, universities and research institutes to improve implementation by documentation of pathogen reduction, environmental impact and economic savings, agricultural use of human excreta, and gender issues.

Background

Sanitation and Health

The National Institute of Statistics, Geography and Information reports that 75% of Mexican homes had some type of sewer by 1995. (INEGI, 1996) However, this is put into perspective by other sources, which reported in 1991 that 50% of the population was connected to centralized sewage systems, but only 13 percent of this wastewater was actually treated. However, most of these treatment plants either functioned inadequately (35%) or not at all (45%) (Merino y Guevara, 1991).

Lack of access to water as well as insufficient sanitation seriously compromise the health of Mexico's population. Infectious intestinal diseases were the second cause of infant mortality only ten years ago (Centro de Estudios de Población y Salud, 1987). Official statistics report that this rate dropped significantly between 1990 and 1995 (Información Estadística del Sector Salud y Seguridad Social, 1997), despite the prevalence of cholera epidemics during that same period.

While it is true that the lack of sanitation systems has serious community health consequences, water pollution is caused in large part by conventional sanitation systems. The massive quantity of water required by these systems also contributes to the general scarcity of this vital element. Such environmental costs are unsustainable in the long run.

Even though it has been government policy to subsidize infrastructure, water and financial resources are inadequate. In the forseeable future it is impossible to provide potable water, piping for the evacuation of wastes and treatment plants for theater population.

Government Response

Several governmental institutions are responsible for providing waste treatment infrastructure and services. The National Water Commission's (CNA) policy is to promote dry sanitation or septic tanks in villages of fewer than 500 inhabitants as well as those of very low population density. Promotion of dry sanitation has been linked to lack of water services, but deteriorating environmental conditions are prompting the CNA to consider the use of dry sanitation even in areas where water is available.

In 1994, armed resistance in the state of Chiapas and 17, 000cases of cholera nationwide motivated the CNA to formulate its Rural Sanitation Program. This included the construction of 20dry alternative sanitation units in each state for on-site experimentation by the CNA. The modified Vietnamese double chamber dry toilet* was the most popular option, as it does not use nor contaminate water, and facilitates the management and final disposal of excretas. Pit latrines have been discarded a san option, and the VIP (ventilated improved pit latrine) is not known in Mexico.

The Mexican Institute of Social Services has defined a strategy for the promotion of dry sanitation in marginalized regions. Approximately 300 extension workers are trained per year by personnel from non-governmental organizations to educate the community, provide technical assistance and negotiate subsidies of construction materials from municipal authorities. In the state of Morelos, non-governmental organizations are beginning to negotiate the same strategy with municipal governments' Environmental Councilors. These small, incremental and sustainable examples can be compared to a project in the state of Oaxaca, which has financed the construction of tens of thousands of dry toilets, with no community participation, education, training or follow-up.

Local Context

The metropolitan area of Cuernavaca, which is Morelos' largest city and capital, sits in the foothills of the Chichinautzinmountain range, which runs west and east and separates Cuernavaca from Mexico City to the north. Heavy rains fall on the oak and pine covered forest in the mountains. Where top soil removal and clear cutting haven't taken their toll, the water lazily filters into the sub-soil and travels to natural aquifers made of volcanic rock in the sub-tropical valley to the south. Unfortunately, this subterranean water route and the aquifer are covered on the superficial level by houses - house with latrines, with inadequate septic tanks, with sewage water spilling directly over ravines and even some houses which send their sewage water to treatment plants, but, unfortunately, the plants are seriously ineffective.

As a result, the springs, wells and irrigation canals are heavily contaminated with fecal material. This results in water-borne epidemics such as cholera, infectious hepatitis, gastroenteritis, dysentery and typhoid fever as well as the spread of skin diseases. In one city, old sewage and potable water pipes disintegrated, leading to the mixing of the waters, and consequently, a cholera epidemic. For people of few economic resources, the problem has been literally fatal.

Urbanization and industrialization during the past 20 years in the state of Morelos have caused severe environmental problems. The population density has increased dramatically since 1985, with immigration of peasants escaping the rural crisis of neighboring states as well as many from Mexico City escaping air pollution and the threat of another earthquake. Especially in the peri-urban areas of Morelos' major cities, the lack of urban planning and adequate infrastructure results in pollution and serious health risks for the population. Wastewater eventually mixes with irrigation water which up until 1991 was used in vegetable production.

Because of the resulting high fecal content in vegetables, the government has prohibited using irrigation in vegetable production, and has threatened to destroy crops and jail peasant farmers. This affects 43, 271 hectares of rich agricultural land(MOCEDMA, 1993), where rain falls only four months out of the year. The prohibition has intensified the crisis facing farmers, prompting them to sell their lands in small parcels - which further increases urbanization without the necessary infrastructure, and thus means more pollution.

Civil Sector Response: Espacio de Salud (ESAC)

Presenting Alternatives

In order to confront these problems, the search for non-polluting alternatives first arose from within the civil sector: primarily individuals and non-governmental organizations. Cesar Anorve, architect and entrepreneur who grew up swimming in the unpolluted springs in Cuernavaca of 30 years ago, began experimenting with the Vietnamese double vault toilet over 15 years ago. One of the key elements to his success in provoking interest has been his design of a conventional-looking urine-diverting toilet seat.

Espacio de Salud (ESAC), a small non-governmental organization based in Cuernavaca, complements the work of Anorve by providing environmental education and technical assistance with organized communities who have requested information and/or training regarding dry sanitation.

ESAC began working with the popular sector in alternative therapies over ten years ago, mostly to prevent burn-out among social activists. The environmental area was added seven years ago, as the health field expanded into communities where polluted water is a permanent health risk. The promotion of dry sanitation was not contemplated as an activity. However, as grassroots popular groups organized around environmental issues they began requesting assistance in dry sanitation.

Since that time, ESAC's policy has been to respond only to requests from organized groups. As a small organization with extremely limited funding, ESAC's strategy has been to work with volunteers within organized communities which have sufficient motivation to initiate contact. They often multiply the experience both within their communities as well as outside them.

Fortunately, Morelos' other "claim to fame" is its active social organization. Popular movements have flourished since the beginning of this century, when a poor peasant farmer, Emiliano Zapata, organized other peasants and led the Revolution in southern Mexico. The revolution of the last twenty-five years has been that of the Roman Catholic church, with poor members embracing Liberation Theology, organizing their communities, analyzing the Bible according to their reality and working towards social

transformation. Cuernavaca has also been a meeting ground for intellectuals, specifically in the field of popular movements and education.

One of the results of this rich history of struggle and organization is the formation of a variety of popular movements and organizations. Many groups, which initially organized around themes such as social, economic and political injustice, have also become aware of environmental concerns, especially as epidemics have increasingly affected their low-income constituency. They often request technical assistance to facilitate critical analysis of causes, problems and alternative solutions. Espacio de Salud trains volunteers in participatory education methodologies as well as technical aspects of dry sanitation in order to facilitate analysis, and provide training and follow-up in their communities.

Long-term Goals

ESAC's priority is to foster the empowerment of communities through tangible action surrounding sanitation projects. Training in building, using and maintaining the dry toilet doesn't require a great deal of time. However, an important factor insustainability is the motivation built up within the community to overcome resistance to change, which can lead to further social transformation.

ESAC's long-term goals within its dry sanitation program include:

- to promote life-styles which minimize negative impact on the environment;
- - to empower marginalized communities to analyze current environmental and health problems, within a gender sensitive approach, that will lead to the proposal and implementation of solutions to waste treatment problems;
- - to strengthen the autonomy of these communities by offering a viable alternative in domestic waste treatment which lowers water consumption and preserves its quality; and,
- - to strengthen local economies by skills development and demand creation of products and services related to sanitation which can be provided locally.

Project Development and Planning

The work is defined depending upon each group's or community's experience, perceived needs and desires. At times the group is specifically interested in the technical aspects of constructing the dry toilet, or requests a short workshop on how to maintain it. Most are interested in involving the larger community, so the project usually includes formulating a strategy with the volunteers. Often, they wish to spearhead broader environmental campaigns within their community, so themes include facilitating analysis on a community level, as well as offering technical and life-style options.

Methodology

The communities have already done some analysis regarding their situation prior to requesting assistance in sanitation alternatives from ESAC. ESAC assists the volunteer or group of volunteers in getting more information through participatory methodologies.

Participatory education methodologies provide opportunities for all to identify appropriate solutions and strategies. Examples include mapping by community groups to show water sources and pollution sources. Participants illustrate conditions fifty years ago and today, and future scenarios. This helps them to determine how and why water sources are being polluted, and how to prevent the pollution, or at least treat it at the source.

Several sanitation options and their advantages and disadvantages are discussed. If participants decide to build dry toilets, a project is planned with the group in order to train them in toilet construction, maintenance and follow-up. Often, the group is also interested in other themes, such as composting, treatment of gray water and inorganic waste and gardening. ESAC provides training in these themes as well. If the community decides on another option (for example, biodigestors) ESAC assists them in contacting trained personnel.

In other words, ESAC does not promote a specific project, but rather adapts general guidelines according to the needs of the group.

Program Participants: Eligibility and location

Because of its limited resources on the one hand, and focus on empowerment and fortifying democratic processes on the other, ESAC only responds directly to requests from organized popular groups and their volunteer workers who have the greatest potential for multiplying the initial effort.

For instance, one woman with years of experience organizing communities as a church volunteer, was very quickly taught the basics of dry sanitation. She first built a toilet for her family's use and afterwards

worked within her community. Now she is assisting communities in two other states through her contacts within the church, with no support whatsoever from ESAC.

ESAC often relies on these volunteers to carry-out the projects and provide follow-up. Advantages include highly motivated personnel who are working out of love of their community as well as the environment. Disadvantages include their limited time and resources. They are often involved in several other volunteer positions - from promoting human rights to teaching catechism. Soalthough ESAC encourages them to provide follow-up, this is often not sufficiently provided.

ESAC doesn't restrict its work to families within a specific income level, although in practice it generally works in low-income communities. When organizing open workshops for volunteers, NGO's and governmental institutions, we have charged a nominal fee, but then provide scholarships where necessary.

Women tend to recognize environmental and health advantages more readily than men, and are also more active in organization and promotion. This is not surprising, as they are usually responsible for their children's health as well as managing household affairs. However, ESAC encourages men to participate in these projects as well so that both the burden of carrying out the project as well as the increased awareness is not limited to the women. Also, men's role within the household is often that of providing technological improvements to the home, and probably are more apt to favor "high-tech" options. Involving them within the project exposes them to an analysis of alternative technologies. During the construction phase of the project, they tend to increase their participation.

ESAC's reputation in environmental education and dry sanitation has largely spread by word of mouth. Requests for training usually come from groups and NGO's related to the popular movement and/or the Base Ecclesial movement of the Roman Catholic Church and through the national Women and Environmental Network, as well as other contacts developed over the last seven years. ESAC has provided training and technical assistance in several states, including Puebla, Oaxaca, Guerrero y Morelos.

ESAC's reputation has also spread through distribution of its publications, which include educational materials, case studies and magazine articles.

Monitoring and Evaluation

ESAC provides tools for the volunteers to monitor progress within their communities. These include checklists which cover construction phases as well as use and maintenance. However, ESAChas been limited financially in evaluating the projects overtime.

A group sometimes makes the decision (explicitly or implicitly)to not build dry toilets, either because they are not convinced or because other pressing community problems take precedence. However, a space has been provided for discussing and analyzing environmental problems, which will certainly have an impact on the families in one way or another.

For example, an environmental education project was organized for and with a group of teachers from several communities. They, unfortunately, faced an acute human rights problem and decided to dedicate their time to this work. However, we feel that when the timing is appropriate, this volunteer group will provide crucial leadership for the entire region in alternative sanitation.

Funding, Implementation and Institutional Cooperation

As ESAC's resources are limited, the approach has also been limited. Financing has come from small private, non-profit funding agencies in the United States and Canada, as well as individual donors. As mentioned above, ESAC usually relies on volunteer community workers, who are trusted to provide follow-up as well as some training. ESAC's work is usually limited to very short-term interventions, often collaborating with other NGO's in the educational and training phase of the project. For instance, a local NGO or church group may have already worked on organization and empowerment issues, even environmental education. Therefore, ESAC can restrict its intervention to sanitation options.

Local NGO's often assist the communities' search for construction funding from municipal governments. Funding often takes the form of loans or out-right gifts for partial or full costs. The functional part of the toilet (two locally built brick chambers plus the urine-diverting toilet seat) costs approximately $127. 00US, certainly still quite expensive for a person earning the minimum wage of less than $4. 00 US/day.

Municipal governments are becoming more involved in providing construction materials for dry sanitation. As

Mexico's democratic process matures, the municipalities are more responsive, and the communities are able to assume a watchdog role. Both NGO's and community groups are working with the new Environmental Councilors, a position which was recently legislated. This is another instance in which NGO's can train and design educational materials for the Councilors' field workers, who would be responsible for working directly with the population, providing education, training and follow-up.

ESAC is collaborating with NGO's, universities and research institutions to improve implementation of environmentally-sound sanitation. For example, ESAC has worked with Anorve in producing educational materials for both promoters and users.

Questions still arise regarding possibilities of disease transmission, and eyebrows are especially raised regarding using fermented urine and dried excrement for agricultural purposes. Another critical area for research is the perception of the common citizen - what are the roadblocks within the family and community, and especially what part do gender roles have to play in acceptance or rejection of an alternative technology?

Research regarding pathogen behavior, comparative agricultural growth, and costs savings and environmental impact have already begun in coordination with the Autonomous University of the State of Morelos and two other NGO's: the Centro de Innovacion en Tecnologia Alternativa and CIDHAL (a women's center). Plans are presently being made to broaden these studies and compare there with similar studies in El Salvador, Sweden, Vietnam and South Africa.

Technology and Sustainability

ESAC has limited itself to the modified Vietnamese double chamber dry toilet due to its simplicity. More sophisticated alternatives in dry sanitation are certainly valid. Although the double chambers can be fully integrated into the "modern" bathroom, ESACalso believes that an even more "conventional-looking" alternative should be offered and marketed to the middle class.

Anorve's improvement of the toilet seat design, and the simple fact that it is painted in attractive colors, has been a very important fact in acceptance in rural areas. However, at the sometime we stress the importance of using indigenous materials such as bamboo and adobe brick for the superstructure. These both lower costs and provide a demand for local skills and knowledge, helping to maintain cultural identity. Although prefabricated models are also available in Mexico, these are more appropriate for emergency measures. An important part of the sustainability of dry sanitation is to keep money recirculating within the community. As local construction workers find a new demand for their services, it is within their best interest to promote the technology as well as provide training inappropriate maintenance, even if on an informal basis.

The same holds true for local producers of urine-diversion toilet seats. ESAC facilitates the installation of these small, independent workshops as sufficient demand is created within the region. The producers usually have previous experience as volunteer extension workers. Toilet seat sales provide an income which improves the sustainability of the project. The producers know they have a market only if the toilet functions properly, so they have become among the best extension workers. ESAC thus leaves the project in the hands of the local community.

The Centro de Innovacion en Tecnologia Alternativa has implemented another strategy to reduce the need for subsidies for training in dry toilet construction, maintenance and follow-up before the manufacturing workshop is economically viable. This involves sending an "itinerant toilet seat producer" to the community. The community provides her with food and lodging and she produces and sell the seats with a minimum of infrastructure. While staying in the community, she responds to questions regarding construction and maintenance of the toilet.

The recycling of human waste back into the food production cycle is a key element in sustainability regarding sanitation as well as providing sufficient food for the world's population. ** Food is produced as plants consume nutrients (nitrogen, phosphorus, potassium, etc.) provided within the soil. If they are removed from the soil without supplying new nutrients, the soil will eventually be depleted.

Humans produce urine and feces, not sewage. The chemical, physical and hygienic characteristics of urine and feces differ greatly and the two products need different types of treatment before they can be safely used. Therefore, it is often easier to design a sustainable sanitation system if the urine and faeces are treated separately than if they are mixed (Jonsson, 1997).

One community, where dry toilets were built without its participation or even consent, finally began to use the toilets when they learned that they could use fermented urine for the production of their pineapple crop. Health risks are being studied before recommending this practice on a large scale. However, income generation (in urban as well as rural agriculture) as another strategy for sustainability should not be underestimated.

Difficulties Encountered

The most significant difficulty has been overcoming the negative reputation of project "failures". When an external agent imposes its own resources and rhythms on a community, the project often fails. In these cases, the community has not identified alternative sanitation as a necessity. It has no interest in the dry toilet nor knowledge of how it should be built and maintained. Large projects often send insufficiently trained field workers who are unclear about the technology, and are ignorant of community empowerment approaches.

One state government undertook a project with a local businessman which included large-scale toilet seat production financed by international organizations. This destroyed the three already existing small-scale toilet seat workshops. The project never went beyond giving away the toilets, and lacked training and follow-up. Rather than facilitating the process, the government's role was to destroy the initiatives of civil society. The local workshops cannot compete with international financing organizations and the government. Without the income from the sale of toilets, they cannot provide their expertise, training and follow-up. (Anorve, 1994.)

As the "flush and forget" mentality invades Mexico, choosing dry sanitation over conventional sanitation is rare. Having "modern" conveniences is a status symbol, while being environmentally "correct" carries no prestige. (Sawyer, 1997)

Lessons Learned

The various advantages of the dry toilets can be better appreciated and assimilated by users when they are explained and supported by established, organized groups. There are important environmental advantages to using dry toilets. Rather than producing 100, 000 to 150, 000 liters of contimanated sewage watter per family per year (enough to fill a2 x 2. 5 x 30 m cistern), the dry system produces approximately5000 liters of liquid fertilizer (urine) and 300 to 500 liters of "composted" soil conditioner.

Seeing is believing! A visit to a home with a dry toilet, preferably one which is integrated within the house, rather than operated as a separate structure, is especially helpful for convincing potential users. Extension workers, who are generally considered of high status, are taken quite seriously when they have dry toilets in their own homes. It is advisable to not talk about financing mechanisms (whether revolving loans, outright gifts or demonstration models) during the first discussions. Otherwise, there is a strong likelihood that this subject will become the focus, and distort the needs assessment.

Rather than succumb to the temptation of building the first toilet for public use, it is best to wait patiently until a few families decide to take the risk to experiment. Public toilets are notorously dirty. Dry toilets are no exception.

Several demonstration models are better than just one, to prevent the "brave" family from being pressured from all sides - either to succeed or fail. A "brave souls" support group can be helpful, with frequent trouble-shooting check-ups of the toilets by community volunteers. (Sawyer, 1997)

Lastly, ESAC has learned the importance of forming a multi-disciplinary network with local grassroots groups, NGO's, architects, researchers and governmental institutions, as well as networking on an international scale.

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* The toilet chambers are built above ground. Urine is diverted by a special toilet seat into a container or soakpit. Feces fall into the chamber below and are covered immediately with dry soil and lime or ash in order to dry the contents, prevent odors and kill pathogens. When this chamber is full, the toilet seat is moved to the other chamber. The first chamber is emptied and the toilet seat returned when the second is full.

** WHO estimates that, on average, the global human population produces over one million tons of feces and over six million tons of urine per day. The urine produced by

each person per year has enough fertilizer value to produce 250 kg of grain. (Simpson-Hebert).

PHAST Initiative in East Africa

UNDP-World Bank
Water and Sanitation Program
RWSG-ESA

Community
Water and Sanitation
Conference
May 5-8, 1998
Washington, DC

HANDOUT: HYGIENE & SANITATION

Why PHAST Was Developed

It is widely observed by sector practitioners that conventional health messages are widely known and largely understood, but these messages have had minimal impact on sustainable hygiene and sanitation behavioural change and practice.

PHAST was initiated to facilitate the empowerment of society members (young, old, female and male, higher and lower status) in a participatory process to assess their knowledge base, investigate the local environmental situation, visualise a future scenario, analyse constraints to change, plan for change, and implement the change.

What Is PHAST?

PHAST stands for:

P articipatory
H ygiene
A nd
S anitation
T ransformation

The PHAST Program was initiated in 1993, by the Regional Water and Sanitation Group in Eastern Africa (RWSG-ESA) and the Community Water Supply Unit (CWS) of the World Health Organisation (WHO), Geneva.

PHAST is a unique approach. It uses methods and materials that stimulate the participation of women, men and children in the development process. It relies on the training of extension workers and on the sets of graphic materials developed (as tool-kits) on site, in order to reflect the actual cultural and physical characteristics of communities. The production of PHAST materials requires trained artists as well as trained extension workers.

PHAST Objectives?

The objective was to design and test participatory tools and techniques using the PROWWESS/SARAR Methodology and evaluate the use of Non-Directive Methods in facilitating community self assessment and incremental hygiene and sanitation improvements.

The overall goal of PHAST is to promote sustainable hygiene behaviour and sanitation improvement in the sector.

The aim of PHAST is not only to teach hygiene and sanitation concepts (where needed), but more importantly, to enable people to overcome constraints to change.

How Was PHAST Initiated?

The PHAST Program was officially begun in September 1993 with a one week pre-planning workshop in Nyeri-Kenya. This was followed by a training of trainers workshop held in Uganda in October 1993. Participants included experienced trainers of extension workers from five African countries. By the end of the workshop participants had developed their own work plans for field application adaptation and field assessments of the hygiene promotion methods.

The participatory methods and materials were tested in pilot /demonstration projects in five African countries of Botswana, Kenya, Uganda and Zimbabwe and also Ethiopia to a minimal extent. Participants then organised national and district training workshops and further adapted the methods and tools to local situations' field testing the methodology in different environment and socio-economic conditions in their respective countries.

The adaptive learning-process approach led to district hygiene-promotion programs in each of the participating countries. A year later, all the participating countries had compiled evidence that documented the projects' impact at the community level as well as lessons learnt for future projects.

Partners

Partners in this collaborative regional learning initiative include ministries of Health/Water, the two ITNcs (NETWAS and the IWSD), UNICEF-ESARO and the country offices, bilateral donors (e.g., SIDA, FINNIDA, DANIDA and NORAD) as well as NGO's (CARE, KWAHO, and Water Aid). The ITNcs in Kenya and Zimbabwe were instrumental in the monitoring and documentation of PHAST and continue to play an active role in the follow up activities.

What Has Been Achieved?

The achievements of the Program far exceeded expectations:

Over 30 districts in four countries were involved in the program. Training of trainers was conducted in each country and a total of over 25,000 people have been trained in the respective districts.

In a low income peri-urban community in Uganda (Katwe Urban pilot project), within six months of an initial visit by one field worker, the community built latrines, organised for operations and maintenance of neglected drains, collected tariffs to pay maintenance workers for the drains and water points and organised their own system for monitoring community sanitation.

Although this has had encouraging results, a lot still needs to be done to scale up and support the demand both in country and within the regions. Requests to support PHAST have come from Rwanda, Tanzania, Mozambique and even as far as Arabia. Response to this will require concerted efforts with sector partners and perhaps this may be the era for enhancing demand in Sanitation.

PHAST Coverage

Country	District Exposed to PHAST	No Exposed to PHAST		
		Extension staff	Community	Total
Uganda	Muyembe			3,000
	Bupoto			1,000
	Bwera			10,000
	Mahyoro			400
	Total			14,400
Zimbabwe	Mutasa	16	598	614
	Chipinge	55		55
	Beitbridge	20	259	279
	Murewe	12		12
	Marondera	46		46
	Wedza	317		
	Goromonzi	115	2,428	2,543
	Total	581	3,285	3,866
Botswana	Chobe	4		4
	Gabarone	33		33
	Kgalagadi	6		6
	Ghanzi	4		4
	Kweneng West	6		6
	Bobirwa	17		17
	Lobatse	2		2
	Total	72		72
Kenya	Homa Bay			4,000
	Nandi			64
	Uasin Gishu			37
	Isiolo			40
	Makueni			17
	Baringo			25
	Kaiyo			18
	West Pokot			30
	Transmara			25
	Turkana			18
	Kericho			
	Nakuru			
	Samburu			
	Total			4,274

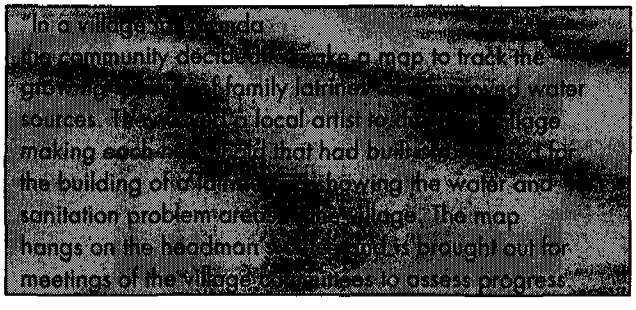
Impact On Communities

Kenya

An 84 year old women in Kenya said "All my life people have been coming here and telling us what to do. This is the first time any one ever listened to what we think"

- Communities undertook house to house hygiene education
- Communities requested for colored tools for use in local schools and by local health workers selected from the community
- Communities approached Public health Officers, for the technical aspects of latrine, water source protection and housing
- Communities compiled list of pit latrine defaulters in their community and instituted local prosecution for defaulters

Uganda



Acceptance of responsibilities

- Communities are willing to pay money for operation and maintenance
- Communities undertook management responsibilities

Increased understanding and appreciation of tools

- Communities requested extension agents to come again
- increased attendance in meetings

Increased appreciation and understanding of the value of facilities

- Hand washing facilities installed
- latrine numbers increased

Community Monitoring and evaluation

- Communities designed pin-boards to monitor hygiene and sanitation status of their community

Zimbabwe

In rural community in Zimbabwe
in the space of eight months
24 latrines which had been left unfinished were completed and 18 family wells were upgraded

- Increased demand for upgrading family wells
- Increased demand to complete half dug latrines
- Awareness of available resources within the community (Leaders plan own hygiene workshops and facilitate)
- Demand for participatory methods in other programs such as Aids.
- Participants become so engrossed in the participatory exercise- time becomes of little importance
- The hand washing method strengthened, especially at funerals
- Community members now view the environmental health workers as resource persons who can be used for areas such a meat hygiene and house construction and not just for water and sanitation

Botswana

- Development of confidence e.g. communities started to work independently of the extension workers
- Motivation for action. e.g. communities provide hand washing soap in schools and dig pit latrines
- Full community involvement. e.g. contributions
- Change of attitude amongst community groups, in terms of crime prevention and literacy
- Improved extension workers relations. e.g. inter-sectoral collaboration and co-operation
- Improved flow of information
- Higher priority is now being given to hygiene education and practice by communities

What Are The Benefits?

- Formation of village health committees and requests to be taught how to use the tools
- Increased awareness and knowledge on hygiene and health
- Latrine coverage increased
- Community members enjoyed being trained in the use of participatory methods and became competent in their use
- Health committees, made plans for building latrines and operation and maintenance of water points

and created a system of community monitoring water and sanitation.

Lessons Learned

Requirements for successfully applying PHAST in Water supply and Sanitation Programs:

- Policy commitment to adapt participatory strategy
- institutional structure supportive of participatory approaches
- Adequate resources (not necessarily additional resources). Probably re-organization of existing resources
- Pilot projects for the development of country specific materials
- Back up support from trainers and supervisors until extension workers feel confident in the PHAST approach
- On-going monitoring and evaluation of progress of impacts

Is There A Demand For PHAST?

A prospective review is currently being undertaken jointly with RWSG-ESA and WHO. The expected outcome of the review is recommendations for sector support on the use of participatory hygiene and sanitation approaches in the sector. This review will be completed by the end of April 1998. An action plan for future support will be defined in collaboration with sector partners.

Reference Materials/ Documentation

(i)The PHAST Initiative- A new approach to working with communities. WHO- Geneva and RWSG-ESA
(ii) PHAST Video. RWSG-ESA and WHO-Geneva
(iii) A step by step guide for working with communities. WHO Geneva and RWSG-ESA
(iv) PHAST Participatory Country specific Tool-kits

FOR DuFo JTV.

Social Fund Projects in the East and Southern Africa Region

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Community
Water and Sanitation
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HANDOUT: SOCIAL FUNDS

Introduction

Many Governments in the East and Southern Africa (ESA) region have started the transition from centrally managed provision of facilities and services based on established needs, to community managed facilities and services developed in reponse to demand. However, past supply driven policies have created an endemic situation in which many communities still expect Government to provide "free" water. This has made the introduction of demand responsive approaches both socially and politically complex.

Over the past two decades, the World Bank has had limited involvement in the water and sanitation sector in ESA. A total of 5 urban and rural water supply and sanitation projects, were underway in 1992. This increased to 9 with the addition of 4 projects in 1996. Several additional projects are under preparation. A key feature of all projects initiated since 1996 is policy reform aimed at improving water resource management and incorporating the principles of community demand and water as an economic good.

1. OVERVIEW OF 3 SOCIAL FUND PROJECTS IN THE EAST AND SOUTHERN AFRICA REGION: ERITREA, MALAWI AND ETHIOPIA

This paper documents the experiences of Social Funds (SFs) in Eritrea, Malawi and Ethiopia. These funds have been operational for over 2 years and have sizeable water components. The paper highlights findings from the perspective of the author and attempts to document the lessons learned from the SFs to date. All three funds are in the early stages of implementation and many of the findings in this report are being internalised and incorporated into project implementation manuals.

Poverty eradication is the main reason that Governments in ESA initiate SFs. As water supply and sanitation are top priorities ior many poor communities, they have become key features of SFs. Community management is a key feature of water and sanitation sector projects and SFs are effective mechanisms for channeling funds and building local capacity. However the complexity of developing community water and sanitation components has not always been accommodated in the design of SFs. In all three countries rural water supply coverage is below 50% and many communities applying for assistance from SFs do not have access to a safe water supply.

Finally in countries where, in the past, WS projects have been implemented in a district or sub-district area, SFs are viewed as having national reach and responding to the needs of community groups.

Social funds, are a relatively new but popular mechanism for World Bank financing of WS in ESA. Since 1994 at least 5 social funds have been stablished in East and Southern Africa of which 3 have substantial water components. Two more are currently under preparation (Rwanda and Zimbabwe). In countries where the World Bank is carrying out both SFs and RWS projects, efforts have been made to ensure compatibility of approaches (Malawi and Ethiopia) and lessons learned have helped inform policy: SFs are often viewed as a means of piloting "new" approaches that will be translated into policy. In many countries, even where policy reform has taken place, the transition to a situation where all RWS projects operate within the same set of rules, has not yet occurred. As such SFs often operate within a context where conflicting rules are applied at project level causing some confusion among neighboring communities and undermining the sustainability of sub-projects.

The size of the WS component of SFs in ESA ranged from USD 5 million in Eritrea to 70 million in Ethiopia. As a percentage of the total project, WS components of SFs constitute between 10% and 30% . WS activities includ rehabilitation or development of rural, urban and peri-urban water supply, and development of rural and peri-urban sanitation. All three social funds include a combination of stand alone sub-projects, and health and education sub-projects that include water and sanitation. They also include complimentary activities such as natural resources management. Capacity building is a key element of all SFs.

2. THE DEMAND RESPONSIVE APPROACH IN THE DESIGN OF THE RWS COMPONENT OF THE SOCIAL FUND PROJECTS

Within the water and sanitation sector in ESA, the demand responsive approach has emerged as an innovative strategy for assisting willing communities to improve their water supply services. SFs are recognised as effective mechanisms for responding to demand and they are among the first World Bank projects in ESA to incorporate the key elements of DRA in the design of water and sanitation components. All three SFs in ESA include elements of DRA, however, in Eritrea and Ethiopia, the water and sanitation components were designed with significant input from sector professionals (UNDP-World Bank Water and

Sanitation Program). This input accounts for the differences between Malawi and Eritrea, Ethiopia illustrated below. A key difference is the preparation of technical handbooks for water and sanitation which outline the approach, and guide sector agencies (Government, NGOs, Consultants and Communities) in the preparation and implementation of water and sanitation sub-sector projects. These technical handbooks are considered an important step in building capacity of sector agencies and creating awareness of DRA.

Regional Workshop on Demand Responsive Approaches to Community Water Supply

In 1997, 60 participants from 10 countries in East and Southern Africa (ESA) came together in Mangochi, Malawi to review the principles of the Demand Responsive Approach. Participants noted that many of the key characteristics of DRA are familiar to most water sector professionals - this is because DRA builds on ideas and methods that have been tried and tested over the years. Several key principles (informed choice, selection of service levels, direct financing, community management of funds) have often not been applied. The workshop concluded that while a number of countries now have policy frameworks that promote DRA participants the following are important challenges in moving from policy to practice:

Clarifying or creating clear policy frameworks, raising awareness of DRA, reforming and reorienting institutions; reviewing procurement and disbursement procedures; developing direct and simple financing mechanisms; building community capacity for management of finances; providing a legal framework that facilitates access to finance; and ensuring participation of poor and disadvantaged countries.

In all three SFs, sub-projects are **initiated by the community** following an extensive outreach programme carried out by the Fund with support from Local/Regional Government staff. During outreach general **eligibility** requirements of the SF are outlined - information on sector specific eligibility requirements are only provided later.
In Malawi, project requests are approved (before a technical appraisal is carried out) on the basis of the option selected by the community. In Eritrea and Ethiopia, communities are expected to make an **informed choice** about their desired service level, and to pay 100% of the cost above the basic level identified by technical assistance agencies.
A range of technology options are depending on feasible options identified by the technical assistance agency. In Malawi, although no options are defined, requests are typically for a shallow well or borehole - (with handpump) and a higher **level of service** is not currently provided for.
In all three projects, specific socioeconomic, technical, and other information is collected and discussed at the community level. The level of information provided and procedures used to **facilitate collective action** also vary from - the community project committee taking a lead role in consulting with community members, preparing and implementing the project (Malawi) to - intermediaries collecting information at household, focus group and community level as a basis for an informed choice on service levels (Eritrea).

In Eritrea, **willingness to pay** for either a basic or higher level of service is established by intermediaries assisting with technical appraisal, and the community's understanding and acceptance of their contribution to capital, operation and maintenance costs, and O&M arrangements confirmed. A financial agreement outlining this commitment is signed between the project and the community.
Communities in Eritrea, and Ethiopia are expected to contribute a minimum of 10% towards the sub-project in cash, material or labour while in Malawi a 20% material or labour contribution is expected. In both Eritrea and Ethiopia the **community contribution** to capital costs is required up-front as a further indication of commitment.
In all three cases, **funds are managed** jointly by the Community and the SF. The Community is a co-signatory of contracts, and has the option of being an implementing agency. In Ethiopia a separate account is set up at regional level for each sub-project in which project funds are deposited (including the community contribution). In MASAF separate accounts are only established if the community is an implementing agency and in Eritrea, funds are disbursed from the Central fund office directly to the contractor or consultant.
Scheme **management arrangements** for sub-projects are recommended by the project, but in all three cases some flexibility is maintained. In Eritrea and Ethiopia a water committee is formed (if one does not already exist) to oversee the project but this committee does not make decisions on behalf of the community. In Eritrea where more complex piped water supplies (3,000 to 10,000 people) are being funded, proposed management arrangements range from the simple water committee to a "mini" utility.

All projects include **capacity building** components targeted primarily at communities, but also the private sector, NGOs, and Government staff who support the SF. Capacity building activities range from generic (for all sub-projects supported by the SF) to sector specific - O&M and hygiene education.
In all three projects **adaptive project design** is an important feature and significant changes are being made to incorporate lessons learned. **Ownership** varies - from land and assets, to "sense of ownership" - and the lack of legal status of community groups is a limiting factor.
Operation and maintenance functions also vary - from Eritrea where the community is responsible for collecting a tariff to cover operating and maintenance costs plus replacement of pumping equipment, - to Malawi where the community is only responsible for operation and maintenance costs up to a certain level - costs of major repairs are the responsibility of Government.

Finally, the **role of Government** has been to provide an overall framework under which the project operates. In the case of both SFs in Eritrea and Ethiopia, the line agency was involved in preparing the water component and agreement was reached on the basic policy principles under which the project would operate. In all three cases principles being employed by the SFs are incorporated, or are being incorporated, into **policy documents**. Governments have also assisted in clarifying the legal framework under which the project operates - e.g. the legal status of community groups. Further in Eritrea, Ethiopia and Malawi, line agencies have been tasked with supporting (technical assistance, training, etc.) water and sanitation the SFs activities at regional level.

3. THE DEMAND RESPONSIVE APPROACH IN PRACTICE

In all three countries the SFs have followed many but not all of the rules and procedures included in the project design. Key departures include:

The lack of involvement of community in the **selection of a service level**. In Malawi, shallow wells and boreholes with handpumps are the most common option. Communities have a preference for boreholes and are not provided with adequate technical assistance for evaluating the viability and/or pros and cons of alternatives available to them. As a technical appraisal is note required before project approval, in one case the SF approved a community request for a borehole in a location where this was not technically feasible. could have been provided to serve more people.

The lack of an informed choice has led to several communities being provided with an inadequate number of *higher* cost facilities (eg. one borehole for 1000 persons) where *lower* cost facilities

- The role of communities in implementing projects and therefore **managing funds** was minimal in all three projects. In Eritrea, due to lack of adequate local capacity, the SF grouped projects together for economy, and hired and paid contractors/ consultants directly. In Malawi although sub-project funds were typically managed by the community, for bore hole sub-projects, this was not the case. Due to perceived inefficiency in disbursing funds (of which the SF contributed 97%) to the community for on-payment to the contractor. Finally in Ethiopia NGOs were often contracted to implement projects on behalf of communities, however, these were typically Government owned NGOs at regional level.

- **Community contributions lower** than the SF minimum. In Malawi, as a result of the low material and labour input required for a borehole based scheme, communities contributed only 3% of capital costs. This was partly a result of sector norms that do not favor collection of a cash contribution from the community. Similar patterns emerged for boreholes in Ethiopia, while for hand dug wells where a material and labour contribution was possible, communities in both Malawi and Ethiopia contributed 20% and more.

- Communities are not responsible for full **operation and maintenance** costs of their systems. In Malawi, rural communities still have high expectations from Government. due to policies in which water and O&M services were provided "free" Supply driven approaches are still being followed by other agencies, working in the sector, creating difficulties for the SF to convince communities to contribute cash towards capital or O&M costs or collect a regular tariff.

Some of the causal factors include:

- *Varying interpretation of rules and procedures* across agencies and regions. In Ethiopia SF rules and procedures had been applied unevenly and practices varied from one region to another.
- *Lack of overall capacity in the sector – Government, NGO and or private agencies;* In all three countries the SFs were playing a greater role in the design of tools, implementation and supervision of sub-projects.
- *Limited community access to contracting and consulting services.* In Eritrea, and Malawi there were a limited number of drilling and consulting

firms, at the start of the SF project. In Eritrea this resulted in repeat advertisements several contracts.

- *Unclear or inappropriate policy*. In Malawi, lack of a clear policy on cost sharing resulted in a lower contribution for water and sanitation sub-projects. *Changing institutional frameworks* - In Eritrea and Ethiopia decentralisation resulted in a larger decision making role for the Local and Regional Governments.
- *Complex procurement and disbursement* arrangements. In Eritrea due to limited sector capacity, the SF decided to group sub-projects for contracting purposes. This had the effect of introducing lengthy (NCB and ICB) procedures and long delays in implementation.
- *Inadequate infrastructure* (roads, telecommunications) particularly in remote regions, made it difficult for remote communities to participate in community management. Banking services, consulting, contracting and drilling/water works services, telephone services were only available in the capital city or major urban centers.
- In Eritrea, *low adult literacy levels* were a further barrier to community management of sub-projects and this was often complicated by complex socio-economic and environmental factors (eg. pastoralists).
- *Inappropriate SF skills mix* was an additional factor contributing to noticeable differences in the attention paid to technical design, implementation and supervision on the one hand (Eritrea), and community management and capacity building on the other hand (Malawi).

Factors that can be addressed by the SF include: improving the skills mix in Sfs to ensure a balance between technical and social components (this is already underway in Eritrea and Malawi); ensiring more even application of rules and procedures across regions through a process of experience sharing and adaptation; reducing procurement and disbursement complexity by gradually building capacity of private sector agencies to provide support to community managed projects and using simplified procedures.

Factors that require wider sectoral reforms include: adjusting the policy framework to accommodate lessons learned, and particulary to address conflicts between *supply* driven and *demand* driven approaches; building capacity of NGOs and the private sector through line agencies implemented with funding support from the Government or project. Other factors which are of a general but important nature are improving access to infrastructure and services, decentralisation of capacity, and improving literacy.

4. RESULTS ON THE GROUND AND LESSONS OF EXPERIENCE

In comparison to other RWS components at country level and within the ESA region, the water and sanitation components of SFs provide useful lessons on key issues to consider when applying demand responsive principles within the context of unclear sector policies and a history of treating water as a free good. In all three projects it is still too early to assess sustainability and although results vary due to differences in application of DRA, early indicators point to an improved sense of satisfaction, commitment, ownership, understanding and responsibility.

Cost effectiveness

Limited capacity and lack of competition in the sector, particularly for borehole drilling are key factors to be considered in assessing cost effectiveness of SF sub-projects. Borehole costs ranged from 5,000 $ in Malawi to 13,000$ in Eritrea (40 metres, fitted with Afridev handpump). Reliance on groundwater, imported handpumps and other equipment and components further inflate per capita costs when compared to other regions. Attention to per capita upper limits has helped to ensure that costs are kept to a reasonable level in Ethiopia while capital costs incurred in preparing the first batch of projects in Eritrea were outweighed by the high cost of social inputs required at the start of the project (preparing a technical handbook, design criteria, etc).

Sustainability

Although it is too early to assess whether sub-projects implemented by the projects are sustainable, in Malawi a recent review of technical quality revealed that a large number of facilities had not been built to the required standard. The SF has now contracted supervision consultants to assist them in certification of technical quality and providing inputs during sub-project supervision. The limited participation of communities in selecting service levels and providing a capital contribution may also have contributed to a reduced sense of ownership and commitment to safeguard facilities. In Eritrea, although adequate attention has been paid to technical quality, the slow pace of implementation, limiited role of the community in managing funds, and inadequate to capacity building and community training in particular, could eventually lead to frustration, a loss of interest and reduced sense of ownership and commitment to sub-projects.

Institutional development

In Eritrea and Ethiopia the SF operates within local/regional government structures. In Eritrea the SF is part of the institutional structure at regional level and SF staff carry out their responsibilities as part of overall activities performed for the region as a whole. Integration of the SF into decentralised structures has served to strengthen and develop capacity at regional level and has also facilitated the exchange of ideas and streamlining of approaches at regional level. An example is the requirement of a contribution for all water and sanitation projects. Further, as the SF is integrated into the local Government structure, regional and sub-regional level staff are expected to provide inputs to project preparation, implementation and supervision. In Ethiopia regional decentralisation has resulted in uneven application of SF rules across the country, but this has provided useful comparative information on the viability of different (interpretation of rules) approaches.

Community capacity strengthening

SFs in ESA typically rely on other structures at local level to build community capacity - government line agency staff, NGOs. In Malawi where institutional structures for community development are well developed at regional and village levels, training and capacity building tools prepared by line agencies (eg. CBM training manuals) have been used by these staff to carry out training programmes. By contrast in Eritrea, the Government is still in the process of developing institutional structures for community development and there are no NGOs to carry out this support function. As a result, the SF may need to work closely with line agencies to carry out training at regional and village level in support of the water and sanitation capacity building requirements. In all three countries tools for improving community capacity for implementation, supervision, contracting, etc. are being prepared to address identified concerns.

Policy reform

SFs have the opportunity to influence and inform policy. Where SFs have not been initiated within a conducive policy framework, lessons learned from implementation of SFs form a valuable input to policy development. SFs have opened new ground in countries such as Malawi where "free" water was the rule. In all countries the gap between policy and practice is wide and transitional arrangements are required to assist countries that have developed policy frameworks re-orient support agencies, modify ongoing projects and programs, and develop common rules (DRA note). In Ethiopia and Malawi where both SFs and RWS projects are underway, efforts to ensure that lessons learned from SFs form an input into policy and strategy..

5. RECOMMENDATIONS FOR IMPROVING DEMAND RESPONSIVENESS OF CWS COMPONENTS

If a water and sanitation component is identified during the preparation of a SF, sector specific expertise should be provided to ensure that where necessary braoder sectoral policy issues are addressed and that the design of the component is adequate.

The role of communities in managing funds and contributing fully towards capital and O&M costs should be strengthened. Information on how this is working in other countries with similar circumstances should be made widely available.

Further assessment of the extent to which each of the key elements of the DRA is critical in ensuring sustainability is necessary. This is critical given the difficult and sometimes unfavourable context within which these projects operate.

Technical Handbooks for Water and Sanitation should be prepared to ensure that the project are well understood, and to guide supporting agents in Government, NGO and Private sector in the implementation of sub-projects.

SFs should ensure a balance between technical staff and social staff and ensure that adequate resources for capacity building at community level is available or can be built -.

Simplified tools for applying DRA should be made available to persons developing and implementing SFs. These include tools for assessing demand (simple WTP instruments), sample contracts, agreements, community procurement and disbursement procedures, and examples of tools for facilitating informed choice. The application of DRA is uneven and there is a need to improve the level of understanding of DRA among staff of SFs, line agencies, NGOs and other partners through similar fora at regional and country level.

Limited demand for sanitation facilities was common to all three social funds - this was particularly true in relation to rural sanitation. Peri-urban sanitation projects were common in Ethiopia. Demand creation through social intermediation and hygiene awareness raising is therefore essential.

PROJECT RULES IN SOCIAL FUND WATER AND SANITATION COMPONENTS

	Ethiopia	Malawi	Eritrea
Eligibility Criteria			
Who is eligible to receive services	All rural and peri-urban communities	All rural and peri-urban communities	All rural, small urban and peri-urban communities
Are more communities eligible than can be served?	Yes	Yes – waiting list of over 500 communities	Yes – waiting list of over 100 communities
Criteria used to select communities from those that are eligible?	Prioritised by Regional Government on basis of access to existing supply, existence of community group, willingness to contribute to project costs.	Social Fund regional office selects projects on basis of community request for specific option – e.g. borehole, community organisation, and community contribution	Regional council assesses requests on basis of regional priority, access to existing supply, existence of community group. SF selects from regional priority list.
Project Initiation and Information Flow			
Are there mechanisms for flow of information to all eligible communities?	Yes, national/regional outreach programmes – radio, leaflets, public meetings, local government s	Yes, national/regional outreach/IEC programmes – radio, drama, leaflets, public meetings, local government	Yes, national/regional outreach programmes – radio, leaflets, public meetings, local government
Who makes initial request?	Community	Community	Community
Are procedures in place to verify demand?	Financial agreement, and capital contribution collected up front	Financial Agreement and contribution agreed up front	Financial agreement, and community capital contribution collected up front
Financial Policy			
Is there a subsidy ceiling?	No, Per capita upper limit guidelines	No	No, Per capita upper limit guidelines for each option
What are the terms of the credit?	10% minimum community contribution – cash, materials, labour	20% minimum contribution – material or labour	10% minimum community contribution –material, cash or labour
Is amount of community contribution linked to the level of service requested?	Yes, community pays 100% of cost above basic service level	No	Yes, community pays 100% of cost above basic service level

What are the financial policies for O&M replacement?	Community responsible for 100% of O&M costs	Community responsible for basic O&M costs	Community responsible for 100% O&M costs and replacement of pumping equipment
Does financial policy create incentives to minimise costs?	Bias towards low cost options – basic level of service	There is no incentive for community to choose less expensive option	SF will only subsidise least cost basic service level
Technology and Service Level Option			
Is there flexibility in technical design and standards to respond to wide range of demands?	Range of options is limited to basic level of service - option to include livestock	The range of options is limited to basic level of service - shallow well or borehole with handpump	Range from hand dug well to mechanised piped water supply
Are services linked to costs presented to communities – does price influence community choice?	Communities are not always offered range of options – but are requested to contribute to the option proposed for them	SF approves sub project without an assessment of costs and do not require communities to contribute for options requiring cash – borehole	Communities choose between basic service level and desired service level on the basis of costs – capital and O&M
Informed Choice			
Who decides service level community will receive?	Community, Region	Community, project	Community
How are decisions made	Community Water Committee on behalf of community and with inputs from meetings, focus group	Community Project Committee on behalf of community, with inputs from meetings, focus group	In meeting for all community members over 18, with inputs from meetings, focus group
Are community O&M responsibilities clear before community makes informed choice?	Yes, financial agreement includes . this (but costs not always clearly spelled out)	Yes, community with backup from Government for major repairs	Yes – financial agreement spells these out including tariff required for O&M
Does project provide qualified assistance to facilitate choice making?	Yes, regional line staff, NGO representatives	No but NGOs, consultants, drillers now being engaged to provide support	Yes, consultant, SF technical staff, local government staff
Does community make informed choice to participate and sign request?	Yes	Yes	Yes

Delivering and Sustaining Services			
What is the communities role in managing funds?	Signs financing agreement and contracts, supervises contractor	Full management of peri-urban WS. Partial management of rural water supply	Signs financing agreement, supervises contractor
Can community choose who delivers the software?	Yes, but normally provided by SF	Yes, but normally provided by fund	Yes, but normally provided by fund
Does community participate in selecting and supervising construction, procuring materials?	Yes, if they are the implementing agency e.g. hand dug wells – provides some materials	Yes, if they are the implementing agency, not normally for boreholes, other schemes	Yes if implementing agency. So far onlysupervises construction, procurement –provides some materials
Who owns the facilities? Who is responsible for sustaining them?	Community owns facilities Community with back up from Government	Community – sense of ownership. Community with back up including funding from Government	Community owns facilities – by law. Community incurs costs, including Government support


Warm Congratulations From Chinese Government Delegation On The Convening of The International Conference on Rural Water Supply and Sanitation in Washington, DC

Wish this Conference Completely Succeed!


The World Bank Credit Implementation Description Of China Rural Water Supply and Sanitation Projects

P.R.China
The Executive Office of National Patriotic Health Campaign Committee
May,1998
Beijing,China

Contents

- 1?Background

1.1

In 1980, United Nations initiated "International Drinking Water Supply and Sanitation Decade" in the 35th General Assembly which targets at "Everybody with safe drinking water and sanitation". Chinese government agree to and support this decision and participate in this activity to improve the drinking conditions in rural China. So, State Council sanctioned NPHCC as State Action Committee of "Decade Activity" and appointed Deputy Director of NPHCC, Minister of MOPH as Director of Sate Action Committee. NPHCCO is in charge of the day-to-day work.

- 1?Background

1.2

From 1986 to 2000, rural water supply task has been included in the Five-year plan on State's development and economic construction for three times. Local governments at each level also contain rural water supply task as the part of local development plans.

General Policies for China Rural Water Supply

Government Proposing

Departments Coordination

Society Support

Individuals Participation

Specific Policies for China Rural Water Supply

Running by the local people and subsidized by the state

Cooperative funding

Suiting measures to local conditions

Scientific guidance

Whoever construct take charge of

Ensuring the water quality

Charging by the consuming volume

Gaining from the water and then investing on water

- 1? Background

  1.3

  22 provinces

  5 autonomous regions

  4 municipalities directly under the central Government

  Generally carrying out rural water supply activity

- 1? Background

  1.3 Twenty-two provinces, five autonomous regions and four municipalities directly under the central Government have generally carried out rural water supply activities. By ten years efforts, the total investment is up to Y28.6 billion RMB.

Investment Summary of China Rural Water Supply
(Y million RMB)

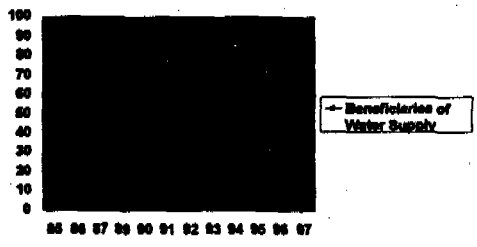
Year	Total	State %	Collectives %	Individuals %	Other %
81-85	3919.23	23.22	31.15	42.33	3.3
86-90	9434.08	20.50	27.90	47.40	4.2
91-95	15263.51	23.95	26.22	42.78	7.04
Total	28616.83	22.56	28.48	44.17	4. 65

- 1? Background

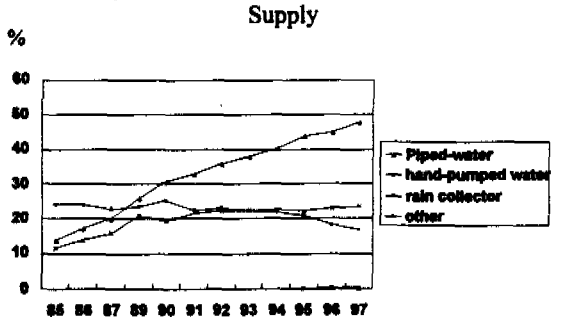
  1.3

  By the end of 1997, The beneficiaries of rural water supply had amounted to 88.9 percent of the total rural population, of which, 48.01 percent drink piped water, 23.16 percent drink hand-pumped water. The rural hygienic qualification rate of drinking water has increased from 23.7 percent in 1985 to 57.3 percent in 1995.

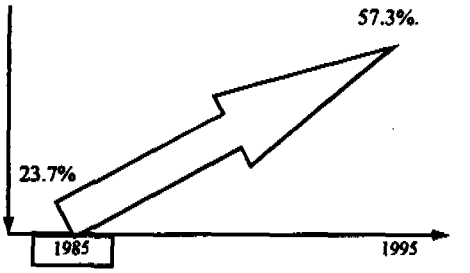
Progress Status of China Rural Water Supply



Progress Statement of China Rural Water Supply



- 1?Background
- 1.3 The hygienic qualification rate of drinking water in rural China had increased from 23.7% in 1985 to 57.3% in 1995.



- 1? Background
- 1.4

A Very Arduous China Rural Water Supply Task

- **There still exists 120 million rural residents without improved drinking water conditions because of poor economy, dispersed housing.**
- **There are 200 million rural inhabitants with initial improvements on drinking water conditions and desperate need for water quality improvements.**
- **After over ten years operation,the pipes and equipment of simple rural water plants constructed at the beginning of 80's need renewal and improvement**

- 2? Project Fundamental Description
  - 2.1 Project Plan
  - 2.2 Project Investment Budget
  - 2.3 The Sources of Project Funding
  - 2.4 The Project Implementation Organizations
  - 2.5 Project Implementation Description

- 2? Project Fundamental Description

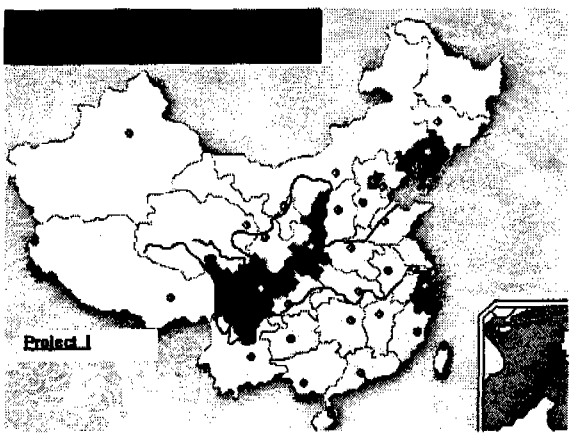
2.1 Project Plan

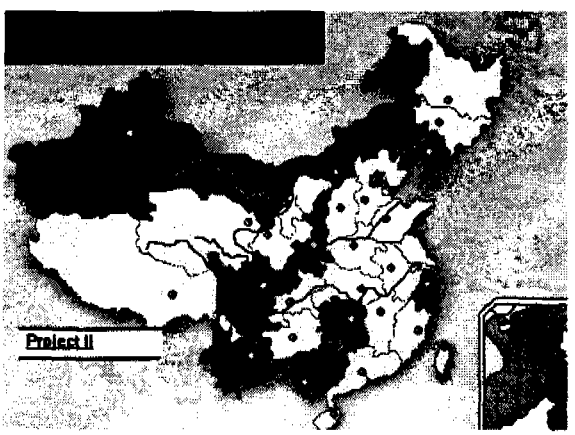
Project	Provinces No.	County No.	Village No.	Beneficiaries (million)	Starting Date and Closing Date
I	5	25	4650	5.93	1985.11.13--1991.6.30
II	6	75	29429	9.06	1992.7.23 --1998.12.1
III	5	40	3079	4.60	1997.11.12--2002.12.31
Total	16	140	37158	19.59	

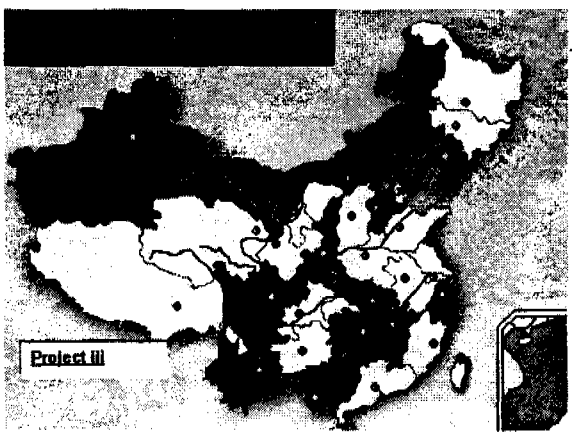
Project Plan:

Supplying enough safe drinking water to 19.59 million rural residents and simultaneously carrying out health education and sanitation improvement activities to improve rural inhabitants health level and promote rural economy development.

Three projects include 16 provinces,autonomous regions,municipalities.







The World Bank Credit

Credit No.	Amount?million?		Lending Term	
	SDR	Equivalent $	State	Project areas
I 1578-CHA	82.10	80	50	25
II 2336-CHA	78.90	110	35	20
III N027-CHA	51.40	70	35	17
Total	212.40	260		

(Project?actually use $104.60 million)

The Source of Project Funding (Project I) ($million)

Central Government	1.10	0.4%
Province and Municipal Government	11.40	4.3%
County Government	11.60	4.4%
Benefiting Farmers	127.20	48.3%
The World Bank	104.60	39.7%
GTZ	0.60	0.3%
WFP	6.80	2.6%
Total	**263.30**	**100%**

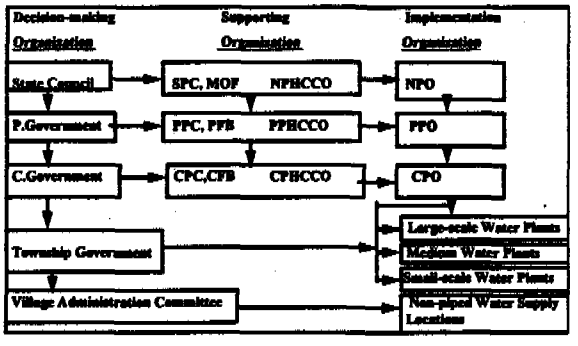
The Source of Project Funding (Project II) ($million)

• Central Government	0.70	0.4%
• Provincial and Municipal Governments	23.00	12%
• County Governments	18.90	9.9%
• Benefiting Farmers	37.20	19.5%
• The World Bank	110.00	57.6%
• UNDP	1.18	0.6 %
• **Total**	**190.98**	**100%**

The Source of Project Funding (Project III) ($million)

• Provincial and Municipal Governments	5.71	4%
• County Governments	29.29	21%
• Benefiting Farmers	35.00	25%
• The World Bank	70.00	50%
• **Total**	**140.00**	**100%**

Project Implementation Organization Directory Tree



• Project I has completed.
The beneficiary rural residents amount to 7.43 million, or 125% of the planned.

The benefiting villages total 5730, or 123% of the planned.

Implementation Statement of Project I

• Component	The Proposed	The Actual	%
• Piped Water Plants	3144	2699	86
• Non-piped Water Supply Locations	758	131	17
• Benefiting Villages	4650	5730	123
• Beneficiaries (million)	5.93	7.43	125

• Project II *is going on*

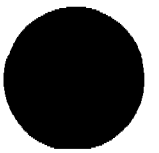
• By Dec. 31, 1997, 7.34 million rural residents had the access to safe clean drinking water, which is 81 percent of the planned. And a variety of 33,000 latrines had been constructed, which is 92 percent of the planned.

Implementation Statement of Project II

Component	The Planned	The Actual	%
Piped Water Plants	2473	2077	84
Non-piped Water Supply Locations	62444	63304	101
Beneficiaries (million)	9.06	7.43	81
Latrines	36158	33353	92

- Project III **has just started and The first ICB procurement for goods has been carried out.**

?????



- 3?Project Benefits
- 3.1 Providing safe clean drinking water for rural residents
- 3.2 The incidence decrease of waterborne diseases
- 3.3 Saving water-fetching time
- 3.4 Promoting rural economy development

- 3. Project Benefits
  - **3.1**

Providing safe clean drinking water for rural residents

Project I has benefited 7.43 million people.

Project II also benefited 7.34 million people.In these areas hygienic conditions have been improved and some rural inhabitants have formed good hygienic practices.

- 3?Project Benefits
- **3.2 The incidence decrease of waterborne diseases Based on the survey of Liaoning Provincial Project Office on drinking water status of 1.11 million people within the water supply coverage of 292 water plants, the incidence of Enteritis has decreased 87.8% than before, and Dysentery 80.4%,Hepatitis A 78.1% respectively. Due to water supply new cases of fluorosis have never taken place in the areas rich in high concentrations of fluoride in waters.**
- **?**

- 3? Project Benefits
- **3.3 Saving water-fetching time Based on the statistical data of Beijing Project Office, among of 164,500 beneficiary households in five project counties 7.5 million working days can be saved in one year. And according to five yuan per day to compute, half of the one-day salary at that time, Y37.5 million RMB service charges could be saved within one year.**

- 3? Project Benefits
- **3.4 Promoting rural economy development Based on the survey within 292 water plants coverage range in Project I, the number of villages and towns enterprises and households with specialized business relying on water quality and quantity has increased 76.3%;the yearly profit has increased 104.2% than before. Additionally, the development of household economy has been promoted.**

- 4?Experiences
  - 4.1 Mass participation, the key to project success
  - 4.2 Departments cooperation, an effective organization means.
  - 4.3 Cooperative funding, an effective way to promote projects in rural areas
  - 4.4 Project Demonstration Effects
  - 4.5 Project Management of Later Period

•4.Experiences

- **4.1** Mass participation, the key to project success The rural residents in project areas as beneficiaries, private investors and individuals responsible for credit repayment pay special attention to project planning, design, construction and operation management. It is difficulty to ensure the projects to go on smoothly without masses' positive and initiative participation.

•4. Experiences

- **4.1**
- **Community leaders introduce project objectives, procedures and principles to villagers and mobilize the beneficiaries to participate in the project positively.**
- **Give the beneficiaries an opportunity to select water supply means.**
- **Employ the local beneficiaries as water plant operation management staff after training.**

•4. Experiences

- **4.1**
- **Women as the largest beneficiary population are encouraged to participate in project positively.**
- **Women make up 10-35% of the total labors of project engineering construction.**
- **Women constitute 47% of all trained members.**
- **Female staff in project offices at each level make up 23% of the whole staff.**

4. Experiences

- **4.2 Society support, an effective organization means**
- **The project leading groups are responsible for projects coordination and ensure its implementation according to project plans. It has been proved in practice that it is a very effective organization means.**

•4. Experiences

- 4.3
  Cooperative funding, an effective way to promote projects in rural areas
- **It is imperative for China rural water supply and sanitation projects to raise funds from society.**
  It is an effective way in practice.

•4. Experiences

- **4.4** Project Demonstration Effects
- Over 900 million, or 75 percent of the total population are rural inhabitants who need to improve their drinking water and sanitation conditions and accept health education. In view of the limited conditions only a few of World Bank financed projects can be carried out to play an exemplary role.

•4. Experiences

- **4.4**
- **Due to the project demonstration roles, water supply has been developed positively in non-project areas and has gained significant achievements.**
-

•4. Experiences

- **4.4**
- **Based on the statistical data, there were only 11.79 million beneficiaries of piped in 1982 before project I in the five project provinces;**
  By the end of 1993 , the beneficiary population had increased to 40.722 million total 35.43 million more than before. of the new beneficiaries ,only 20% are from the project areas, the other 80% of new beneficiaries are the achievement of water supply of non-project areas affected by project areas.

•4.

- **4.5**
- **Project offices during project implementation are transformed into operation management organizations.**
- **What gains from water supply are invested on water supply; Run and manage the water plants on a commercial basis.**

5. Lessons

- **5.1**
  Emphasizing rural water supply and ignoring the roles of improving sanitation and spreading health education simultaneously.

  Project II and Project III carried out water supply, sanitation and health education simultaneously.

5. Lessons

- **5.2**
  Overemphasizing cost decrease results in the lack of convenient water supply.

  During implementation of Project I and Project II water supply plans had to be modulated significantly.

•5. Lessons

- **5.3**
  The goods and materials for civil works in Project I and Project II are procured through ICB procurement.Because of over-long period the goods arrival time was postponed and so both projects cycle were prolonged for one year. Project III draw from the above lesson and began the first ICB procurement as soon as the signing of the Credit Agreement.

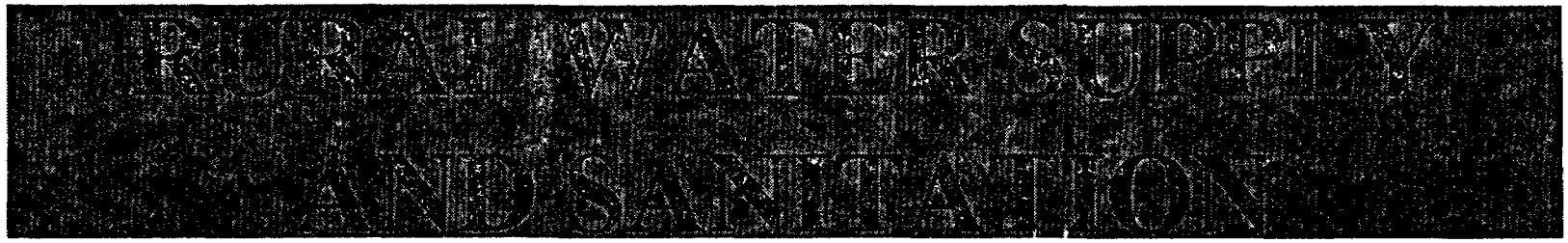
•5. Lessons

- **5.4**
  Project II and III are state assisting the poor projects. Some areas of Project II could not provide counterpart funds on time even in a rather long time, which affect the project progress seriously. So it is necessary to consider their ability to provide counterpart funds when select project areas.

The Government of China Thanks The World Bank and International Organizations' Support on China Rural Water Supply and Sanitation during the past years!

Thanks for World Bank Staff's Industrious Work on China Rural Water Supply and Sanitation.

Thank you !



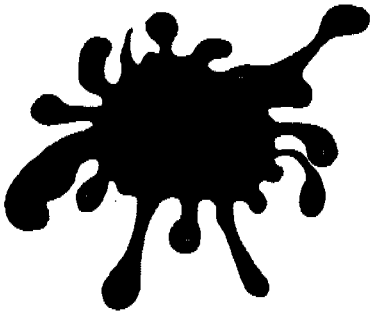
PEOPLE & PARTNERSHIPS

an introductory presentation

by

Letitia A. Obeng

Africa Region



RURAL WATER SUPPLY AND SANITATION

PEOPLE & PARTNERSHIPS

PRESENTATION OVERVIEW

- What Is the Bank doing in RWS?
- What have we learned?
- Where are we going?

GROWING PORTFOLIO

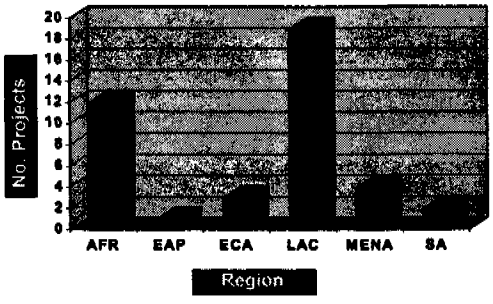
- RWSS is a growing sub-sector for the Bank.
- Portfolio and Pipeline based on lessons learned.
  - Major initiatives by governments, NGOs, multilateral and bilateral agencies during the IDWSSD of the 1980s.
  - Agencies such as UNICEF and the UNDP-World Bank Water and Sanitation Program have documented global experiences and contributed to the learning process.

WORLD BANK FUNDING OF RWS

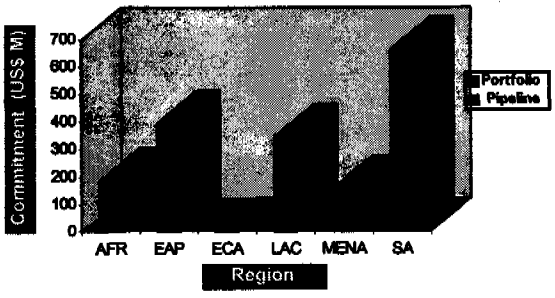
- Of the 100 RWSS projects in the portfolio and pipeline:
  - about 1/3 are stand alone;
  - 1/3 are components of agriculture, health or urban water supply projectsd;
  - 1/3 are components of social investment funds.

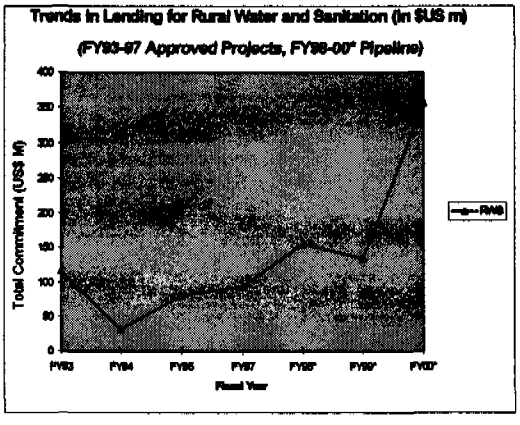
STAND-ALONE RWS PROJECTS

PROJECTS WITH RWS COMPONENTS: BY REGION



RWS LENDING BY REGION: PORTFOLIO & PIPELINE





WHAT HAVE WE LEARNED ABOUT RWSS? - 1.

- RWS is institutionally complex with people and partnerships being a crucial aspect.
- Supply driven approaches have not been sustainable.
- Cost-sharing is important.
- Level of service is more important than technology choice.

WHAT HAVE WE LEARNED ABOUT RWSS? - 2.

- Pilot projects have not always been replicable.
- Sanitation and hygiene are often neglected.
- Participation and consultation are fundamental for success.

WHERE ARE WE GOING?

- Let's now look briefly at people, partnerships and policies that join them:
  - People
  - Policies
  - Partnerships

PEOPLE AND PARTNERSHIPS

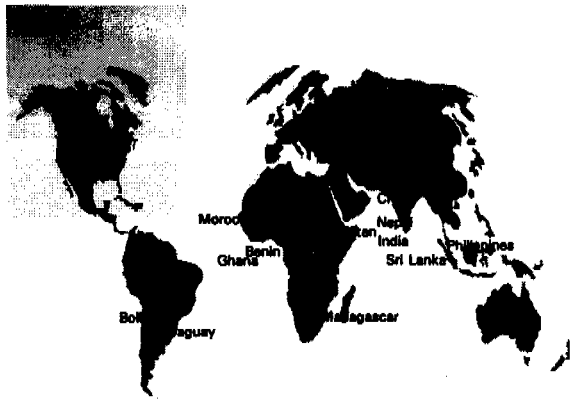
- Communities
- Private Sector
- NGOs
- Local Government
- Sector Ministries
- Training Institutions
- External Support Agencies

SECTOR POLICIES
Institutional Arrangements

- All partners with well defined roles
  - Communities plan and manage
  - Private sector delivers goods and services
  - Public sector plans and facilitates

SECTOR POLICIES
Financing Arrangements

- Clearly defined cost sharing for all partners
  - Communities do what they can to improve services without government subsidy.
  - Government contributes to capital cost without stifling community initiative.
  - Communities pay all O&M costs.

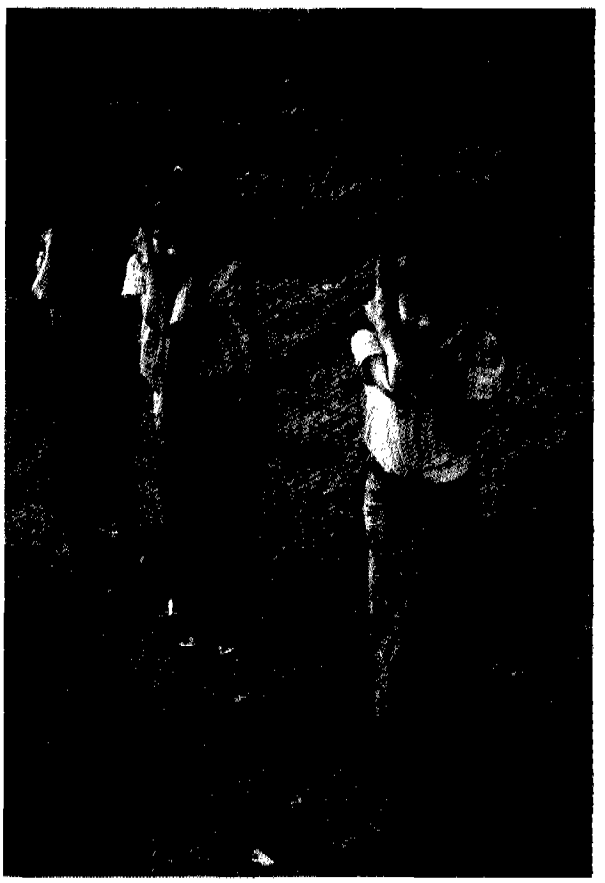


Lessons Learned

RWSG-EAP
March 1998

Demand
Informed Choice
Behavior Change

Rural poor choose their water and sanitation services



Lao PDR at a glance

Total population: 4.6 million

Rural/urban population: 85% / 15%

Coverage for rural water supply: 57% (1996 estimate)

Coverage for rural sanitation: 20% (1996 estimate)

Infant mortality rate (IMR): 113/1000 live births

Life expectancy at birth (1993): 51.3 years

Main morbidity/mortality causes: malaria/ diarrhoeal disease/respiratory infection

Adult literacy rate: 58% (male 64%, female 42%)

Human development ranking: 138 (of 174)

Real GDP per capita: $ 1,458

GNP per capita: $ 280

Contributor: Nilanjana Mukherjee e-mail: nmukherjee@worldbank.org Tel: 62.21.52993003 Fax: 62.21.52993004

Overview

Preparation for the World Bank-financed Provincial Infrastructure Project for Oudomxai and Phongsali provinces in northern Lao PDR, was carried out during the larger part of 1997.

In a radical departure from the usual practice of hiring specialized international consultant firms, the preparation for the Rural Water Supply and Sanitation sub-component was entrusted to the National Water Supply and Environmental Health Program (NWSEHP or Nam Saat) of the Government of Lao PDR. They accomplished their task working in partnership with related sector personnel and representatives from mass organizations of Lao women and youth.

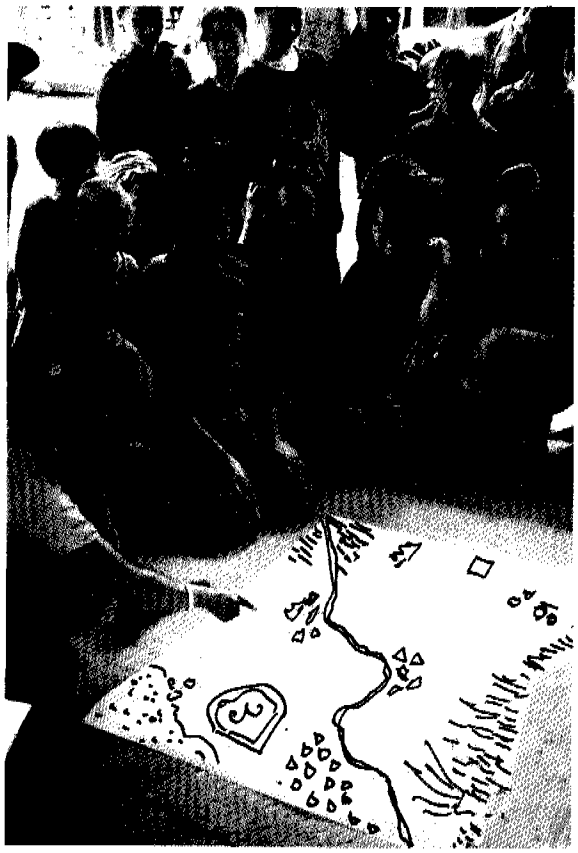
In a never-before-attempted approach, the project preparation teams drove, walked, climbed, and rowed to more than 30 villages in the two provinces - to consult women and men at length about their water and sanitation preferences, beliefs and practices. Technical and capacity building support for the work was provided by the Regional Water and Sanitation Group for East Asia and the Pacific, of the UNDP-World Bank Water and Sanitation Program.

The result of this intensive collective learning process was a sub-project that the Government of Lao PDR has named HASWAS, for Hygiene Awareness, Sanitation and Water Supply.

Demand and Informed Choice

Central to the preparation process was an exercise in '***listening***' to rural Lao communities about the types and levels of water and sanitation services they want, are willing to pay for, and sustain. It was also an attempt to understand ***why*** communities are making the choices they are, since an accurate estimation of demand is possible only when those choices are adequately '***informed***' ones. Thus, the preparation involved community dialogues that did ***not*** begin by asking, *"what are your willing to pay for?"* or *"how much are you willing to pay?"* Dialogues began, instead, with participatory assessments of existing health and hygiene awareness and practices within the communities.

The results were used to jointly identify ***what water and sanitation related behaviors they would like to change,*** linking these with ***the water and sanitation services they want to buy***.



Mapping of existing water & sanitation facilities and identifying locations for new ones.

In the process, the communities gained insights about how they could maximize the impact of services on their quality of life, while the external facilitators of the dialogues (service providing agency & partner agencies) gained deeper understanding of what would sustain the services, once provided.

Community Dialogues

Villages were selected to represent the population targeted by the project, according to criteria such as:

- Location in terms of distance from the district centers. (*Zones 0, 1, 2 and 3, where Zone 0 is near the district Nam Saat office; Zone 1 is within easy access of several hours; Zone 2 can be reached only after an overnight halt on the way., and Zone 3 needs 2 to 3 days of travel, often on foot or by riverboats. Sampling was biased towards Zone 3, which contains a disproportionately larger number of potential project target villages)*
- Reflecting major economic and ethnic groups in each district
- Having no external assistance for water-sanitation services to date, and
- Within the districts' "development focus" area

In each village, the sub-teams facilitated community dialogues for jointly assessing:

- Local water and sanitation situation/problems
- Local hygiene practices/rationale for these practices
- Economic demand for services based on information on feasible options and costs, and
- The community's development history as an indicator of social capital

Women sorting community hygiene behaviors as "good for health", "bad for health", "irrelevant".

Building Capacity, Confidence, Ownership

The key feature of this nationally led work was the joint quest for ways to recognize and facilitate the expression of demand. In a spirit of mutual learning by the 25-member team, it was recognized that there was ***no single expert guide, nor a step-by-step manual available for the task.***

Contrary to past experience of most team members, the task required no '***education***' of the community. It took a while for them to accept that communities had to be helped to ***analyze their own situation*** and ***select their own options,*** given complete information on available options and costs.

A set of techniques and visual tools were developed, and training on their application was provided to communicate the options effectively.

It was obvious that the district level Lao field teams were ***the*** most qualified to undertake the actual facilitation, due to their depth of local knowledge and language ability for communicating with the client population.

The presence of high-ranking central level personnel and international consultants might ordinarily have been inhibiting- but the field-based training experience changed all that. District level personnel clearly saw why they had to take the lead and central Nam Saat members encouraged them. Locally appropriate visual materials were developed by a local illustrator, to facilitate the communication process. By consensus, the sub-teams were balanced in terms of gender and ethnicity, to foster free dialogues with women, men and different ethnic groups in villages.

At the end of field work by sub-teams, the whole team synthesized its findings and made suggestions about the menu of technological choices to be offered. The team also made observations on

the organizational structure, coordination and management of the HASWAS Project and pointed out difficulties and special provisions needed for working in remote areas.

Their inputs have been integrated into the HASWAS proposal prepared by Nam Saat. A support team of senior central Nam Saat and RWSG-EAP personnel offered technical guidance and capacity building assistance through the process, and helped ensure timeliness of preparation. Their own learning through this process was no less than that of the team they supported.

Glimpses of Field Experience

What Constituted the Community Dialogues?

Community dialogues were initiated with groups of women and men in each village, through the following set of thirteen participatory learning activities, drawn from the repertoire of Participatory Rural Appraisal (PRA) and Participatory Hygiene & Sanitation Transformation (PHAST) methodologies.

Who does what? Identifying task/role divisions.

- Community history profiling (time line)
- Wealth classification (criteria for identifying the poorest)
- Gender analysis of task-roles: household and community level
- Gender analysis of control of resources: household and community level
- Social and natural resources mapping
- Community participation profile in past development projects
- Priority problems of villagers
- Health awareness assessment
- Hygiene awareness; rationale for existing hygiene behaviors
- People's perception of routes of fecal-oral contamination in the community
- People's perception of ways of blocking contamination routes
- Water Supply Ladder (existing water supply system & menu of options with increasing levels of services and costs)
- Sanitation Ladder (existing defecation practices & menu of options with increasing levels of services/facilities and costs)

Output of task/role identification process.

Learning that Emerged

➢ Field investigators reported that the actual exercises took about 6-7 hours to do, with simultaneous facilitation of separate groups for women and men. They found the high levels of enthusiasm generated and quality of information produced by the community extremely rewarding.

➢ Gender-segregated dialogues greatly improved women's participation and produced clearer gender differences. It was realized that during project implementation, special strategies would

be needed for situations where barriers to participation were identified. Some ethnic groups such as the Lao Ko, do not allow their women to talk to outsiders regardless of the sex of the outsider. Several others restrict women's participation in public affairs and training. In addition, many ethnic minorities do not speak, read or write Lao. With them, communication was difficult even with visual aids. These were often the more isolated communities, with the least development exposure and the most alarming (according to the field teams) hygiene practices. Sometimes it was not possible to find words equivalent to 'latrines', 'cleanliness', and 'sanitation' in the language of the ethnic minorities.

- Water collection was found to be primarily women's task, done with the help of children of both sexes. Women are also the forest foragers, rice and vegetable farmers, petty shopkeepers, fuel wood gatherers, cutters of thatch and grass, cooks and cleaners of home and yard. Men fish, hunt, plough fields, clear forests through slash and burn practices for agriculture, build houses, visit markets for buying and selling and share childcare with women. Although most assets are said to be jointly owned, men control major financial assets and decisions to buy and sell. When making decisions about community resources, the village chief is supposed to listen to all opinions and then decide, based on consensus. However, it was not clear how women are actually consulted.

- Both men and women showed a distinct preference for Gravity Feed Systems for water supply, although for different reasons. Women consider flowing water (e.g. springs and rivers) to be of higher quality than that in wells, ponds or lakes. This is despite the fact that all kinds of washing, cleaning and ablutions are carried out in the river. Men prefer GFS, as it is 'more modern'. Rainwater harvesting is a relatively new concept, not familiar to most people. Those interested in latrines are mostly in Zone 0 or Zone 1 villages (closer to urban areas). One or two pit pour-flush-toilet is the most preferred option. These preferences are backed by a readiness to meet construction costs in terms of materials, labor and sufficient cash to cover 100 per cent of requirement for latrines and between 20 -70 per cent of the requirement for community water supply systems.

- There is readiness to pay 100% of operation and maintenance costs for both water supply and sanitation facilities.

The water supply ladder: presenting a menu of options to a potential client community.

- Demand for sanitation varied in direct proportion to the communities' exposure to the world outside their village. In isolated communities in Zone 3 (many ethnic minorities fall in this category), women have often not ventured beyond 10 kilometers of their villages. They did not recognize the pictures of any kind of latrines. Their lack of interest in, and

demand for, water and sanitation improvements could be related to their low radius of development exposure. It is difficult for them to want what they have never seen.

- Levels of hygiene awareness were consistently low among both sexes in the villages visited, and seemed to decline steadily with distance from the district headquarters, i.e. highest level in Zone 0, declining through Zones 1, 2 and 3. Limited access to formal education, low exposure to the world outside the village and low access to mass media seem to be the major constraining factors. In many villages, practices like boiling water and fencing to keep animals out are known, but not practiced. Malaria, diarrhea, dengue, cough, stomach pains are the most frequently reported health problems, but popular perceptions do not usually connect them with water and sanitation.

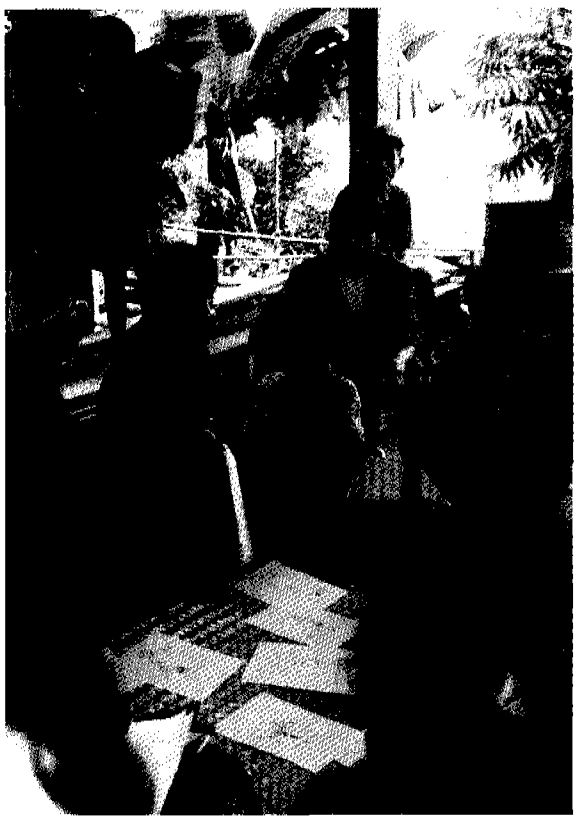
- The effort and time needed to collect water, particularly in this mountainous northern Lao territory, has a profound influence on the use and re-use of water. Feasibility of hygiene practices that can be promoted is closely tied to the quantity of water that is/can be made available within reasonable access.

- Behavior change targets will have to vary with communities and be incremental in nature, i.e. in keeping with the level of hygiene awareness created. It is essential to identify 1 or 2 key behaviors to promote, rather than a package.

- It is essential for field-level personnel to understand the rationale for existing community hygiene behavior and build on it, by identifying culturally sensitive areas and feasible behavior change strategies suited to specific communities.

- Promoting behavior change should strategically target men, women and children, since behavior change can have significant costs in terms of several kinds of household and community resources - (money, time, materials, energy, opportunities) - which would require everyone's compliance with a decision for change.

- Facilitation of informed choice was done through the use of two visual 'ladders', one each for water supply and sanitation, whereby increasingly higher levels of service options were displayed, with approximate price tags. The 'ladder' was first explained very simply and briefly to community groups, after which questions were invited, and clarifications/ additional information provided only in response to questions.



Water supply ladder: the community discusses options presented.

- Villagers then identified the level of service/facility they currently have, and where that fits on the ladder. They were helped to identify collectively (for water supply) and individually (for sanitation), where on the ladder they would like to be. Deciding this usually produced a rich discussion on costs,

benefits, advantages and disadvantages of each option. The Nam Saat technical personnel on the teams faced a challenging barrage of questions from the villagers and sometimes had difficulties in satisfying their demands for information. In terms of sanitation, the current range of options starts with no-cost, behavioral options for safe excreta disposal, such as digging a hole in the ground and covering it up after use. Increasingly higher cost options include several types of dry latrines with or without platforms and lids, ending with a single pit pour-flush latrine. After the community dialogues, the menu has been expanded to include twin-pit-pour-flush latrines, as the majority of interested villagers demanded such a permanent long-term option.

The experience provided valuable lessons about technical and participatory facilitation capacities needed among field teams for future implementation.

A supply-driven institutional system trying to transform itself into a demand-driven one has to increasingly empower and enable its field level personnel to be creative, innovative and non-conventional in responding to local demands.

The challenge is to find the optimal local solutions - without sacrificing technical feasibility and quality. The key to success lies in being open to listening and learning , using team-based approaches that combine technical and social process skills.

For Nam Saat personnel, it was a major role-change, to be learned and applied. For the External Support Agencies involved, it was a valuable lesson about the modes of support required for nationally-led development.

HASWAS is envisaged as a valuable learning opportunity for the Government of Lao PDR, its partners and other stakeholders involved in the country's development. At the closing of the Lao-led Preparation Team Workshop, Vice-Minister Bounkhouang Phichid's words reiterated this shared vision:

"...You have been a part of the first Lao-led Project Preparation Team in the history of the Ministry of Public Health. It is a pilot, our first opportunity, and of course we need advice from outside. But, gradually, that can be reduced with practice. If we do our work well, we can share this information and process with other Provinces, even other countries. Thus, I feel this process is a milestone and needs to be well recorded..."

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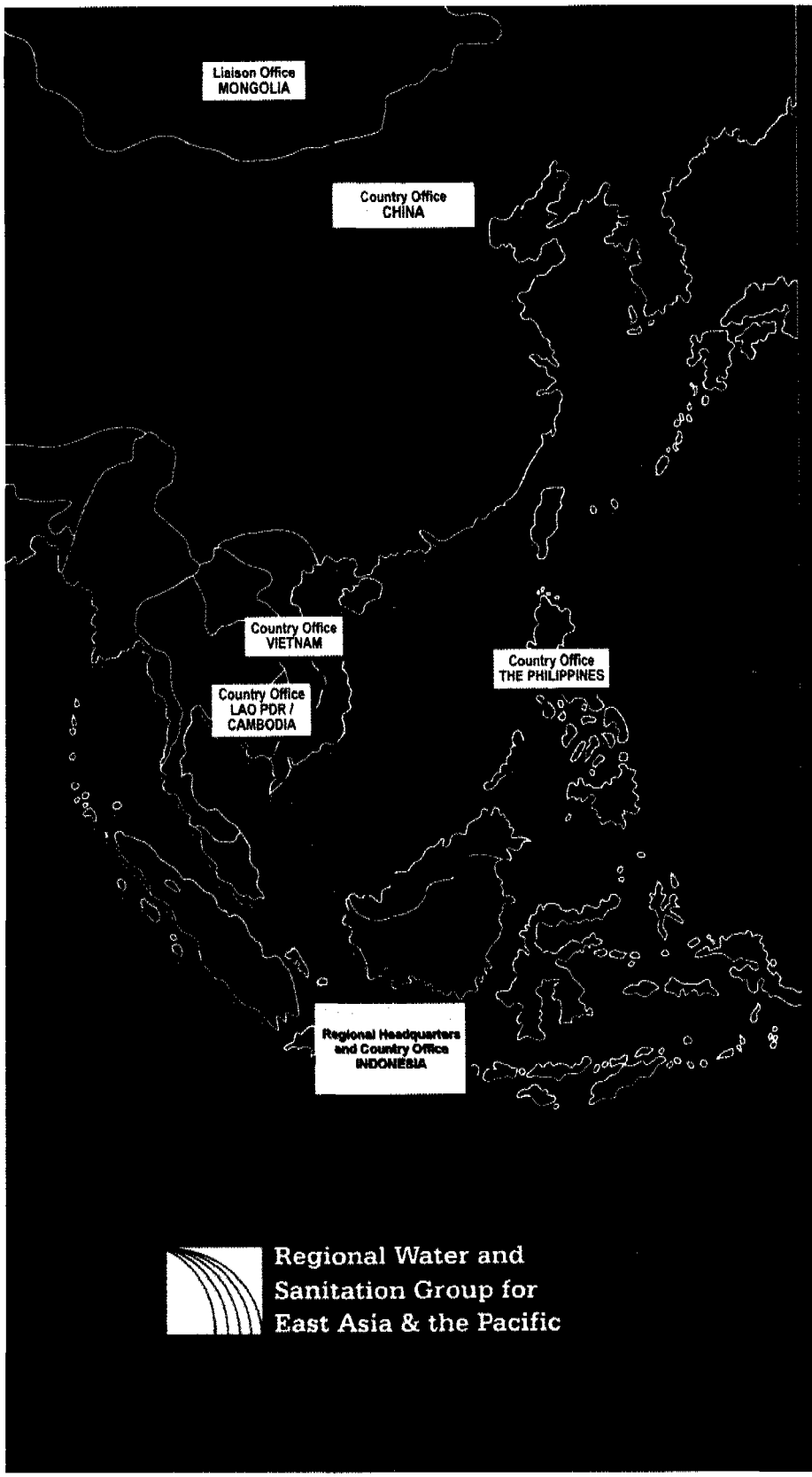

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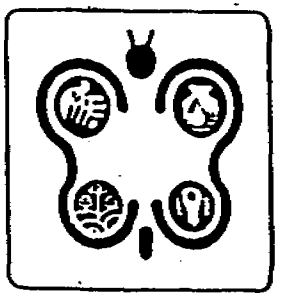
RURAL SANITATION PROGRAMME
TECHNICAL GUIDELINES

(SECOND EDITION)



PANCHAYAT & RURAL DEVELOPMENT DEPARTMENT

GOVERNMENT OF WEST BENGAL

IN COLLABORATION WITH UNICEF

INTRODUCTION

Sanitation has got a very important role to play in the matter of public health and improvement of quality of life. But in our country, particularly in the rural areas, the status of sanitation is extremely poor. Ignorance coupled with age old habits and non-availability of different kinds of sanitation facilities like latrine, soakage pit, garbage pit, smokeless oven etc., within affordable capacity of the villagers are the main reasons for such poor conditions. The Government of West Bengal had initiated the Intensive Sanitation programme in the districts of Medinipur and Hooghly. In other districts, sanitation programme is being implemented in blocks after establishing sanitary marts. Panchayat and different local voluntary organisations are working together for this cause. The progress of work is also quite satisfactory.

One of the pre-requisites of the sanitation programme is to instal household latrines in the premises of the villagers within their affordable means. Thus, for succesful implementation of this programme, it is very important to construct different components of sanitary latrines and other sanitary facilities of proper quality. Accordingly, this booklet has been prepared so that all relevant information in connection with production of different kinds of sanitary materials are available in one place and that can help in smooth implementation of the programme. How much materials like cement, sand, bricks etc., as well as how much labour including their wages would be required for production of different kinds of sanitary materials, have been indicated in detail in this booklet. In other words, it has been tried to elaborate the whole process of production system.

The costs of different kinds of sanitary materials have been worked out considering the prevailing approximate market rates of required raw materials, wages of labourers and transporation cost in Calcutta and its suburbs as of November 1995. Naturally, there will be a variation in the rates from place to place and from time to time. In case of necessity, the rates, can be modified. But the rates can be changed only after discussions with Panchayat Samity/Zilla Parishad.

It is expected that this second edition of technical guidelines will be of immense help to the Panchayats, voluntary organisations and other workers who are associated in successful implementation of sanitation programme in West Bengal. Suggestions are invited for further improvement of this technical guitelines.

Nov. '96

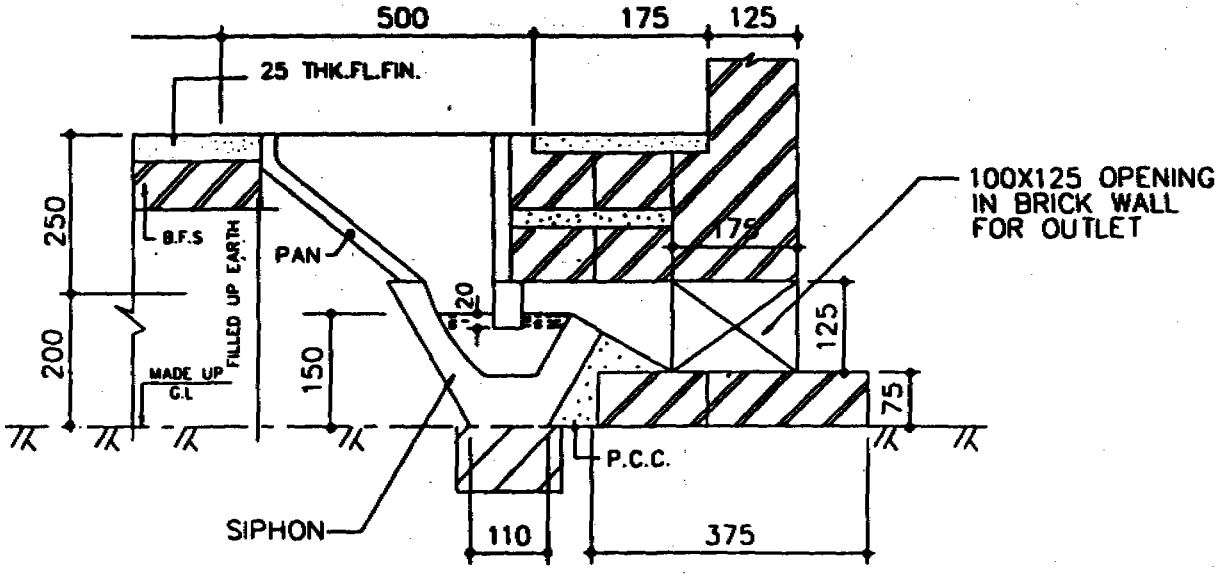
APPROVED RATE OF WAGES

		Rs.	Rs.
01.	Total wages for production of a pit cover		7.00
02.	Total wages for production of a rectangular squatting plate		17.00
03.	Total wages for production of a round squatting plate		16.00
04	Total wages for production of a big siphon (Trap)		7.50
05.	Total wages for production of a small siphon (Trap)		1.50
06.	**A. WAGES FOR PRODUCTION OF A MOSAIC PAN** (Excluding polishing)		
	1. Preparation of clay mould	0.75	
	2 Mud plastering (2 times)	0.30	
	3 Casting of pan on mould	4.50	
	4. De-moulding and putting in curing vat	0.75	
		6.30	6.30
	B. WAGES FOR POLISHING OF A PAN		
	1. 1st cutting and polishing	1.80	
	2. 1st filling	0.60	
	3. 2nd cutting and polishing	1.60	
	4. 2nd filling	0.60	
	5. Final polishing	1.30	
		5.90	5.90

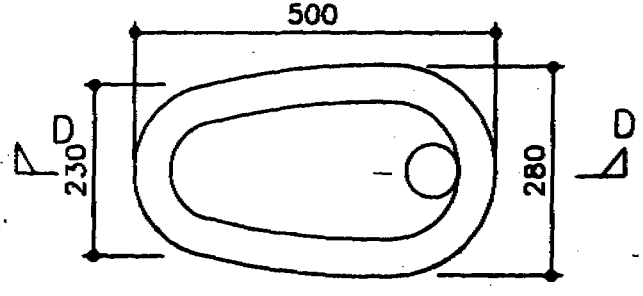
Total wages for construction of a mosaic pan A + B = Rs. (6.30+5.90) = Rs. 12.20 .

N. B. Above mentioned amounts include wages of mason, helper etc. For fixing of small siphon (trap) with pan, additional Rs. 1.00 will be paid to the mason.

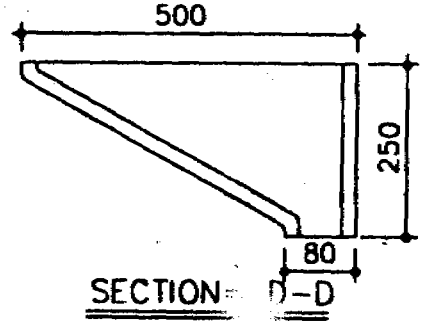
CONNECTION WITH MOSAIC PAN & TRAP



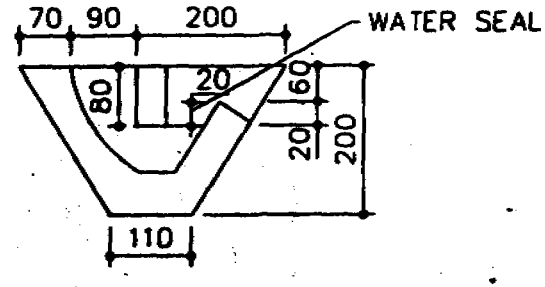
SECTIONAL VIEW OF PAN & TRAP CONNECTION



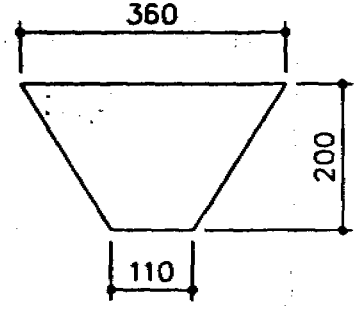
PLAN OF PAN



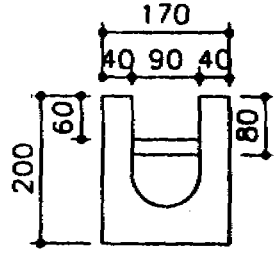
SECTION D-D



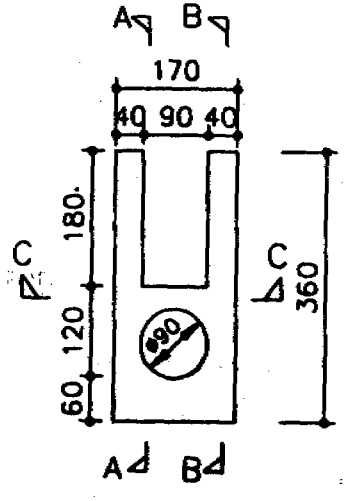
SECTION A-A



SECTION B-B



SECTION C-C



PLAN OF SIPHON

NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

COST OF PRODUCTION OF ONE MOSAIC PAN

Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
	MATERIALS			
01.	White Cement	1.3 kg (including 100 gms for filling)	525.00/bag (50 kg. bag)	13.65
02.	White Marble dust	1.3 kg (including 100 gms for filling)	70.00/bag (38 kg. bag)	2.39
03.	Milk White Mosaic Stone Chips	2.5 kg	75.00/bag (35 kg. bag)	5.36
04.	Sand	0.25 cft. (3" in measuring box)	4.50 / cft	1.13
05.	Cement	0.042 cft. (1/2" in measuring box)	140.00/bag	4.65
06.	Clay for making moulds	100 cft for 1000 pans	Lump Sum	0.25
07.	Cow dung	100 cft for 1000 pans	Lump Sum	0.40
08.	Mosaic cutting stone	24 nos of stones (8 nos of each category 40/60/80 for 800 pans)		1.50
09.	Finger gloves	500 nos for 1000 pans		0.40
	TOTAL COST FOR MATERIALS			**29.73**
10.	Carrying, Wastage and depreciation	@12% on cost of material		3.57
11.	Wages • Production of Pan	Piece rate basis		6.30
	• Polishing of Pan	Piece rate basis		5.90
			TOTAL COST	**45.50**

APPROVED COST - RS. 46.00

COST OF PRODUCTION OF ONE SMALL SIPHON (TRAP)

Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
	MATERIAL			
01.	Sand	0.048 cft (0.56" in measuring box)	4.50 /cft	0.22
02.	Cement (including neat Cement finish)	0.019 cft (0.23" in measuring box)	140.00 /bag	2.13
				2.35
03.	Carrying, Wastage and depreciation	@ 12% on cost of materials		0.29
	WAGES			
04.	For casting	Piece rate basis	1.00	1.00
05.	For jointing and finishing	Piece rate basis	0.50	0.50
			TOTAL COST	**4.14**

APPROVED COST - RS. 5.00

COST OF PRODUCTION OF ONE BIG SIPHON (TRAP)

Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
	MATERIAL			
01.	1/4" stone chips	0.17 cft (2" in measuring box)	17.00 /cft	2.89
02.	Sand	0.085 cft (1" in measuring box)	4.50 /cft	0.39
03.	Cement (including neat finish)	0.07 cft (0.82" in measuring box)	140.00 /bag	7.84
				11.12
04.	Carrying, wastage and depreciation	@ 12% on cost of material		1.33
05.	Wages	Piece rate basis		7.50
			TOTAL COST	**19.95**

APPROVED COST - RS. 20.00

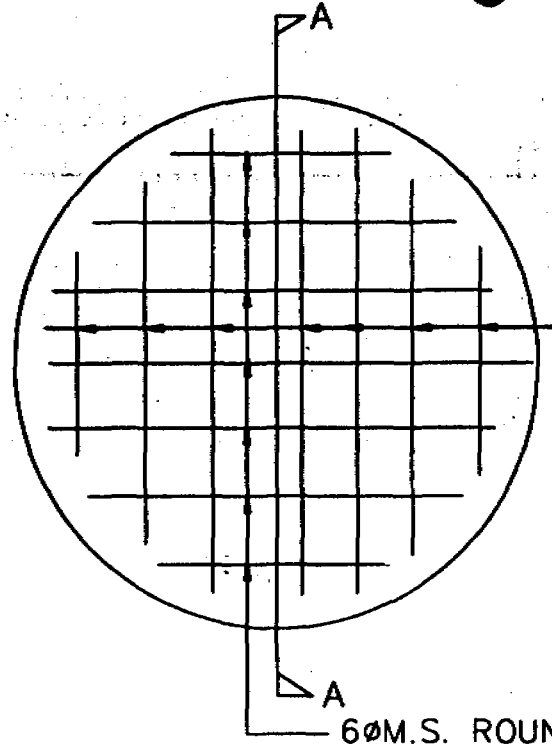
COST OF PRODUCTION OF
ONE MOSAIC PAN FIXED WITH SMALL SIPHON (TRAP)

Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
01.	Mosaic Pan	1 pc	46.00	46.00
02.	Small Siphon (Trap)	1 pc	5.00	5.00
03.	Wall net	1 pc	0.50	0.50
04.	Cement and sand for fixing of small syphon (Trap) with pan	Lump Sum		1.00
05.	Wastage and depreciation	Lump Sum		1.00
06.	Wages for fixing Trap with pan	Piece rate basis		1.00
			TOTAL COST	**54.50**

APPROVED COST - RS. 55.00

PIT COVER

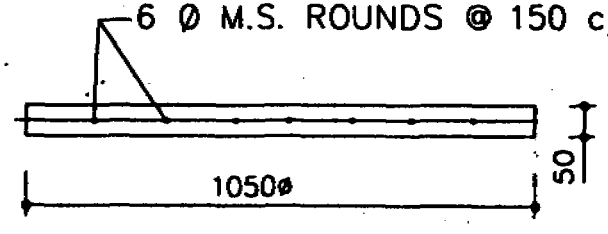
R.C.C (1:2:4)
DIAMETER–1.05 METER



6ø M.S. ROUNDS @ 150 C/C 7 NOS.
NO OF RODS :– 14

6øM.S. ROUNDS @ 150 C/C 7 NOS.

REINFORCEMENT ARRANGEMENT OF PIT COVER



SECTION A–A

NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

COST OF PRODUCTION OF DIFFERENT COMPONENTS OF SANITATION FACILITIES

COST FOR PRODUCTION OF ONE PIT COVER

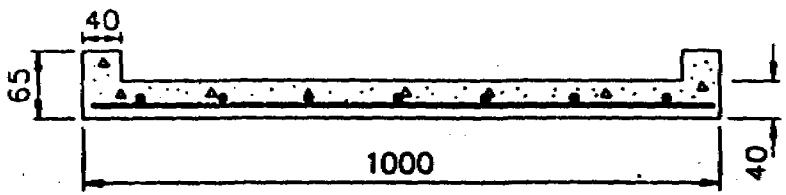
REINFORCED CEMENT CONCRETE WORK (1:2:4), SIZE : 1.05 METER DIA

Sl. No.	Material/Labour	Quantity *required*	Unit Price (Rs.)	Cost (Rs.)
01.	1/2" Stone chips	1.30 cft (15" in measuring box)	17.00 /cft	22.10
02.	Sand	0.65 cft (7" in measuring box)	4.50 /cft	2.93
03.	Cement	0.33 cft (3.5" in measuring box)	140.00 /bag	36.96
04.	6mm dia MS rod	11.00 Mtrs (2.4 kgs)	15.00 /kg	36.00
05.	Binding wire	50 gms.	20.00 /kg	1.00
06.	Burnt engine oil/Polythene sheet	Lump Sum		2.50
	TOTAL COST OF MATERIALS			**101.49**
07.	Carrying, wastage and depreciation	12% on cost of materials		12.18
08.	Wages of mason and Helper	Piece rate basis		7.00
			TOTAL COST	**120.67**

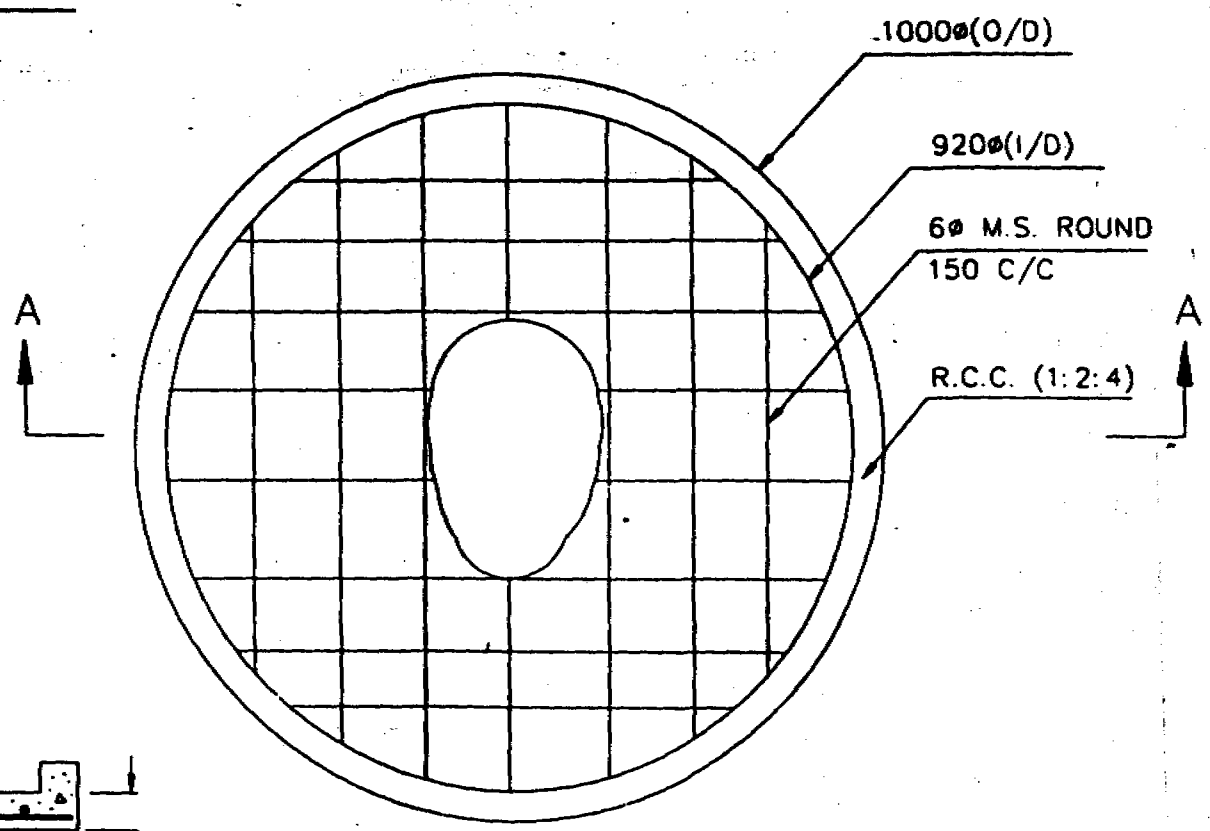
APPROVED COST - RS. 125.00

ROUND SQUATTING PLATE

R.C.C.(1:2:4), DIAMETER-1.0 METER



SEC.- A-A



NO OF RODS :- 18
TOTAL LENGTH OF ROD-12.00 MTR.(APPROX)

ARRANGEMENT OF REINFORCEMENT

NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

COST FOR PRODUCTION OF ONE ROUND SQUATTING PLATE

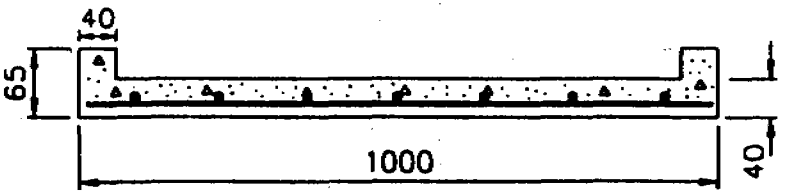
REINFORCED CEMENT CONCRETE WORK (1:2:4), SIZE : 1 METER DIA

Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
01.	1/2" stone chips	1.33 cft (16" in measuring box)	17.00 /cft	22.61
02.	Sand	0.67 cft (8" in measuring box)	4.50 /cft	3.02
03.	Cement (including neat cement finish)	0.42 cft (5" in measuring box)	140.00 /bag	47.04
04.	6mm dia MS rod	12.00 mtrs (2.64 kgs)	15.00 /kg.	39.60
05.	Binding wire	50gms.	20.00 /kg.	1.00
06.	Burnt engine oil/Polythene sheet	Lump Sum		2.50
	TOTAL COST OF MATERIALS			**115.77**
07.	Carrying, Wastage and depreciation	@ 12% on cost of materials		13.89
08.	Wages of mason and helper	Piece rate basis		16.00
			TOTAL COST:	**145.66**

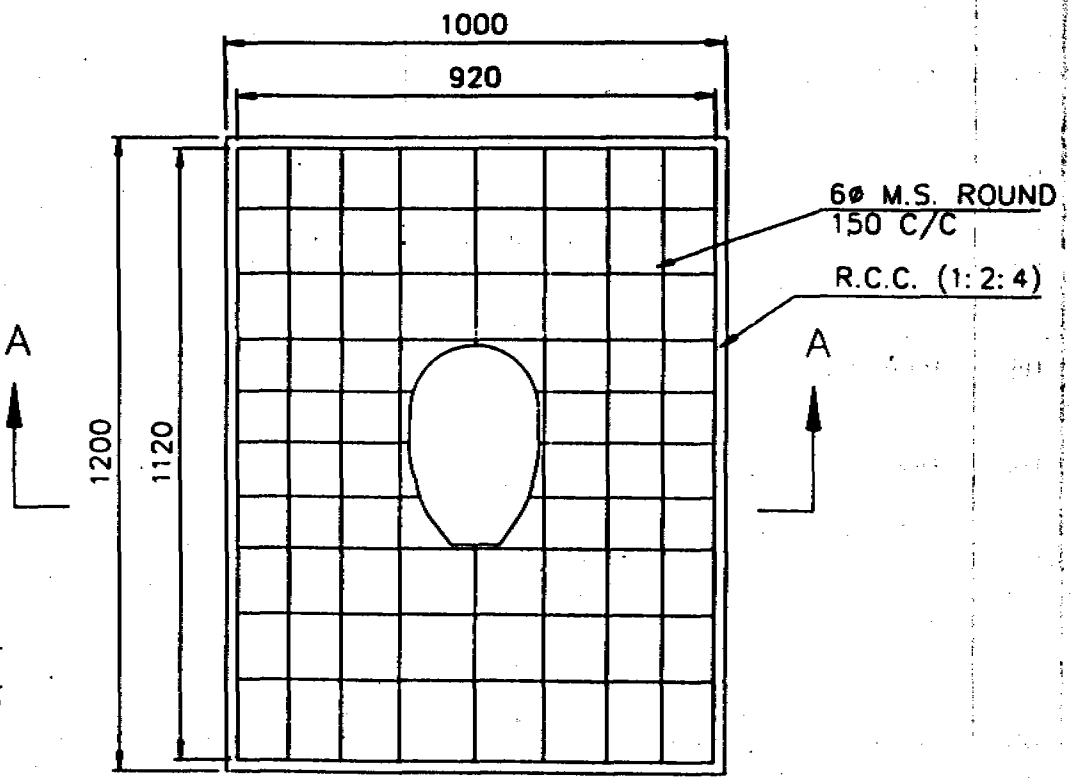
APPROVED COST - RS. 150.00

RECTANGULAR SQUATTING PLATE

R.C.C.(1:2:4), SIZE-1.2 METER X 1.0 METER



SEC.- A-A



NO OF RODS :- 20
TOTAL LENGTH OF ROD-16.00 MTR.(APPROX.)

ARRANGEMENT OF REINFORCEMENT

NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

COST FOR PRODUCTION OF ONE RECTANGULAR SQUATTING PLATE

REINFORCED CEMENT CONCRETE WORK (1:2:4), SIZE : 1.2 METER X 1.00 METER

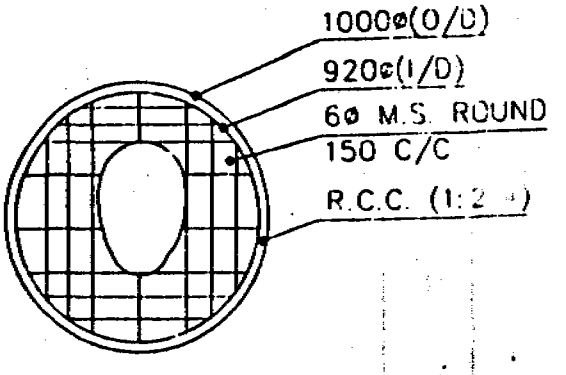
Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
01.	1/2" stone chips	1.66 cft (20" in measuring box)	17.00 /cft	28.22
02.	Sand	0.83 cft (10" in measuring box)	4.50 /cft	3.73
03.	Cement	0.50 cft (6" in measuring box)	140.00 /bag	56.00
04.	6mm dia MS rod	16.00 Mtrs.(3.52 kgs)	15.00 /kg.	52.80
05.	Binding wire	50gms.	20.00 /kg.	1.00
06.	Burnt engine oil/Polythene Sheet	Lump Sum		2.50
	TOTAL COST OF MATERIALS			**144.25**
07.	Carrying, wastage and depreciation	@ 12% on cost of materials		17.31
08.	Mason and helper	Piece rate basis		17.00
			TOTAL COST	**178.56**

APPROVED COST - RS. 180.00

ROUND SQUATTING PLATE

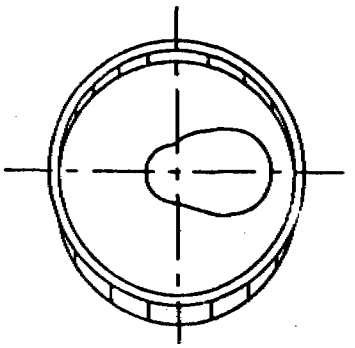
WATER FLUSH LATRINE

(DIRECTLY PLACED OVER UNLINED PIT– WITHOUT SUPER STRUCTURE)

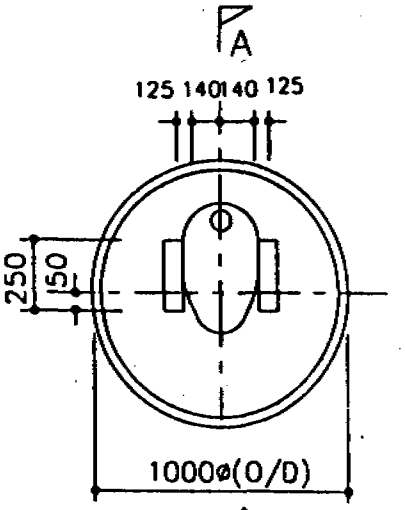


NO OF RODS :– 18
TOTAL LENGTH OF ROD–19.0MTR.(APPRO

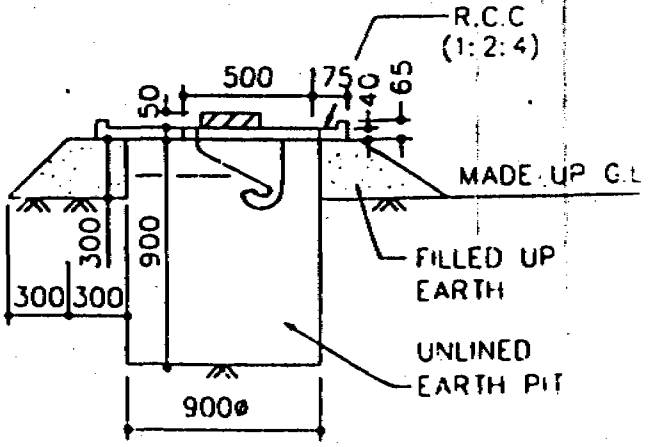
ARRANGEMENT OF REINFORCEMENT



THREE DIMENSIONAL VIEW



PLAN



SEC A–A

NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

ESTIMATED COST FOR INSTALLATION OF DIFFERENT MODELS OF LATRINE

WATER FLUSH LATRINE WITH ROUND SQUATTING PLATE-DIRECTLY PLACED OVER UNLINED PIT (WITHOUT SUPER STRUCTURE).

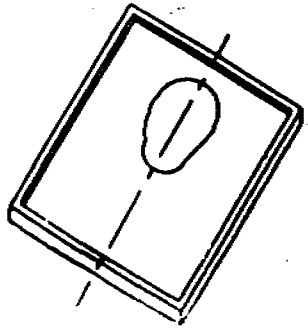
Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
01.	Round squatting plate	1 pc	150.00	150.00
02.	Mosaic pan-Trap	1 set	55.00	55.00
03.	Digging of pit and placing the squatting plate over the pit	Fixed rate	30.00	30.00
04.	Fixing of pan-trap in squatting plate	Fixed rate	6.00	6.00
05.	Carrying, breakage and wastage	Fixed rate	25.00	25.00
			TOTAL COST	**266.00**

APPROVED COST - RS. 270.00

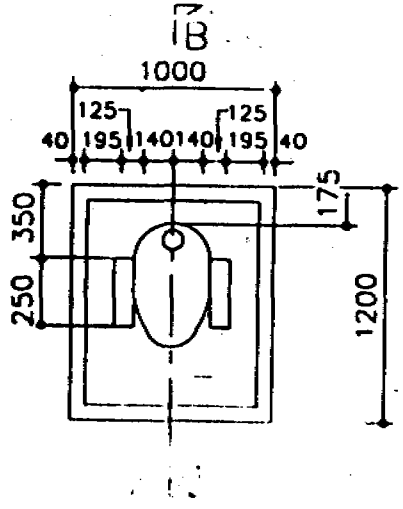
RECTANGULAR SQUATTING PLATE

WATER FLUSH LATRINE

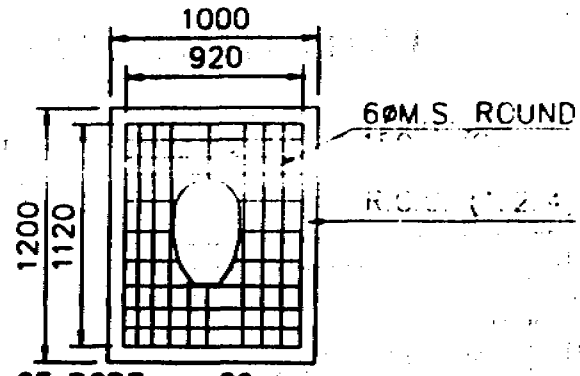
(DIRECTLY PLACED OVER UNLINED PIT– WITHOUT SUPER STRUCTURE)



THREE DIMENSIONAL VIEW



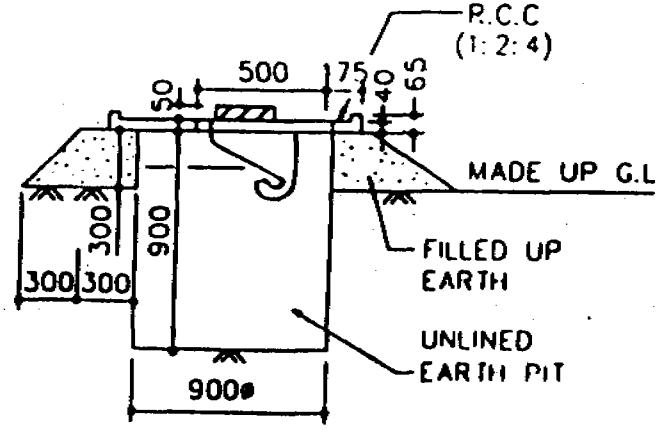
PLAN



NO OF RODS :– 20

TOTAL LENGTH OF ROD–16.00 MTR. (APPROX)

ARRANGEMENT OF REINFORCEMENT



NOTE

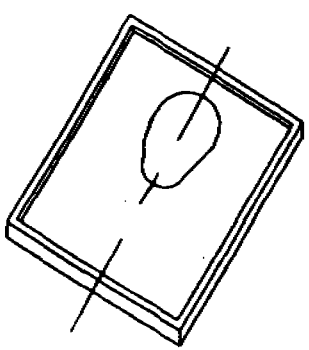
1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

WATER FLUSH LATRINE WITH RECTANGULAR SQUATTING PLATE DIRECTLY PLACED OVER UNLINED PIT (WITHOUT SUPER STRUCTURE)

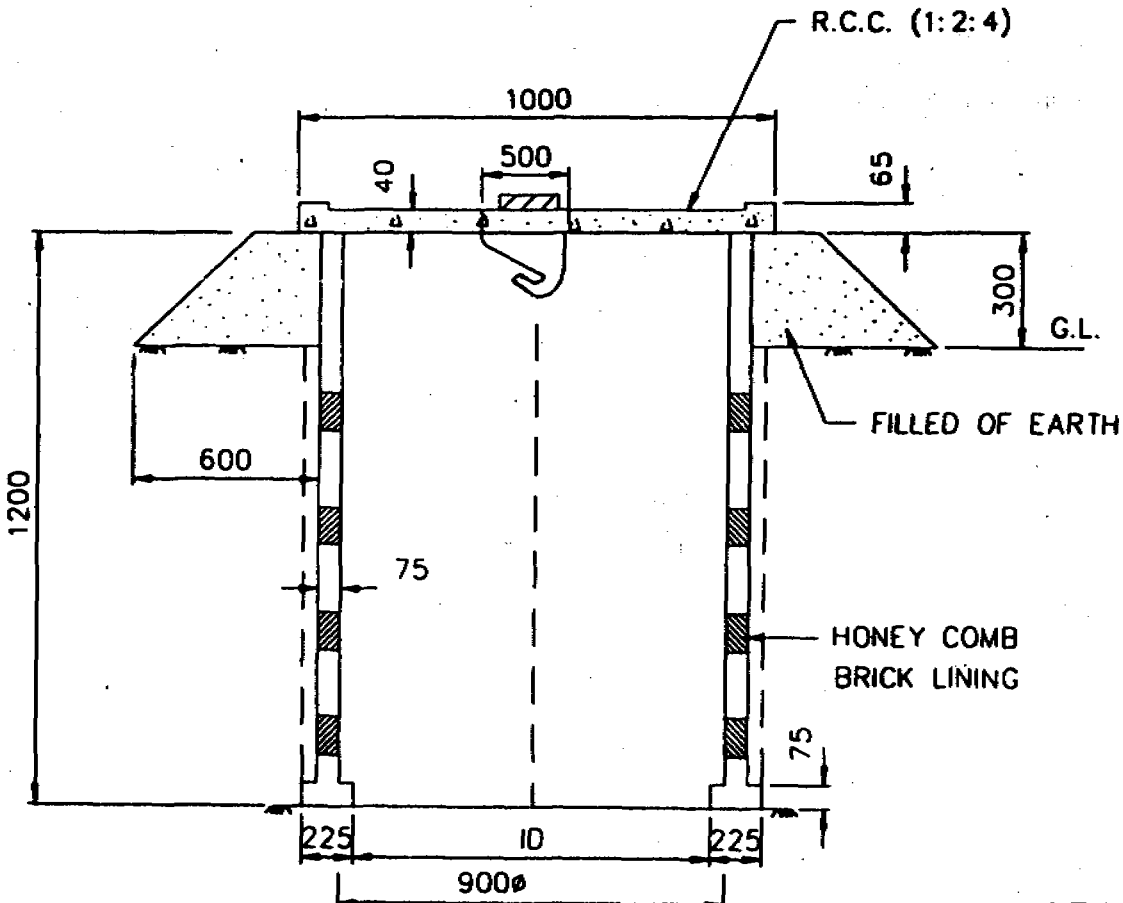
Sl. No.	Material/Labour	Quantity Required	Unit Price (Rs.)	Cost (Rs.)
01.	Rectangular squatting plate	1 pc	180.00	180.00
02.	Mosaic pan-Trap	1 set	55.00	55.00
03.	Digging of pit and placing the Squatting plate over the pit	Fixed rate	30.00	30.00
04.	Fixing of pan-trap in squatting plate	Fixed rate	6.00	6.00
05.	Carrying, breakage and wastage	Fixed rate	35.00	35.00
			TOTAL COST	**306.00**

APPROVED COST - RS. 310.00

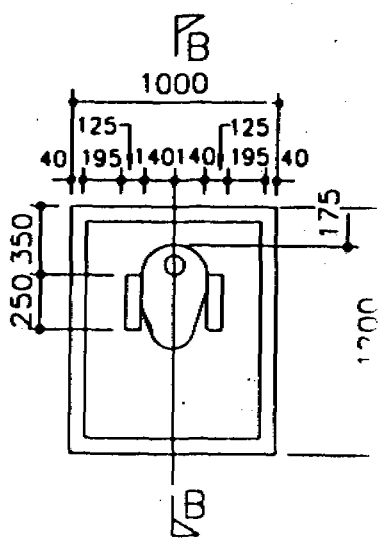
RECTANGULAR SQUATTING PLATE WATER FLUSH LATRINE (DIRECTLY PLACED OVER BRICK LINED PIT WITHOUT SUPER STRUCTURE)



THREE DIMENSIONAL VIEW



SECTION B-B



PLAN

NOTE

1. ALL DIMENSIONS IN MILLIMETRE
2. NOT TO SCALE

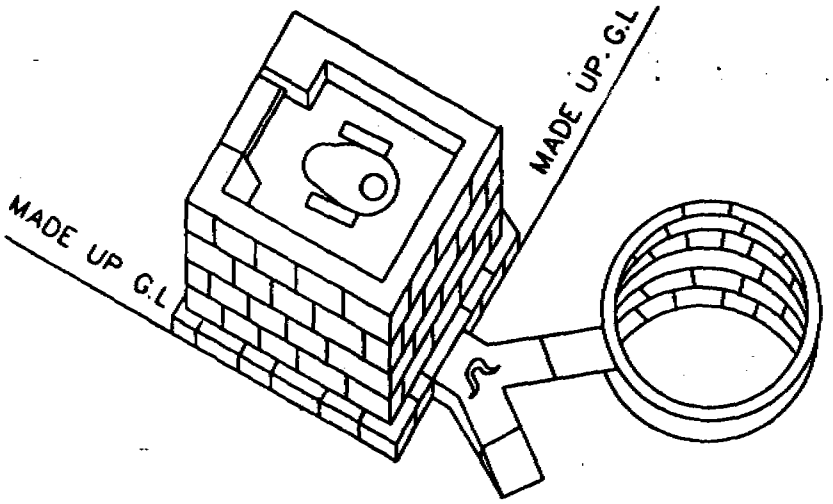
WATER FLUSH LATRINE WITH RECTANGULAR SQUATTING PLATE

(DIRECTLY PLACED OVER BRICK LINED PIT (WITHOUT SUPER STRUCTURE)

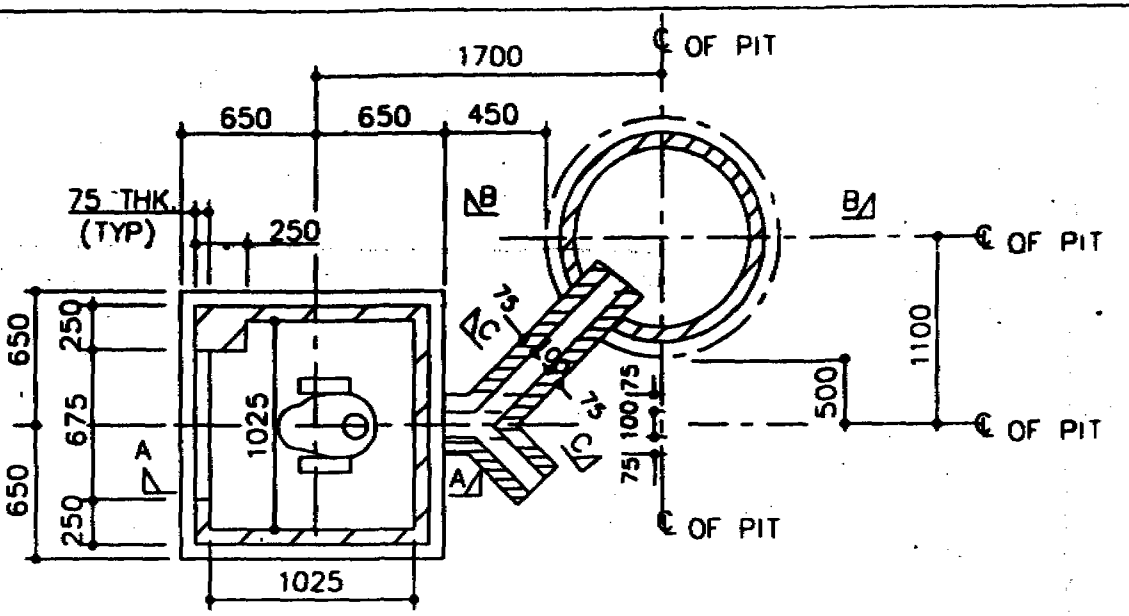
Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
	MATERIAL			
01.	Rectangular squatting plate	1 pc	180.00	180.00
02.	Pan-Trap	1 set	55.00	55.00
03.	Bricks	100 pcs	1.60 each	160.00
04.	Sand	4 cft	4.50 /cft	18.00
05.	Cement	0.50 cft (6" in measuring box)	140.00 /bag	56.00
				469.00
06.	Carrying, Breakage and wastage	@ 12% on cost on meterial		56.28
	LABOUR			
07.	Mason	1 person	60.00 /workingday/person	60.00
08.	Labour (including digging of pit)	$1^{3}/_{4}$ person	40.00 /workingday/person	70.00
			TOTAL COST	**655.28**

APPROVED COST - RS. 660.00

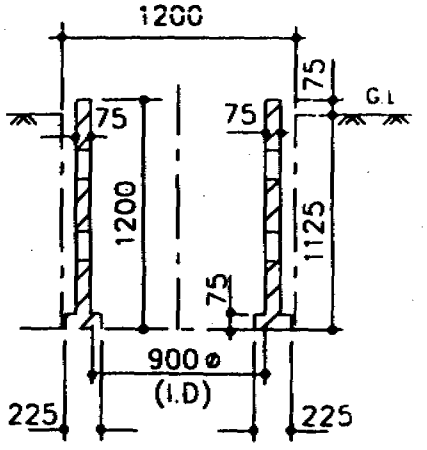
ONE PIT WATER FLUSH LATRINE UPTO PLINTH LEVEL WITHOUT SUPER STRUCTURE (ALL BRICK WORK)



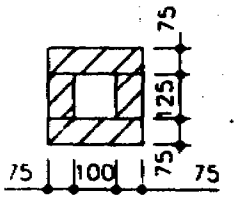
THREE DIMENSIONAL VIEW



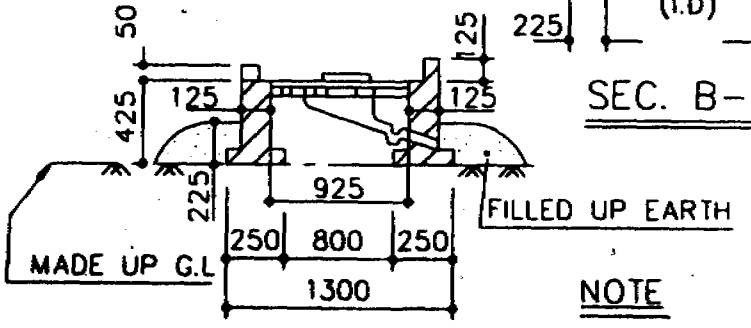
SECTIONAL PLAN



SEC. B-B



SEC C-C



SEC. A-A

NOTE

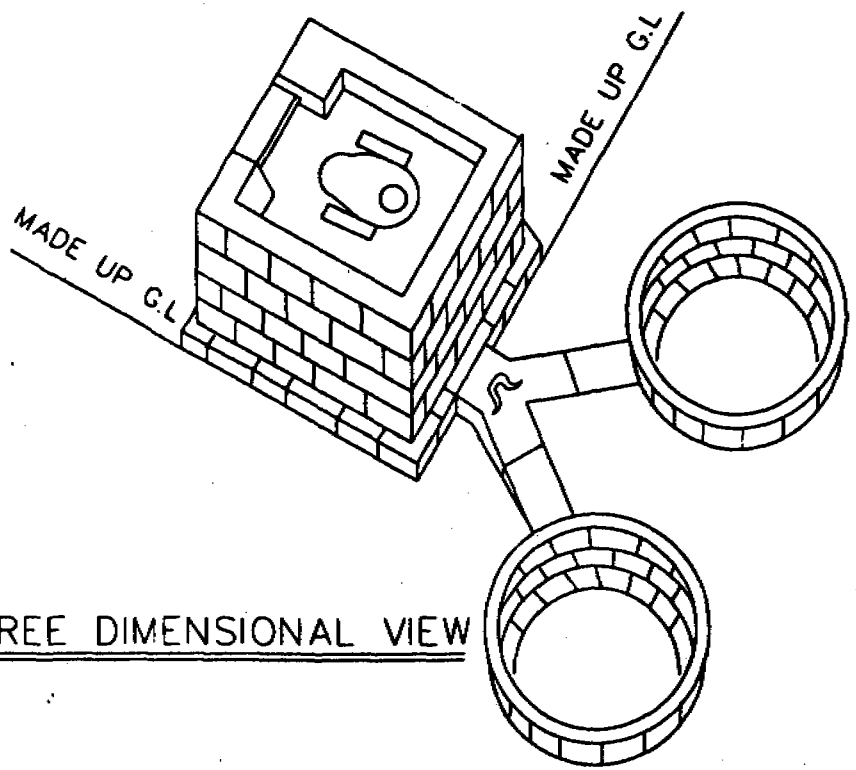
1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

COST OF ONE PIT (WITH THE PROVISION OF 2ND PIT) WATER FLUSH LATRINE UTPO PLINTH LEVEL WITHOUT SUPER STRUCTURE (ALL BRICK WORK)

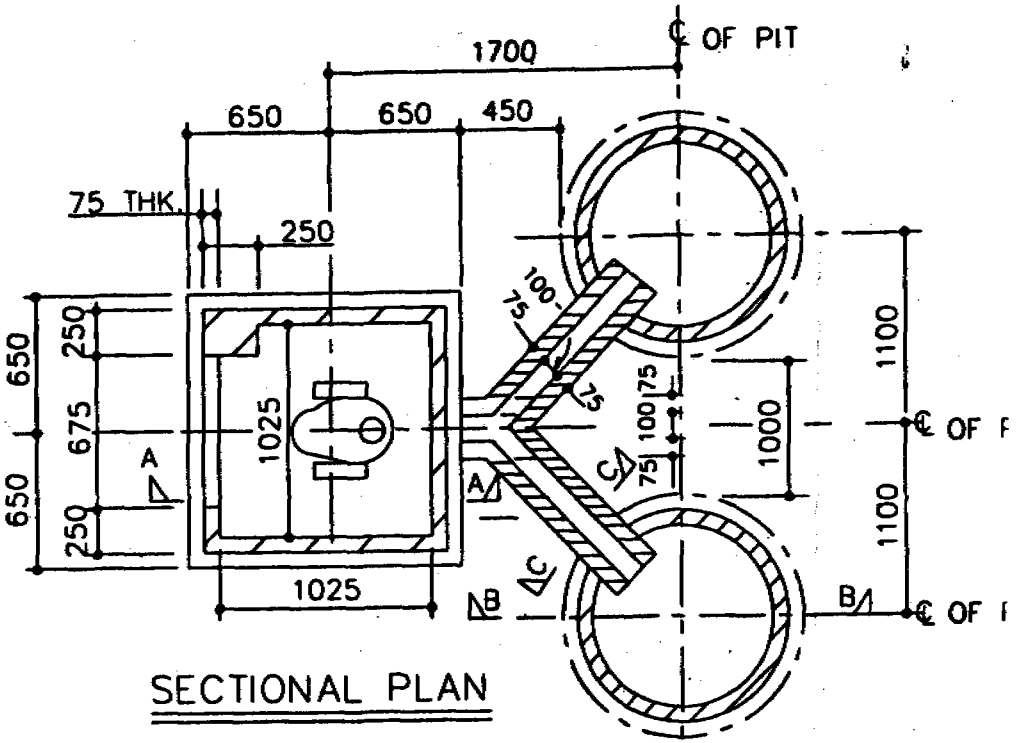
Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
	MATERIAL			
01.	Brick	280 pcs	1.60 /pc	448.00
02.	Sand	10 cft	4.50 /cft	45.00
03.	Cement	1.25 bag	140.00 /bag	175.00
04.	1/2" Stone chips	0.65 cft	17.00 /cft	11.05
05.	Pit Cover	1 pc	125.00 /pc	125.00
06.	Mosaic Pan	1 pc	46.00 /pc	46.00
07.	Cement Trap (Big)	1 pc	20.00 /pc	20.00
	TOTAL COST OF MATERIALS			**870.05**
08.	Carrying, Breakage and Wastage	@ 12% on cost of materials		104.41
	LABOUR			
09.	Mason	2 mandays	60.00 /man day	120.00
10.	Helper (including digging of pit)	$2^{3}/_{4}$ mandays	40.00 /man day	110.00
			TOTAL COST	**1204.46**

APPROVED COST - RS. 1210.00

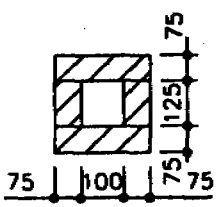
TWO PIT WATER FLUSH LATRINE UPTO PLINTH LEVEL WITHOUT SUPER STRUCTURE (ALL BRICK WORK)



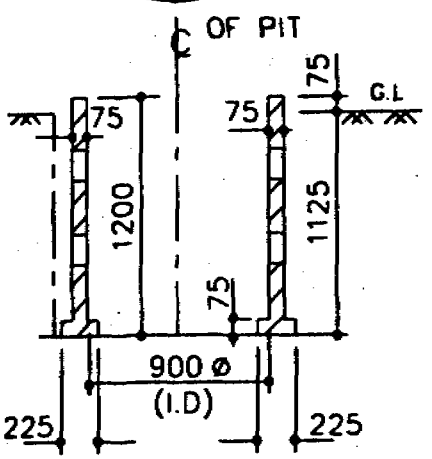
HREE DIMENSIONAL VIEW

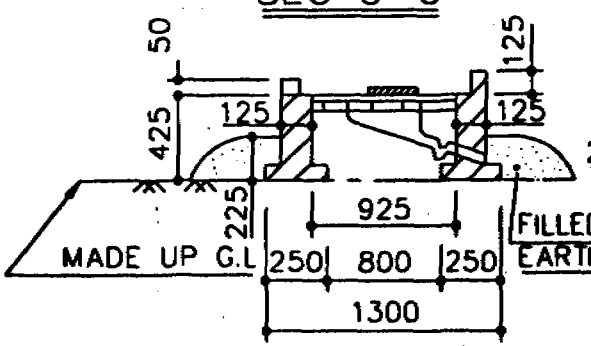


SECTIONAL PLAN



SEC C–C





SEC. A–A

SEC. B–B

NOTE

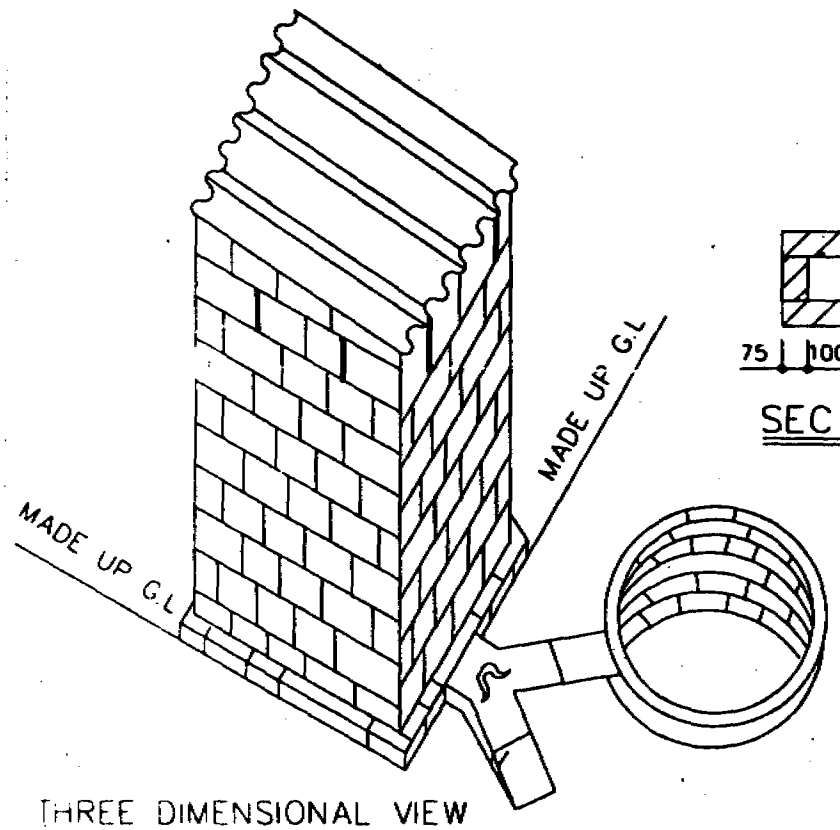
1. ALL DIMENSIONS IN MILLIMET
2. NOT TO SCALE

COST OF TWO PIT WATER FLUSH LATRINE UPTO PLINTH LEVEL WITHOUT SUPER STRUCTURE (ALL BRICK WORK)

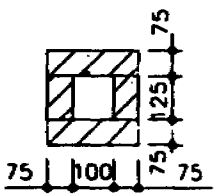
Sl No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
	MATERIAL			
01.	Brick	380 pcs	1.60 /pc	608.00
02.	Sand	13 cft	4.50 /cft	58.50
03	Cement	1.50 bag	140.00 /bag	210.00
04.	1/2" Stone chips	0.65 cft	17.00 /cft	11.05
05.	Pit Cover	2 pcs	125.00 /pc	250.00
06.	Mosaic Pan	1 pc	46.00 /pc	46.00
07	Cement Trap (Big)	1 pc	20.00 /pc	20.00
	TOTAL COST OF MATERIALS			1203.55
08.	Carrying, Breakage and Wastage	@ 12% on cost of materials		144.43
	LABOUR			
09.	Mason	2 1/2 Man days	60.00 /man day	150.00
10.	Helper (including digging of pit)	4 1/2 Man days	40.00 /man day	180.00
			TOTAL COST	1677.98

APPROVED COST - Rs. 1680.00

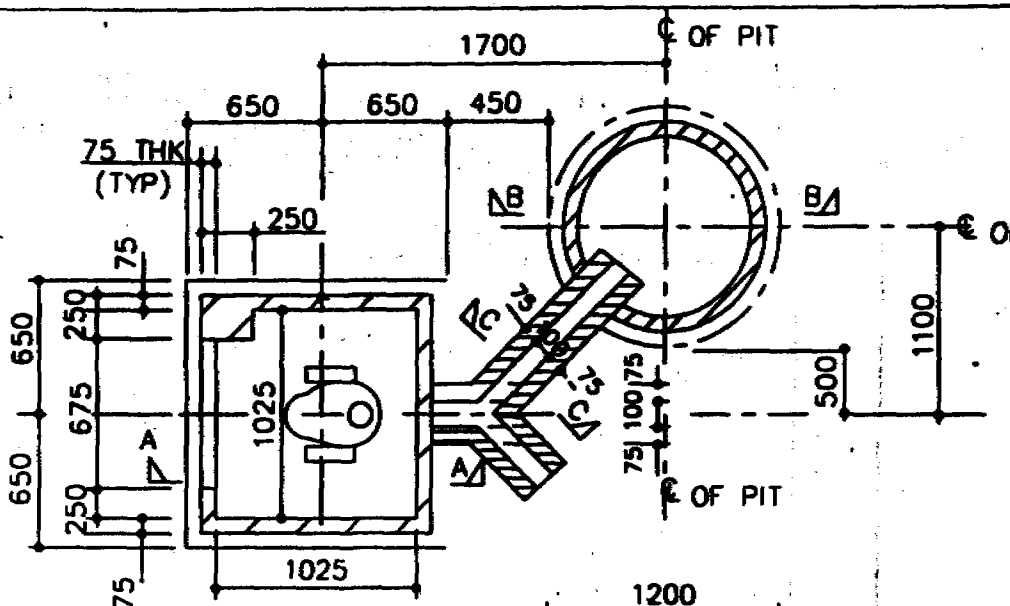
ONE PIT WATER FLUSH LATRINE WITH SUPER STRUCTURE. (ALL BRICK WORK)



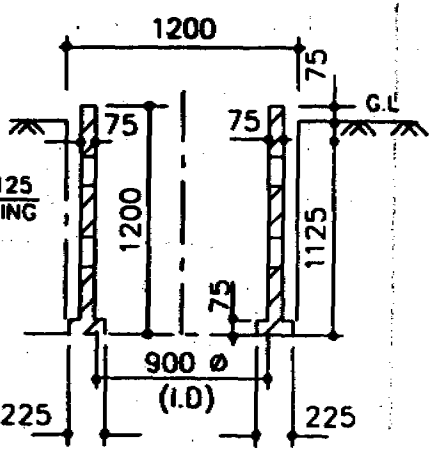
THREE DIMENSIONAL VIEW



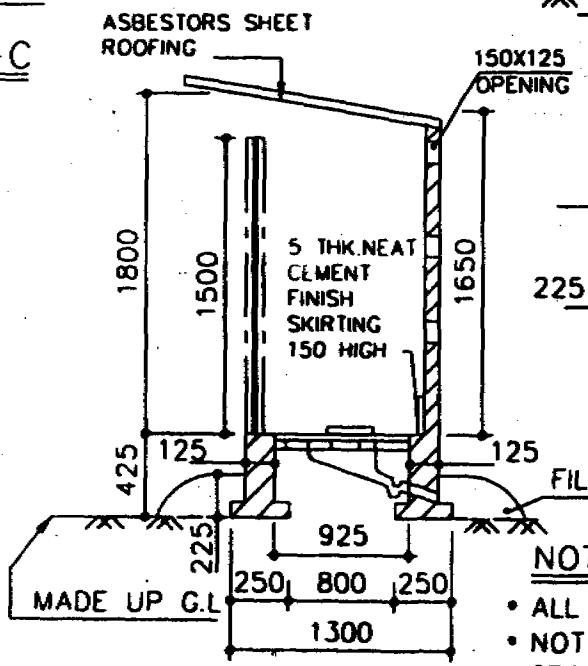
SEC C-C



SECTIONAL PLAN



SEC. B-B



SEC. A-A

NOTES

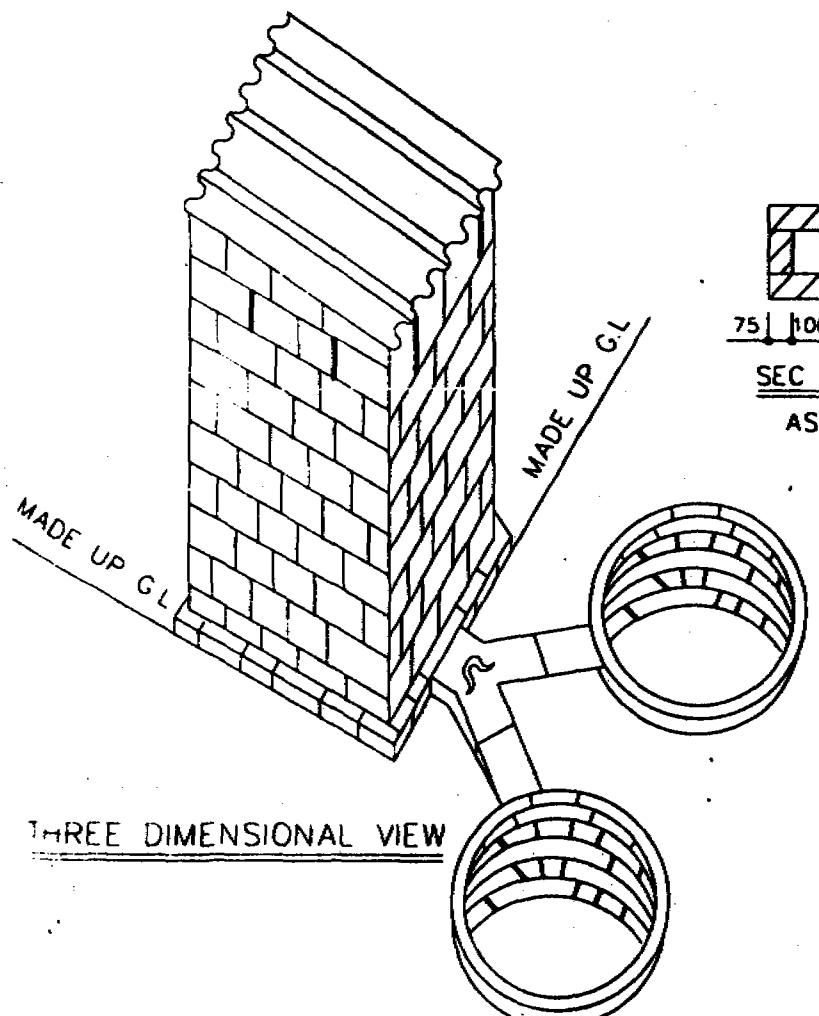
- ALL DIMENSIONS IN MILLIMETRES
- NOT TO SCALE
- CEMENT PLASTER(1:4)INSIDE & FRONT OI
- CEMENT FLUSH POINT(1:4)OUTSIDE ONLY
- OPENING FOR VENTILATION SIZE- 150X125 HIGH

COST OF ONE PIT WATER FLUSH LATRINE WITH BRICK SUPER STRUCTURE (ALL BRICK WORK)

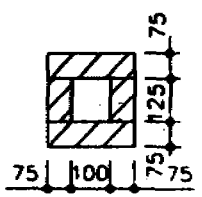
Sl No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
	MATERIAL			
01.	Brick	480 pcs	1.60/pc	768.00
02.	Sand	20 cft	4.50/cft	90.00
03.	Cement	2.75 bag	140.00/bag	385.00
04.	½" Stone chips	0.65 cft	17.00/cft	11.05
05.	Pit Cover	1 pc	125.00/pc	125.00
06.	Mosaic Pan	1 pc	46.00/pc	46.00
07.	Cement Trap (Big)	1 pc	20.00/pc	20.00
08.	Door (Galvanised tin sheet on wooden frame)	1 pc	200.00/pc	200.00
09.	Asbestos Cement Sheet (3.5' x 5')	1 pc	200.00/pc	200.00
	TOTAL COST OF MATERIALS			**1845.05**
10.	Carrying Breakage and Wastage	@ 12% on cost of materials		221.41
	LABOUR			
11.	Mason	3 Mandays	60.00/Manday	180.00
12.	Labour (including digging of pit	4 Mandays	40.00/Manday	160.00
			TOTAL COST	**2406.46**

APPROVED COST - Rs. 2410.00

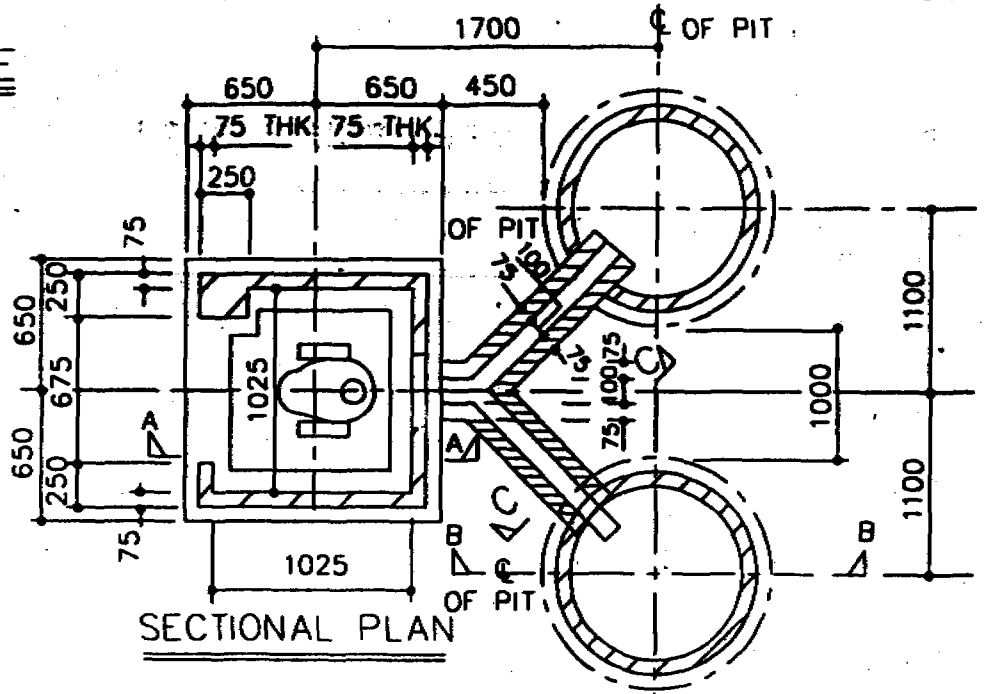
TWO PIT WATER FLUSH LATRINE WITH SUPER STRUCTURE (ALL BRICK WORK)



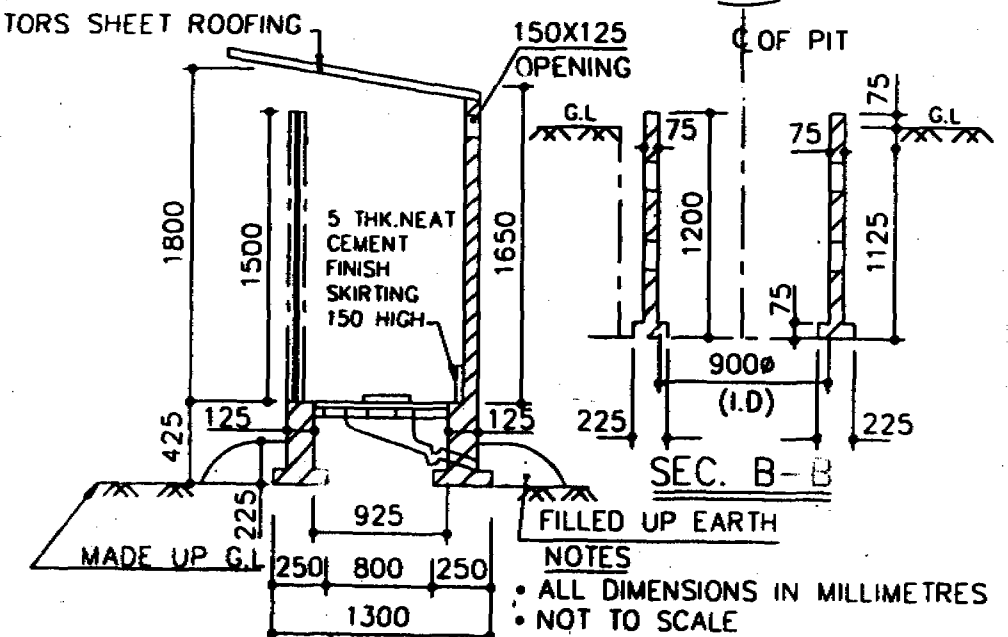
THREE DIMENSIONAL VIEW



SEC C-C



SECTIONAL PLAN



SEC. A-A

SEC. B-B

NOTES

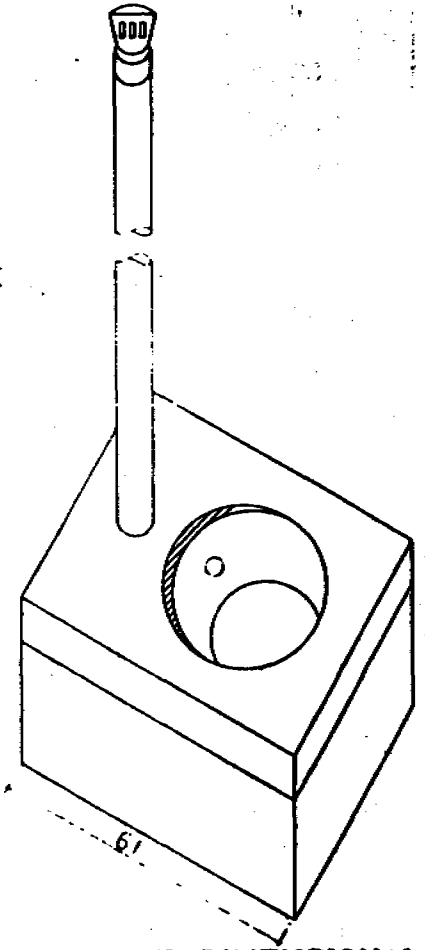
- ALL DIMENSIONS IN MILLIMETRES
- NOT TO SCALE
- CEMENT PLASTER(1:4)INSIDE & FRONT ON..
- CEMENT FLUSH POINT(1:4)OUTSIDE ONLY
- OPENING FOR VENTILATION SIZE- 150X125 HIGH

COST OF TWO PIT WATER FLUSH LATRINE WITH BRICK SUPER STRUCTURE (ALL BRICK WORK)

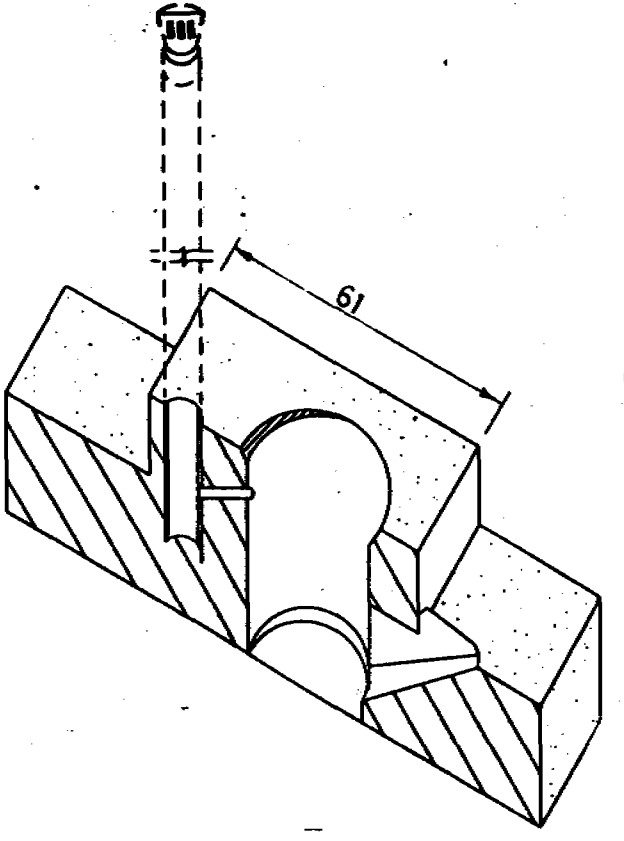
Sl No	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
	MATERIAL			
01.	Brick	580 pcs	1.60 /pc	928.00
02.	Sand	23 cft	4.50 /cft	103.50
03.	Cement	3 bags	140.00 /bag	420.00
04.	½" Stone chips	0.65 cft	17.00 /cft	11.05
05.	Pit cover	2 pcs	125.00 /pc	250.0
06.	Mosaic pan	1 pc	46.00 /pc	46.00
07.	Cement Trap (Big)	1 pc	20.00 /pc	20.00
08.	Door (Galvanised tin sheet on wooden frame)	1 pc	200.00 /pc	200.00
09.	Asbestos sheet (3.5' x 5')	1 pc	200.00 pc	200.00
	TOTAL COST OF MATERIALS			**2178.55**
10.	Carrying, Breakage, Wastage	@ 12% on cost of materials		261.43
	LABOUR			
11.	Mason	4 Mandays	60.00 /Manday	240.00
12.	Labour (including digging of pit)	5 Mandays	40.00 /Manday	200.00
			TOTAL COST	**2879.98**

APPROVED COST - Rs. 2880.00

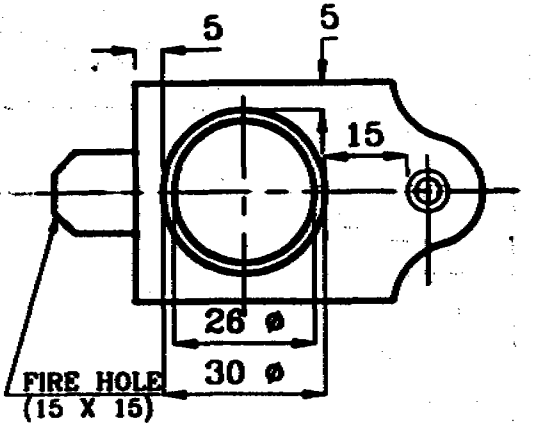
SMOKELESS OVEN (SINGLE)
MODEL:- SOHINI (MODIFIED)



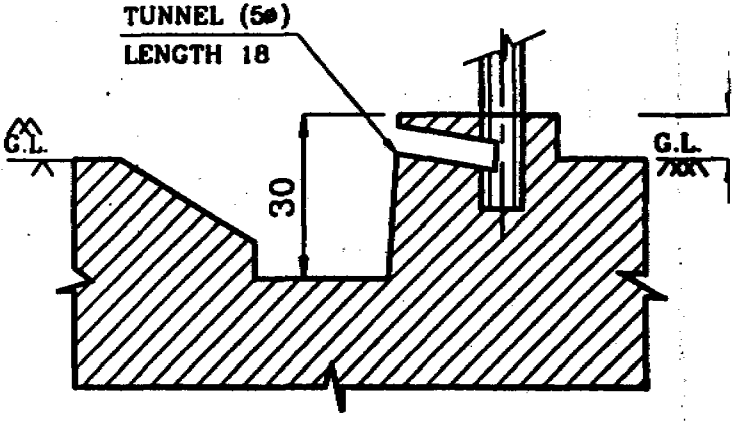
THREE DIMENSIONAL VIEW.



SECTIONAL VIEW



PLAN



ELEVATION

NOTE

ALL DIMENSIONS ARE IN C.M.

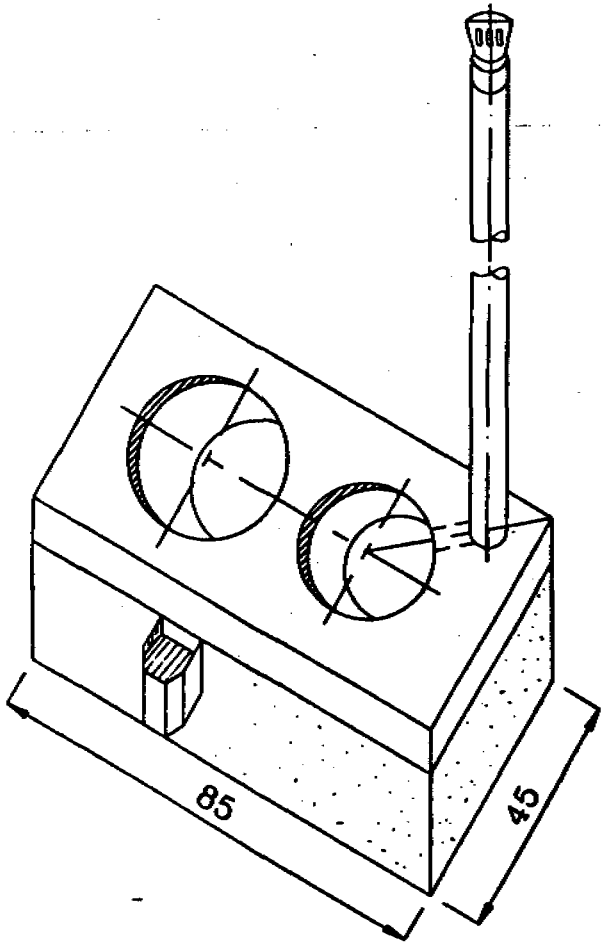
COST FOR CONSTRUCTION OF SMOKELESS OVEN (SINGLE)

MODEL : SOHINI (MODIFIED)

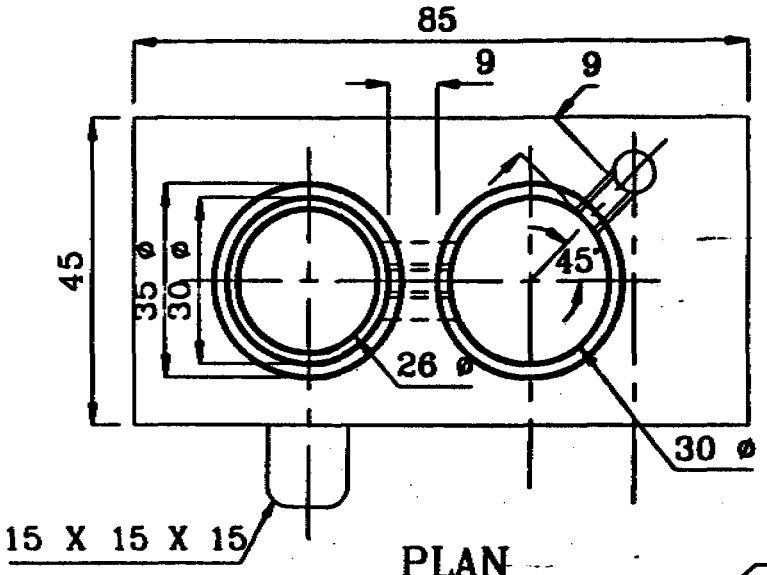
Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
	MATERIAL			
01.	Asbestos Cement pipe (7.5 cm dia.)	3 mtrs	18.00 /mtr.	54.00
02.	AC Tunnel pipe (5 cm dia)	18 cm x 1 pc	2.00 /pc	2.00
03.	AC Cowl	1 pc	12.00 /pc	12.00
04.	Protector (9 cm dia)	30 cm x 1 pc	3.50 /pc	3.50
	TOTAL COST OF MATERIALS			**71.50**
05.	Carrying, Wastage and breakage	@ 12% on cost of materials		8.58
	LABOUR			**80.08**
06.	Mason for construction including preparation of mud, fixing of chimney etc.	0.5 working day	60.00	30.00
			TOTAL COST	**110.08**

APPROVED COST - Rs. 111.00

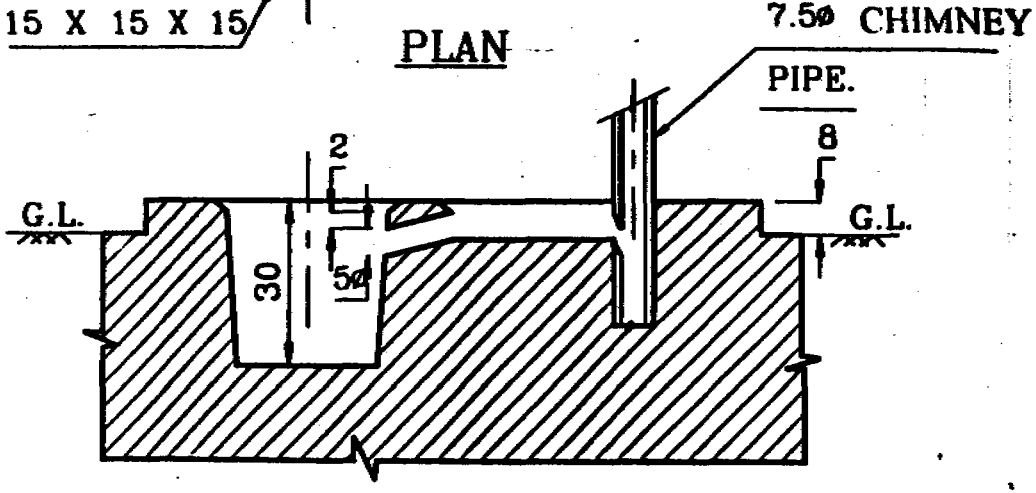
SMOKELESS OVEN (DOUBLE)
MODEL:- SUGAM SEVA (MODIFIED)



THREE DIMENSIONAL VIEW.



PLAN



ELEVATION

NOTE

ALL DIMENSIONS ARE IN C.M.

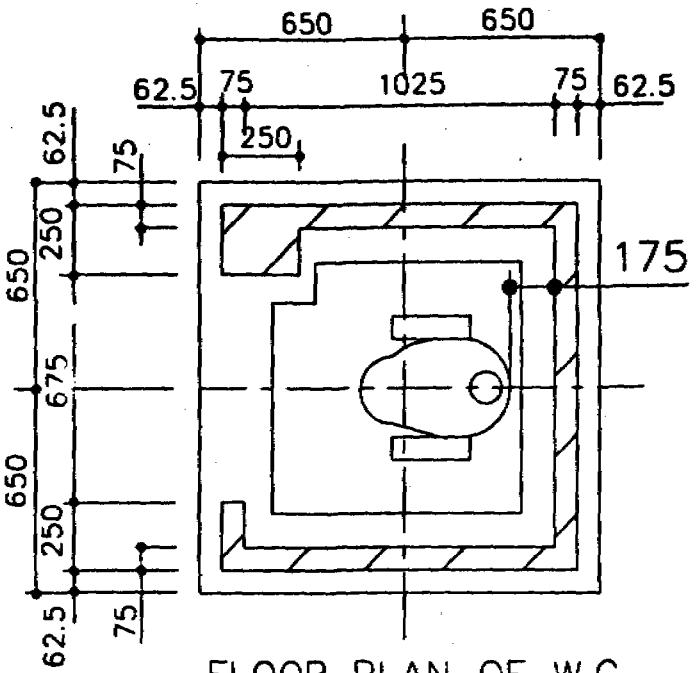
COST FOR CONSTRUCTION OF SMOKELESS OVEN (DOUBLE)

MODEL : SUGAM SEVA (MODIFIED)

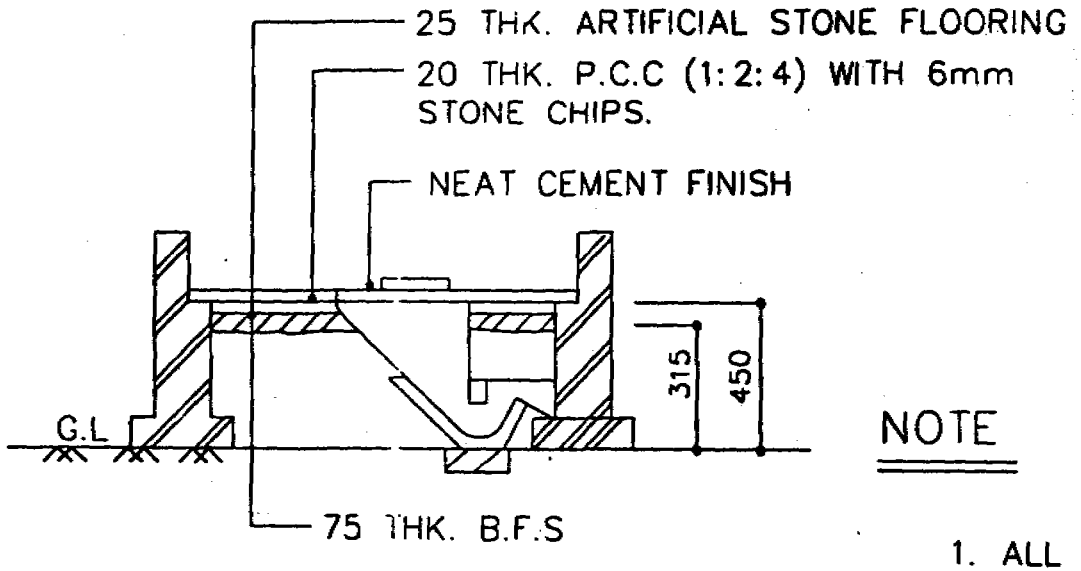
Sl. No.	Material/Labour	Quantity required	Unit Price (Rs.)	Cost (Rs.)
	MATERIAL			
01.	Asbestos Cement pipe (7.5 cm dia.)	3 mtrs.	18.00 /mtr	54.00
02.	AC Tunnel pipe (5 cm dia.)	9 cm x 2 pc	0.75 /pc	1.50
03.	AC Tunnel pipe (5 cm dia.)	14 cm x 2 pc	1.00 /pc	2.00
04.	AC Cowl	1 pc	12.00 /pc	12.00
05.	Protector (9 cm dia.)	30 cm x 1 pc	3.50 /pc	3.50
	TOTAL COST OF MATERIALS			**73.00**
06.	Carrying, Wastage and breakage	@ 12% on cost of materials		8.76
	LABOUR			**81.76**
07.	Mason for construction including preparation of mud. fixing of chimney etc.	0.5 working day	60.00	30.00
			TOTAL COST	**111.76**

APPROVED COST - Rs. 112.00

DETAILS OF LATRINE UPTO PLINTH LEVEL



FLOOR PLAN OF W.C.

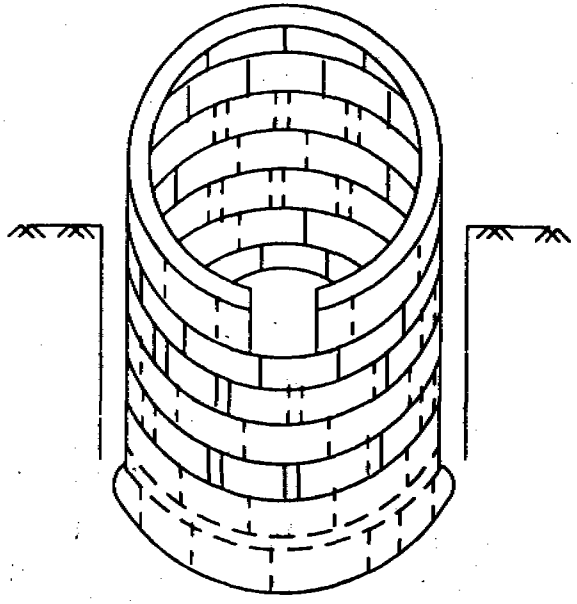


FLOOR SECTION OF W.C.

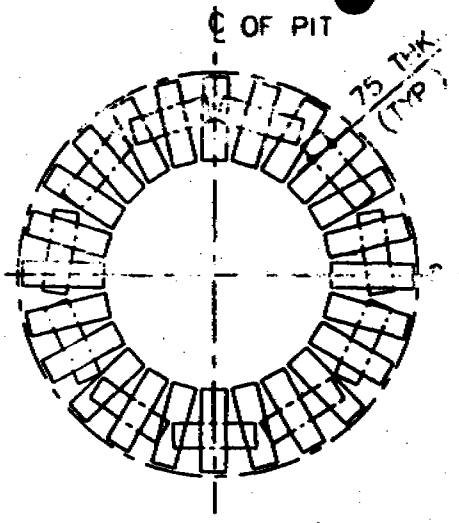
NOTE

1. ALL DIMENSI
   IN MILLIMETF
2. NOT TO SC

DETAILS OF BRICK LINED PIT

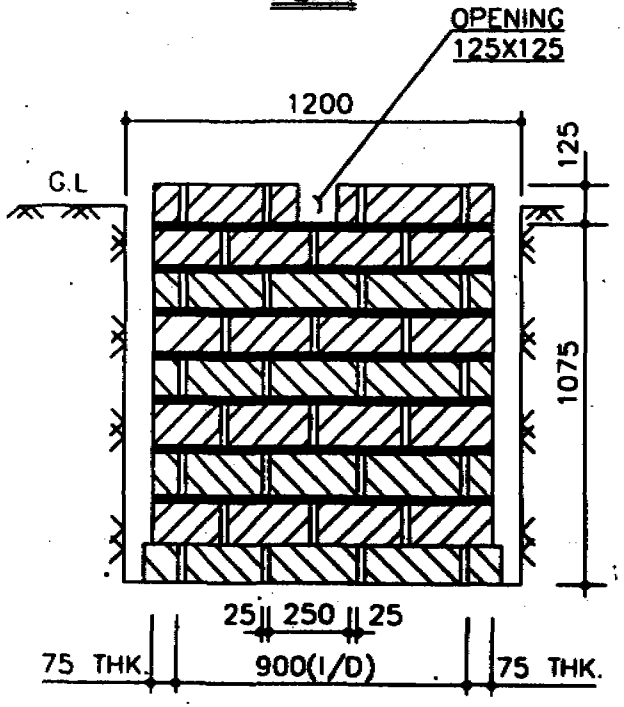


THREE DIMENSIONAL VIEW



PLAN

HONEY COMB BRICK WORK.
SIZE OF HOLES SHOULD BE 50MM WIDE AND EXTENDED TO THE FULL HEIGHT OF THE BRICK COURSES HOLES SHOULD BE PROVIDED IN ALTERNATE BRICK COURSES
IF THE SOIL IS SANDY, THE WIDTH OF THE OPENINGS SHOULD BE REDUCED TO 12 TO 15 MM.

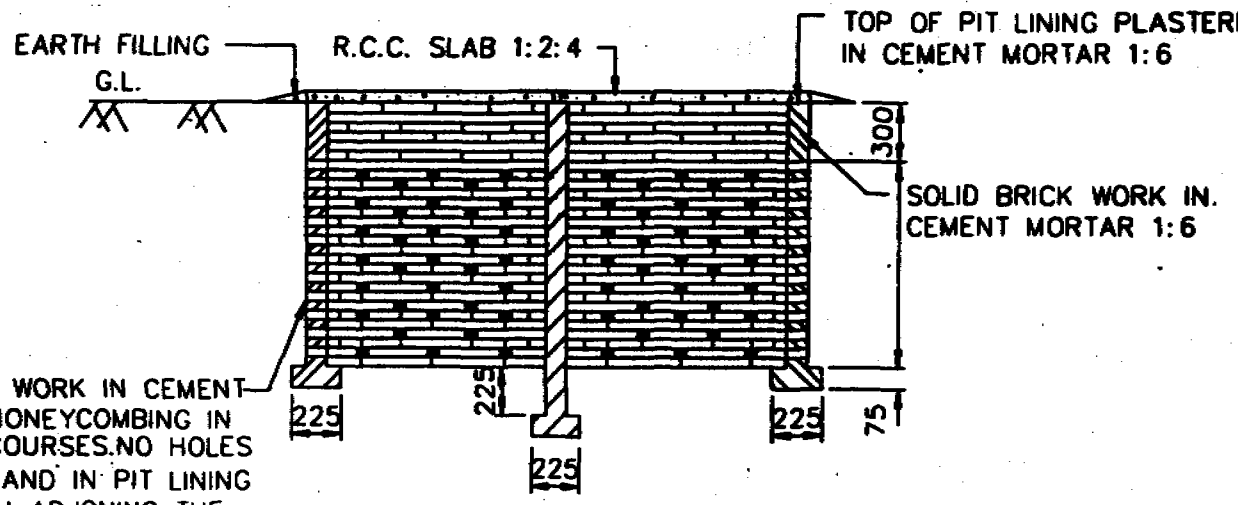


SECTIONAL ELEVATION

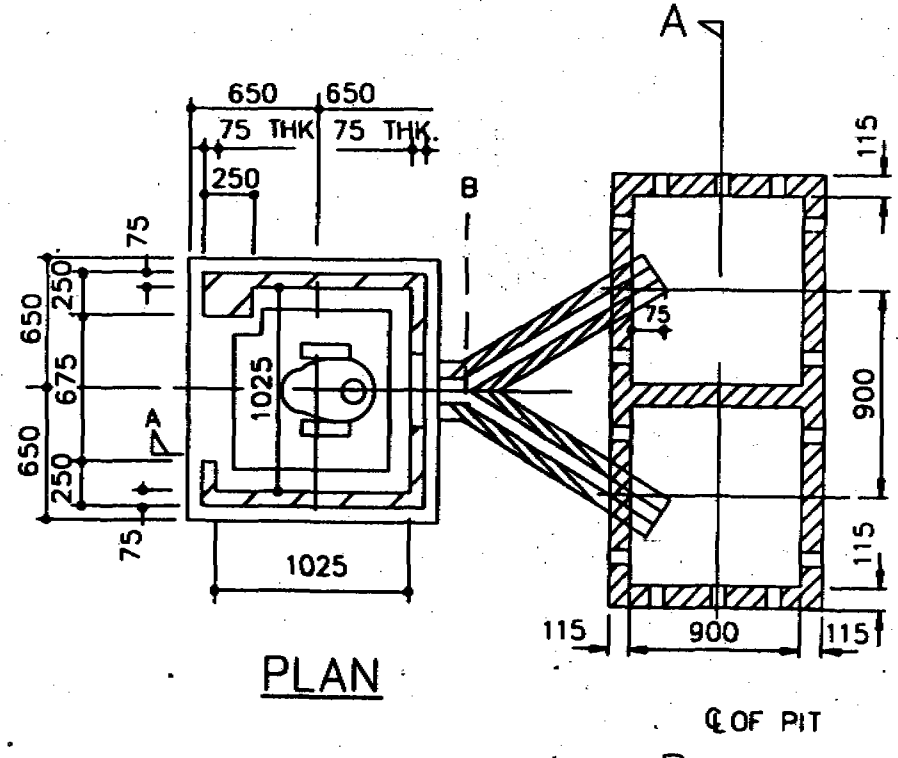
NOTE

1. NOT TO SCALE
2. ALL DIMENSIONS IN MILLIMETRES.

POUR FLUSH LATRINE WITH COMBINED LEACH PITS



SEC. A–B



PLAN

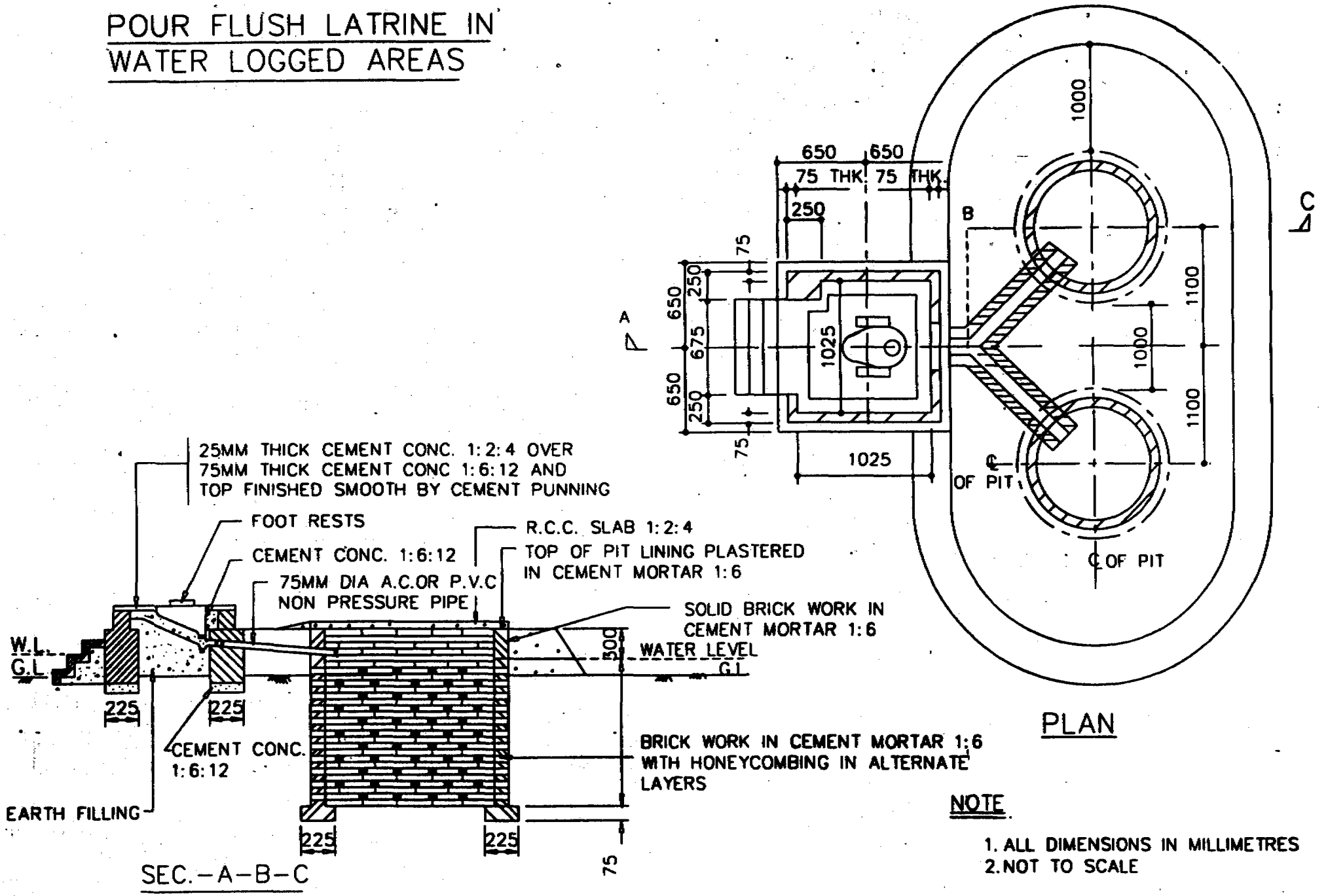
NOTE

1. THE SIZE OF HOLES IN HONEYCOMBING SHOULD BE 50MM WIDE AND FULL HEIGHT OF BRICK COURSE. IN SANDY SOIL OR WHERE THERE ARE CHANGES OF DAMAGE BY FIELD RATS OR WHERE SAND ENVELOPE IS PROVIDED.WIDTH OF HOLES BE REDUCED TO 12 TO 15MM.

2. ALL DIMENSIONS IN MILLIMETRES

3. NOT TO SCALE

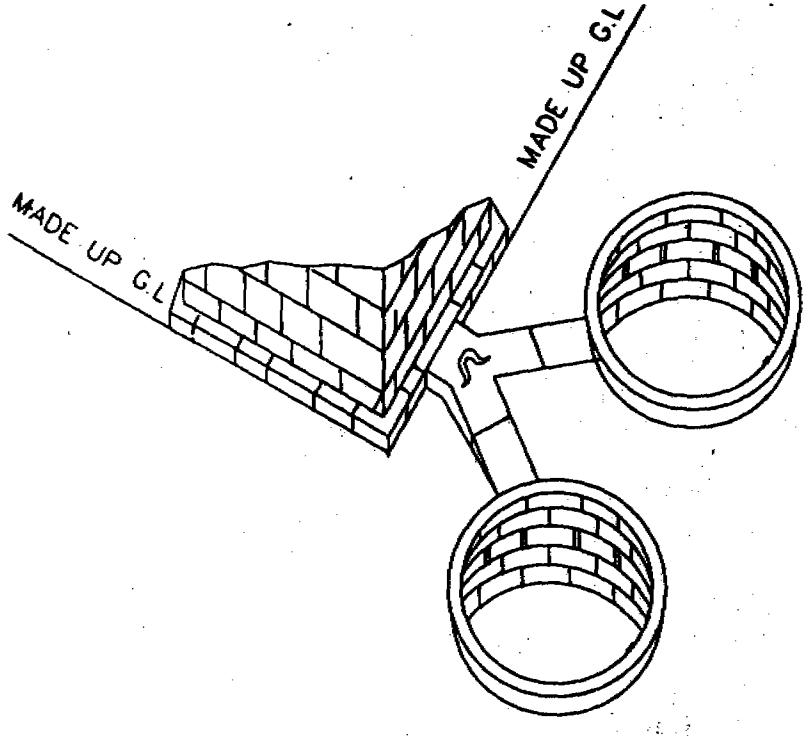
POUR FLUSH LATRINE IN WATER LOGGED AREAS



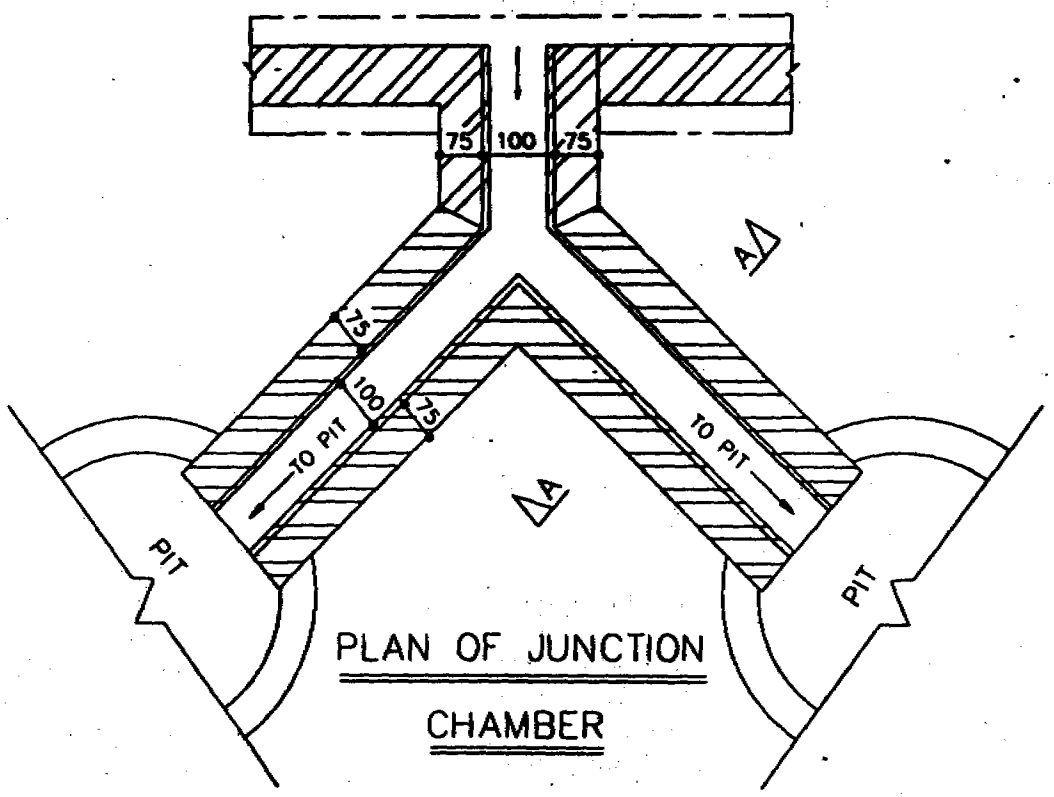
NOTE.

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

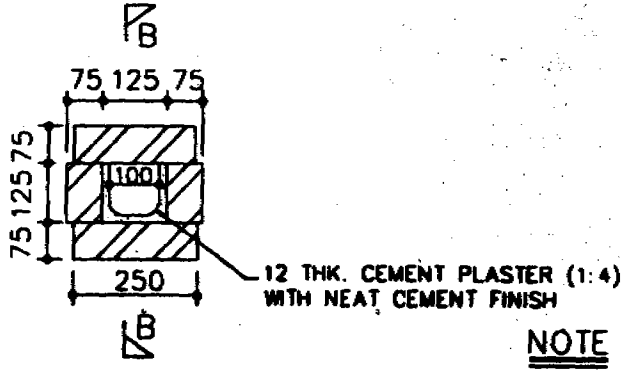
JUNCTION CHAMBER (BRICK WORK)



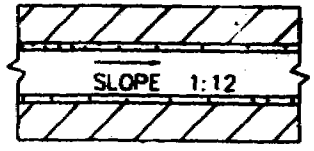
THREE DIMENSIONAL VIEW



PLAN OF JUNCTION CHAMBER



SECTION A–A



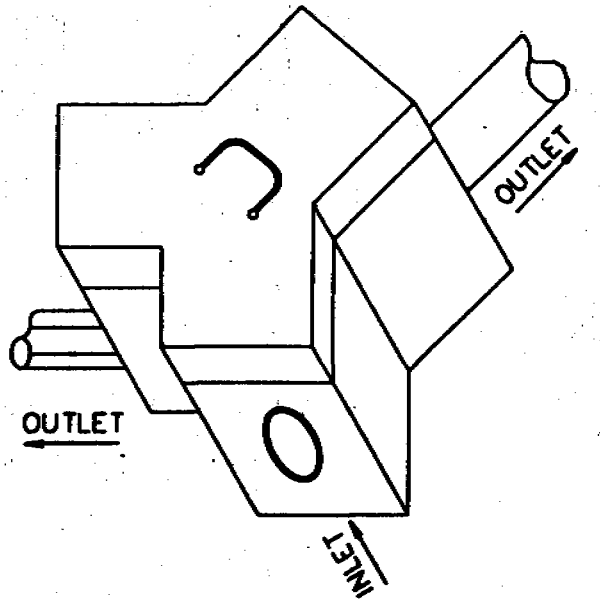
SECTION – B–B

NOTE

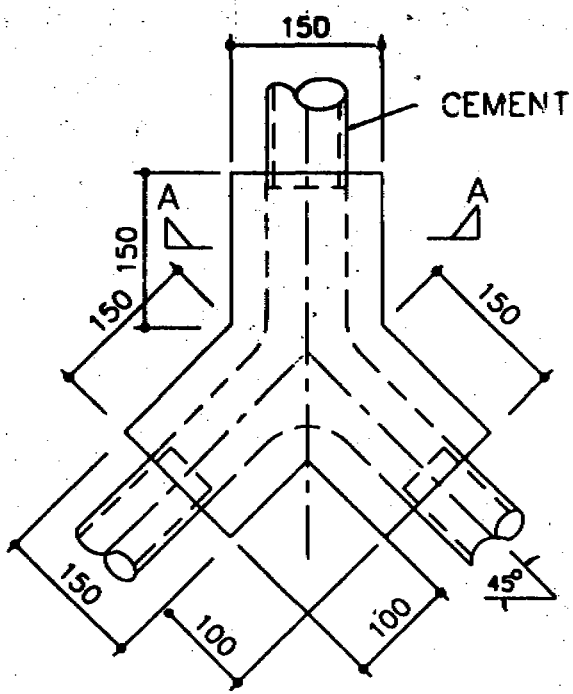
1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

JUNCTION CHAMBER

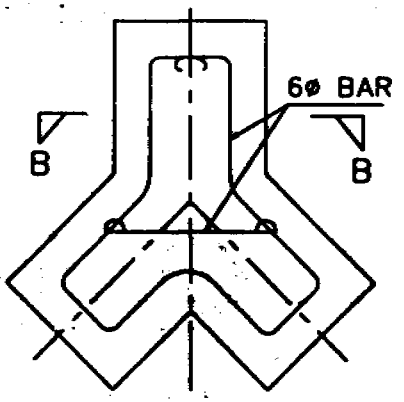
(CONCRETE)



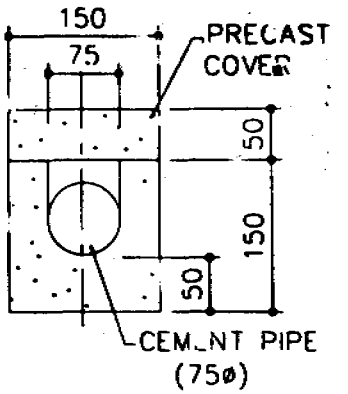
THREE DIMENSIONAL VIEW



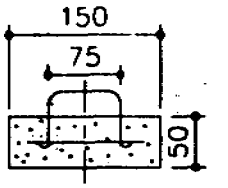
PLAN OF JUNCTION CHAMBER WITH DRAIN



REINF. ARRANGEMENT OF J.C.COVER



SECTION A–A

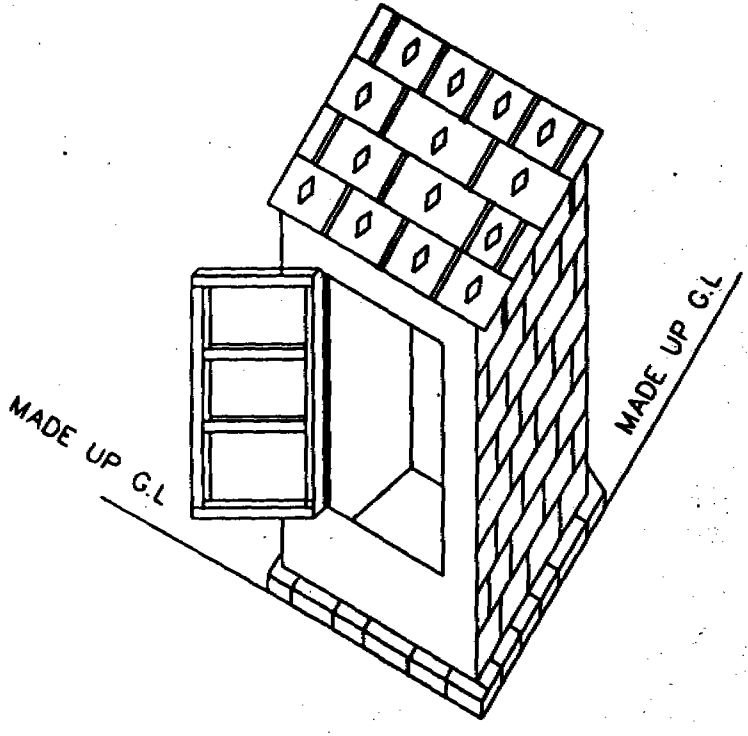


SECTION B–B

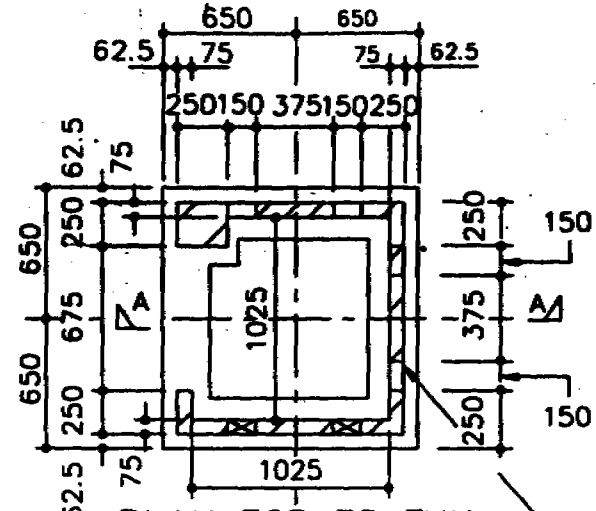
NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

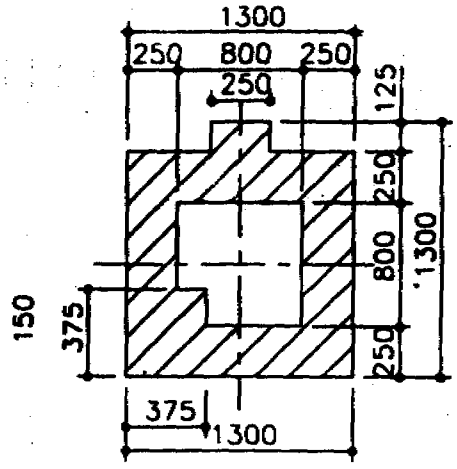
DETAILS OF BRICK SUPER STRUCTURE



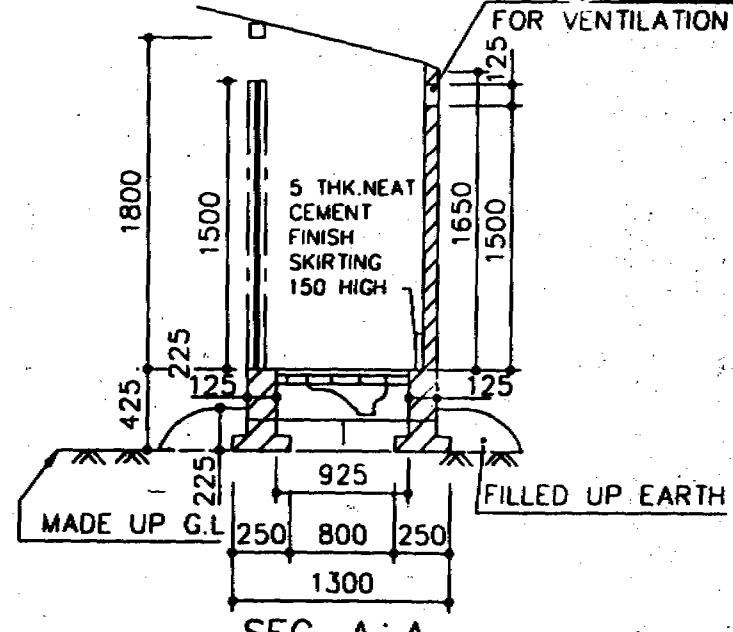
THREE DIMENSIONAL VIEW



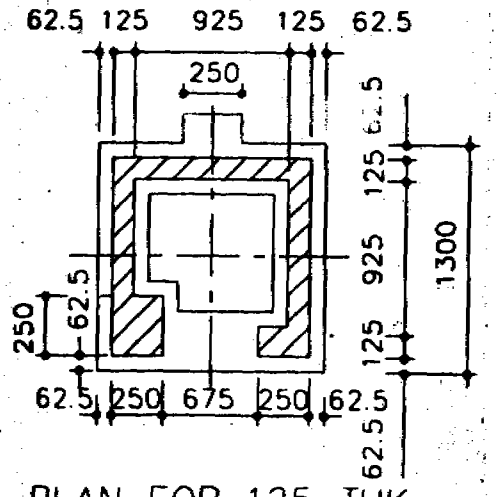
PLAN FOR 75 THK. BRICK WORK (STEP - 3)



PLAN FOR 250 THK BRICK WORK (STEP - 1)



SEC. A-A (FINAL STEP)

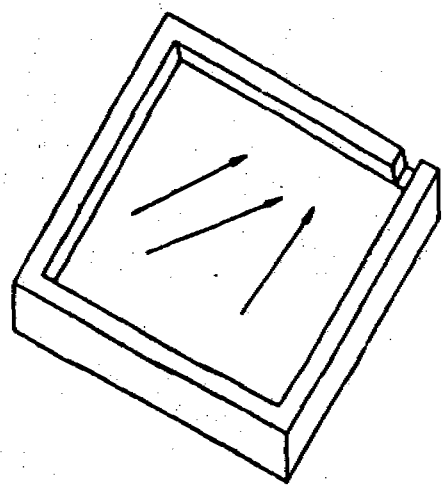


PLAN FOR 125 THK BRICK WORK (STEP - 2)

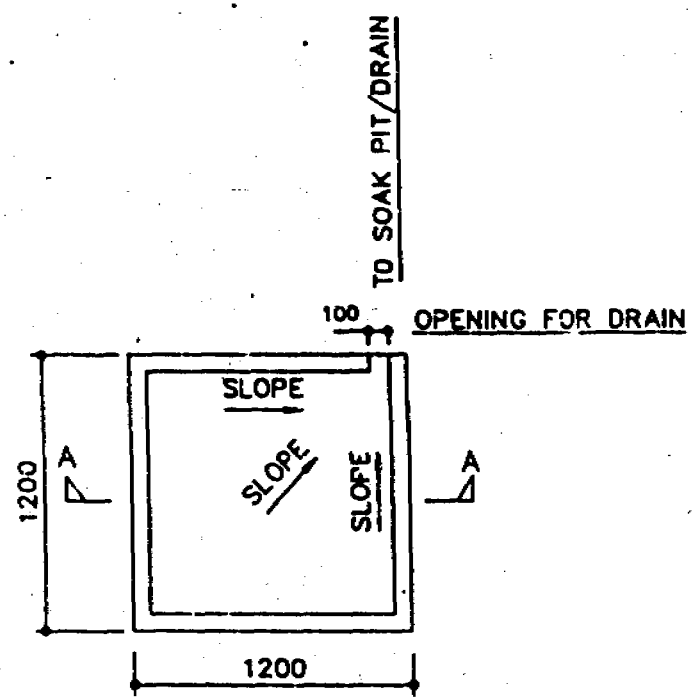
NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

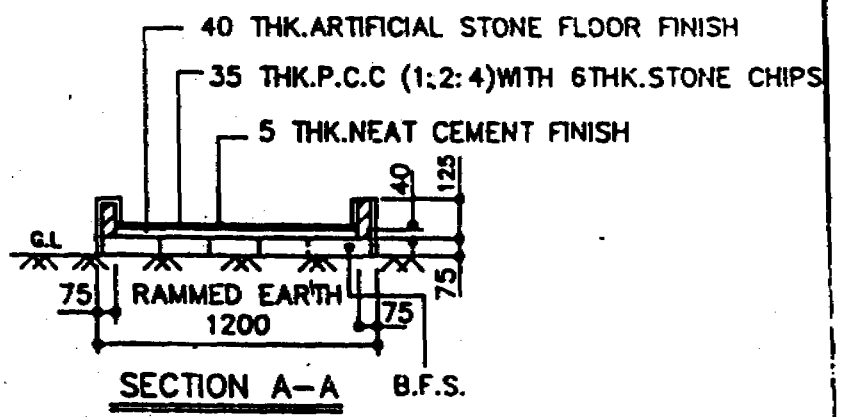
BATHING PLATFORM



THREE DIMENSIONAL VIEW



PLAN OF BATHING PLATFORM

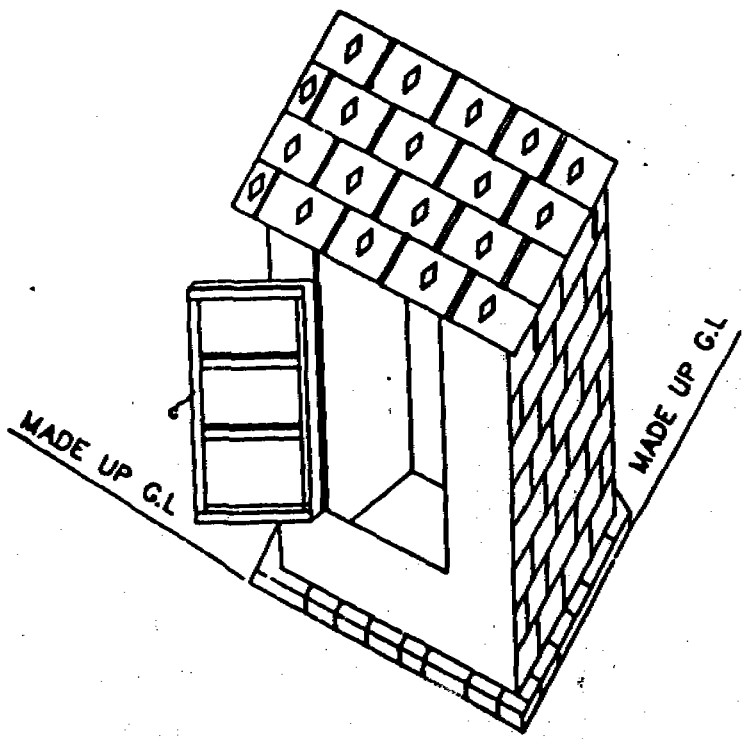


SECTION A–A

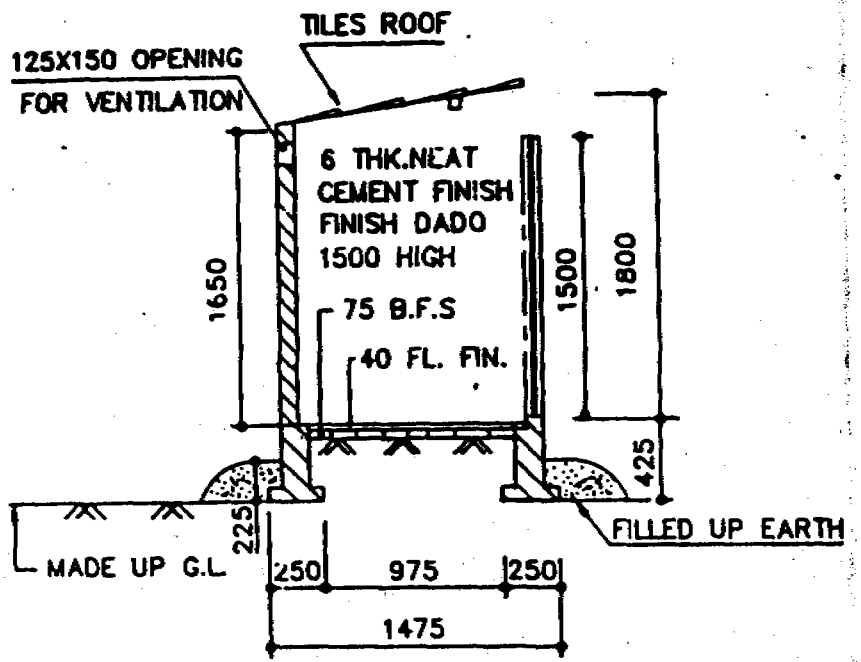
NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

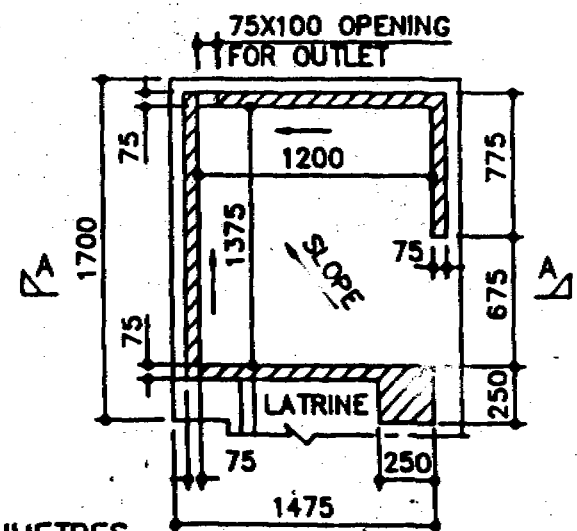
BATHROOM



THREE DIMENSIONAL VIEW



SEC. A–A

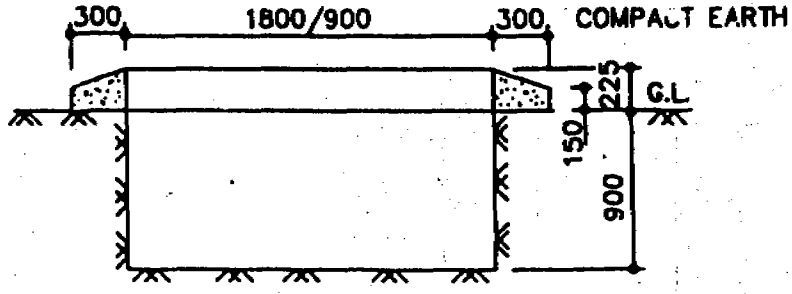


PLAN

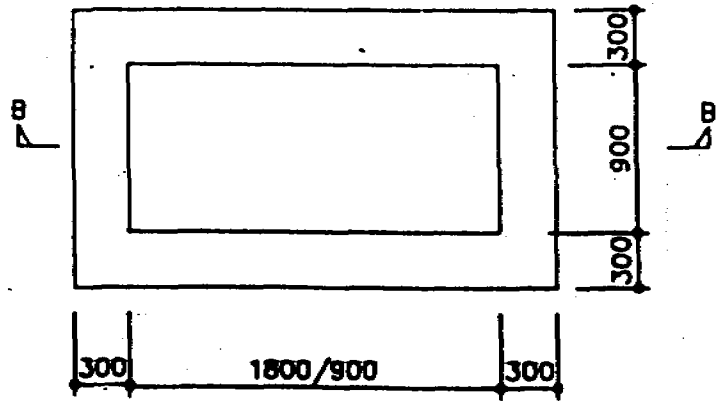
NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

GARBAGE PIT



SECTION.B–B

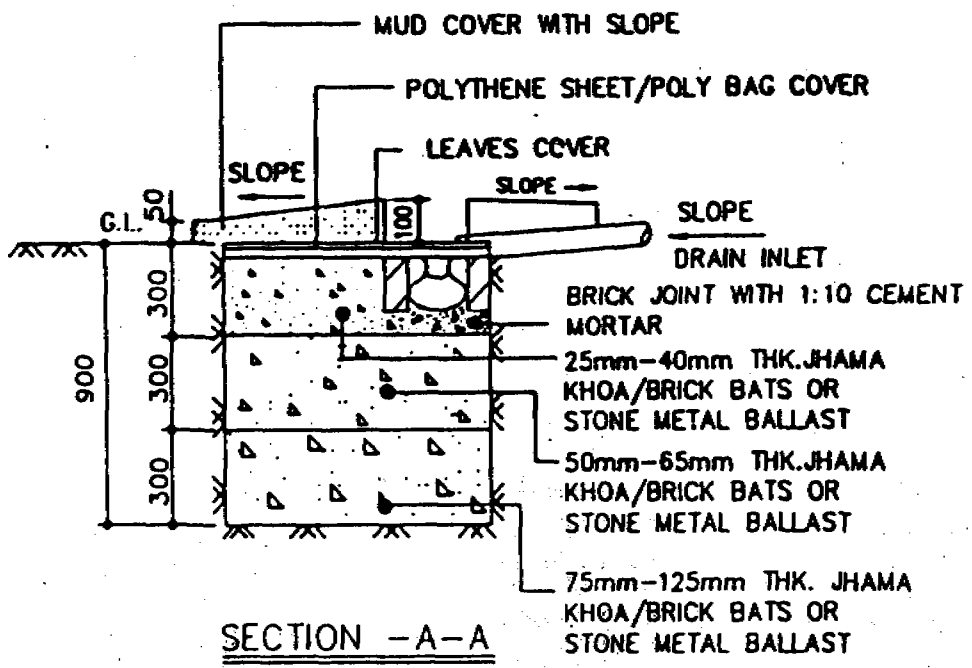


PLAN

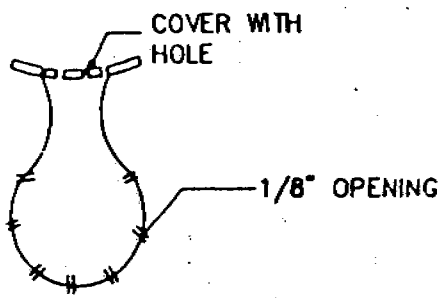
NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

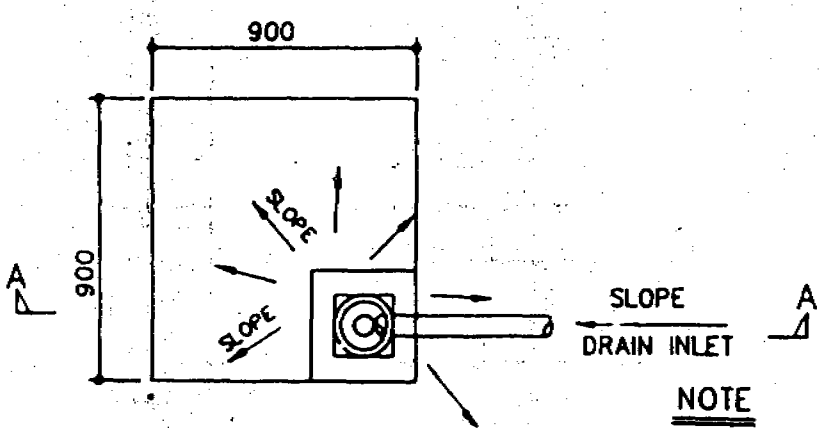
SOAK PIT



SECTION –A–A



EARTHEN POT WITH OPENING AT BOTTOM



PLAN

NOTE

1. ALL DIMENSIONS IN MILLIMETRES
2. NOT TO SCALE

IMPORTANT NOTES

1. Rates of different kinds of raw materials required for producing various components of sanitary materials have been considered in this guidelines to assess their costs. These are the approximate market rates which prevailed during the month of November 1995, in and around Calcutta. The rates are mentioned below :

Sl. No.	Description of material	Unit	Rate (Rs.)
1	Cement	Bag.	140.00
2	Sand	Cft	4.50
3	Stone chips	Cft	17.00
4	M S Rods	Kg	15.00
5	White cement	Bag of 50 kg	525.00
6	White marble dust	Bag of 38 kg	53.00
7	White marble chips	Bag of 35 kg	75.00
8	Bricks (First class)	1000 nos	1600.00

2. The wages of different labourers required in the work have also been considered as those which prevailed in Calcutta and its suburbs during the month of November 1995. The wages are to be paid @ "piece rate" basis and not on a daily rate basis.
3. It has been considered that one cement bag will contain 1.25 cft of cement. Generally, in West Bengal, the masons use "Foot-Box" of size 12" x 12" x 12" in their work, to measure cement, sand, stone chips etc. One such foot-box measures 1 cft which the masons measure in inches. If the measure in the box is 1", the volume will be - 1 ft (12") x 1 ft (12") x 1/12ft (1") = 0.083 cft. For the convenience of the mason, the quantity of cement, sand etc., have been indicated in inches along with cft.
4. Sometimes it is difficult to get MS rods of exactly 6 mm dia in the local markets. It results in variation in weight. In this guideline, thus, quantity of MS rods has been shown in lengths (mtrs) also. This matter is to be looked into.
5. The persons in whose house the latrines would be built, can help in digging the pit and can also assist the masons in their work. In such case, besides saving in construction of the latrine, there will also be direct participation of the villagers in the programme which is desirable.
6. In this guideline, wages of masons and their helpers for production of different kinds of sanitary materials have been indicated based on production of components, not on daily rate basis. This type of work is new. As a result, masons or their helpers may not earn initially as

per their expectations. There should not be any reason to worry for that. Within a few days, when they will acquire the skill, their earning will be considerably increased. It has been noticed that these workers are in a position to earn more, working in sanitation programme than that what they used to earn in their earlier assignments.

7. In places which are inundated, latrines, are to be constructed after raising the land and compacting the same. Otherwise, due to flow of water, the squatting plate may subside or tilt, particularly in those latrines which had been constructed placing the squatting plates directly over the unlined pits. The invert of the incoming drains/pipes should be above the likely high flood water or sub-soil water level. Otherwise, the latrine will not function. Raising of the pipes will necessitate raising the latrine floor also. The level of the pit cover or floor of the latrine should be 300 mm above the high flood level.
8. Wherever possible, circular pits should be constructed because of their structural strength and relatively larger surface area. However, where circular pits cannot be constructed due to space constraint, combined oval, square or rectangular pits divided into two equal compartments by a partition wall may be provided. In case of combined pits, the partition wall, as well as the adjoining side walls upto 225 mm width, should not have any holes. The partition wall should be 225 mm deeper than the pit lining. Both faces of partition wall should be plastered in cement mortar 1 : 6.
9. As far as possible, the latrine and the leach pits should be located within the premises. There is no chance of any foul gas or bad odour. If due to reasons, the pits are constructed under the street or the footpath, the pit cover should be designed to withdstand the expected load which it will be subjected to.
10. The pits should preferably be lined to avoid possible collapse. 75 mm thick honeycomb brick work is sufficuent for the purpose. Generally the size of holes in honeycombing should be 50 mm wide and full height of brick course. In sandy soil or where there are chances of damage of the pit walls by field rats or where sand envelope is provided, width of the holes can be reduced to even 12 mm. Where the foundation of a building is close to the pit, holes should not be made in the portion of lining facing the foundation. There should be at least 1/2 mtr gap in between the foundation of the wall of a house and the leach pit.
11. Except where precautions are to be taken to prevent pollution of drinking water sources, the pit bottom should be left in natural condition for better leaching.
12. The pits can be lined with materials other than bricks also. Concrete rings or ferro-cement rings can be used. Even earthen rings will serve the purpose. However, there should be holes in these rings. In soil, which is not sandy, there is not so much risk of collapsing of the pit even if it is not lined.
13. There should be at least 1 mtr. distance in between the two leach pits. Otherwise once one is filled up, there will be a problem of disludging. Disludging can be done after about 18 months of stoppingof use of one pit while the sludge is completely digested. If adequate distance is not provided, the digested sludge will remain moistened.
14. The pipe or drain leading to the pit from the latrine should be extended adequately inside the pit so that sewage falls in the middle of the pit.

INTENSIVE SANITATION PROGRAMME
&
SANITARY MART

Panchayat and Rural Development Department
GOVERNMENT OF WEST BENGAL

SANITATION
In Collaboration with
UNICEF

INTENSIVE SANITATION PROGRAMME
&
SANITARY MART

सत्यमेव जयते

Panchayat & Rural Development Department
GOVERNMENT OF WEST BENGAL

SANITATION

In Collaboration with

What is Sanitation?

Sanitation is a field in public health. It involves various efforts to manage the environment in preventing and controlling diseases. Matters related to sanitation are:

- Storage and safe handling of drinking water
- Safe disposal waste water
- Safe disposal of solid waste
- Safe disposal of human excreta
- Home and food sanitation
- Upkeep of personal hygiene
- Overall environmental cleanliness of the community

Present status of sanitation

Status of sanitation in India as well as in West Bengal is not at all satisfactory. In rural areas, almost 90% of the population have no access to household latrines. Again, the few numbers of latrines which exist in the villages are not sanitary latrines. The status of other environmental sanitation facilities, e.g., smokeless oven, soakage pit, garbage pit, etc is even worse. Due to age old habits, poverty and lack of knowledge in the matter of sanitation, rural people, till now, are compelled to defecate in the open.

The role of sanitation in the matter of public health and improvement of quality of life is immense. But most of the people in our country are not aware of this fact. During past five decades, adequate attention has not been given to the sanitation programme. Priority which was given to rural water supply was not given to sanitation. Since 1986, however, some importance has been given to sanitation, even it was subsidy based. As a result, whatever little work has been done with a small amount of allocated fund, was insignificant in comparison to the actual need.

Alternate delivery system of sanitation

Keeping this in mind, in the year 1990, the Government of West Bengal launched experimentally, an alternate sanitation programme in the district of Medinipur. In close collaboration with the Zilla Parishad, the programme is being implemented by the Ramkrishna Mission Lokashiksha Parishad, Narendrapur with UNICEF support. This is a programme where there is no provision of any subsidy

and the villagers install different kinds of low-cost sanitation facilities in their households, at their own cost. Considering the affordability of the villagers, a range of different types of latrines, costing each from Rs 310 to Rs 2930 (each of them having water seal and thus sanitary) is being offered to the villagers through this programme. The villagers prefer to install the types of latrines which they can afford and they are installed in their premises with the help of trained masons. The programme was found to be very successful and till December 1997 about 185,000 household latrines and 25,000 other sanitation facilities, e g, smokeless oven, soakage pit, etc have been provided to the villagers.

Being fully convinced with the experience of this self-sustained programme, the Government of West Bengal has taken action to spread this type of sanitation programme in other districts of the state. In Hooghly, the programme is being implemented by the three-tier panchayat system of the district, whereas in other districts, this is being implemented after establishment of sanitary marts.

What is a Sanitary Mart?

A sanitary mart is the shopping center where along with different components of latrines, other materials such as, soap, toilet brush, tooth brush, tooth powder, nail cutter, cheaper varieties of footwear, domestic water filter, alum, phenol, bleaching power, smokeless ovens, halogen tablets, ORS packets, handpump spares etc will also be available. In other words, this is a one-stop shopping centre for all materials related to sanitation. With overall guidance and close cooperation of the concerned Panchayat Samity, one sanitary mart will function in a particular community development block and will be responsible for all activities related to sanitation, in that block. In short, the sanitary mart is the social marketing centre for propagation of concept of environmental sanitation.

Matters to be looked after by the sanitary mart:

- To make the people aware of sanitation, awareness can be generated by wall writings, posters, distribution of handbills, video show, song squad programme, group discussions, exhibitions, cinema slides, etc. Important role can be played by the trained motivators for creating awareness generation through inter personal contacts.

- Low-cost sanitary materials like, cheaper varieties of pan and traps, squatting plates, smokeless ovens, domestic water filter, etc are not available in the market. These materials are to be produced locally after establishment of a production centre.

- To train local masons for production of the aforesaid materials and also to train local motivators to enhance their communication skills so that they can interact with the villagers more effectively.

- Create demand of different kinds of sanitary materials through extensive awareness generation amongst the villagers and arrange to provide those facilities to the villagers with the help of the trained labourers. Mart will also assist the villagers to use and maintain these facilities properly, once these are installed.

- To establish one shop in the market area and store all kinds of materials related to sanitation in that shop so as to help the villagers for one-door shopping centre of sanitary materials.

- To appoint two full time workers to manage all the above mentioned activities. The organisers of the mart will give fixed monthly honorarium to them. The other workers eg, motivators, masons and their helpers would get wages/honorarium based on their actual work.

Who can establish a sanitary mart?

Any local Non Government Organisation, cooperative body, DWCRA group, or Panchayat Samity can establish sanitary mart. This body or organisation should have previous experience of social service and at least 10 cottahs (7,200 sq ft) of land in their name for the purpose of establishment of a sanitary mart. This plot of land would be required for establishment of the production centre and storing of different kinds of materials.

If a sanitary mart is established by the Panchayat Samity, then due to their regular roles and functions, it may not always be possible on their part to look after the activities of the mart properly. Moreover, the workers who would be engaged to run the mart, may also expect permanent employment. Thus it is necessary to constitute a separate registered body to manage the mart under direct supervision of the Panchayat Samity. Day-to-day work of the mart will be carried out by the body and all sorts of financial responsibility will also be lying with it. Financial support to establish the mart will be provided to that body. The full time workers of the sanitary mart will be associated with that body and will not be in any way, connected to the Panchayat Samity. The organisation which will establish a sanitary mart in a particular block will be identified by the Zilla Parishad in consultation with the concerned Panchayat Samity. The proposal of establishment of mart with recommendation of the Zilla Parishad is to be sent to the Panchayat & Rural Development Department (P&RDD), Government of West Bengal.

Role of the sanitary mart

The sanitary mart, financially, should be self-sustained. There should be balance in its income and expenditure. The source of income of the mart would be from the sale proceeds of different kinds of sanitary materials. But the selling price of all materials should be fixed not only from the point of profit but to raise the required expenditure to run the mart. In other words, a small amount can be charged over the procurement cost or production cost of any material. But there will be a limit to that amount. A portion of the profit will be shared with the motivator and the balance amount will be used to meet the honorarium of the workers and other administrative expenditures. This amount of profit will be Rs 40 in case of latrines, production cost of which is upto Rs 800 per latrine and Rs 50 in case of latrines costing more than Rs 800 per latrine. In both the cases, the motivators would be entitled to Rs 20 per latrine. The chargeable profit on each of smokeless oven, soakage pit and bathing platform would be Rs 10. Just after establishment of the sanitary mart, there may not be enough turnover. Thus there is a provision to provide honorarium to the two mart managers @ Rs 750 per manager per month for the first two years, from the project. Within two years, the sanitary mart should be in a position to make necessary profit to meet up all required administrative expenses by way of constructing latrines and selling other materials. The wages paid to the labourers such as masons and their helpers in producing sanitary materials will be inclusive of production cost. The carrying cost of the materials from the production centre to the premises of the villagers and the cost of digging of pits will also be inclusive of the sale price.

The sale prices of different kinds of sanitary material are to be finalised by the sanitary mart after discussion with the Panchayat Samity/Zilla Parishad. In this regard, the Technical Guidelines published by the Government of West Bengal is to be followed.

Funds required for establishment and operation of mart:

- Construction of workshed of the production centre, provision of water and curing vat and preparation of flat brick soled platform (30 ft x 20 ft). The workshed will be of brick work upto plinth level and 30 ft x 15ft in size. There will be GCI or asbestos sheet roofing over trusses supported by RCC pillars. In one side of the shed, there will be two rooms each of size 10 ft x 7.5 ft. One room will be used as office while the other as store. - For this purpose there will be provision of Rs 72,000.

- Procurement of moulds for production of various types of precast components. - Provision for this purpose will be for Rs 6000.

- Training of village masons and motivators - Provision for this purpose will be for Rs 12,000.

- Advocacy and awareness generation - There will be provision of Rs 13,000.

- Renting of one shop, printing of cash memos and preparation of sign boards. - There will be provision of Rs 9,200. This includes the rent of the shop @ Rs 300 per month for two years.

- Procure materials required for production of different kinds of precast sanitary facilities and to have a stock of these materials and also for procurement of other items to be sold through the shop. There will be provision of Rs 101,500. This will be the working capital and used as revolving fund of the mart.

- Grant of honorarium to the two mart managers for a period of two years @ Rs 750 per month per manager. - Rs 36,000 would be provided to the mart.

For taking up of all the above mentioned activities, one sanitary mart will be provided with a total financial support of Rs 249,700 during a span of two years.

Facilities for the people lying below poverty line

In this programme, the minimum cost of a latrine is about Rs 310. Out of this, Rs 270 is the cost of production of the latrine including the transportation cost of the materials. The superstructure of the latrine is exclusive of this amount. The balance amount of Rs 40 will be shared by the motivator and the mart. The sale prices of latrines may vary from place to place and from time to time, depending on the prevailing rates of different materials and labour required to build the latrines. The sanitary mart would promote social marketing and should be financially self-sustained. Naturally, everybody will have to purchase the facilities in cash. There are 12 models of latrines within the approximate price range of Rs 310 to Rs 2930. A person will prefer a latrine which can be afforded by him or her. Each of the models of latrines, of course is a sanitary one. However, it may also be difficult to arrange even Rs 310 by a poor family. It is also not possible to arrange loan. Thus it will be better if a household latrine can be provided to these type of poor people at a lesser cost. If a latrine is to be provided at a cost lower than its production cost, the deficit is to be borne by the Government. It has been decided that some relief would be given to the poor people and this deficit would be met up from the fund available against Central Rural Sanitation Programme and state Minimum Needs Programme.

An amount of Rs 200 would be provided as subsidy, for construction of a latrine, per family, lying below poverty line. It means that if a latrine costs Rs 310 and such a person pays Rs 110, the said type of latrine would be installed in his/her house. In case, the latrine costs more, or a costlier model of latrine is preferred by that family, the extra cost over Rs 200 is to be borne by the family. The amount of subsidy will be released by the Zilla Parishad to the Panchayat samity for disbursement to the mart. Subsidy, however, would be issued only after construction of the latrine.

The families lying below poverty line will be identified by the Panchayat. For this, the IRDP survey list is to be considered as the basis. The amount of subsidy payable to the mart is to be released very quickly. Otherwise its revolving fund may get blocked. To enable the mart to continue its activities by way of producing materials, a certain amount of fund meant for subsidy may be placed with the mart. This will also serve as revolving fund. In other words, so long as the subsidy is not released, the activities of the mart will be continued from that amount.

PRESENT STATUS OF THE PROGRAMME

Till December 1997, with support from UNICEF and State Government, it has been possible to take action to establish 121 sanitary marts in 15 districts of West Bengal (except Medinipur and Hooghly district where districtwise Intensive Sanitation Programme has been initiated). The districtwise break-up of the sanitary marts is mentioned below:

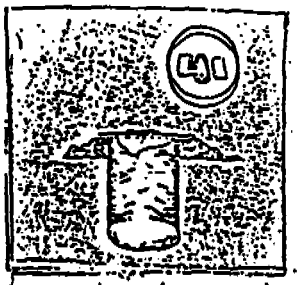
Sl.No.	Name of the District	No of marts
1.	South 24 Parganas	20
2.	North 24 Parganas	11
3.	Howrah	8
4.	Nadia	9
5.	Murshidabad	10
6.	Bankura	3
7.	Birbhum	10
8.	Purulia	6
9.	Burdwan	14
10.	Malda	7
11	South Dinajpur	2
12	North Dinajpur	5
13	Darjeeling(Siliguri Sub-	1
14	Division)	
15	Jalpaiguri	5
	Coochbehar	12
	Total	123

The performance of the sanitary marts so far established was found to be quite satisfactory. It is expected that by 1999 it would be possible to spread sanitation programme in all the blocks of the state through establishment of sanitary mart.

In districts, it is the responsibility of the Zilla Parishad to implement this massive programme. To implement, coordinate and monitor various activities under this programme, one Sanitation Cell is being established in each district within the Zilla Parishad. Monthly meetings are organised by the Chairperson, Standing Council, Public Health to monitor various Rural Sanitation Programme related activities . At the state level, there is also a Sanitation cell to coordinate all these activities.

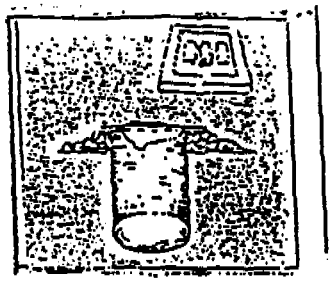
As per 1991 census, it has been noticed that only 12.31% of the rural population in West Bengal have access to latrines at household level. All of these are again not sanitary latrines. It is expected that converting the sanitation programme as a peoples' movement, by 2000 AD, it would be possible to cover 60% of rural dwellers of West Bengal under safe excreta disposal.

APPROXIMATE COST OF CONSTRUCTION OF DIFFERENT TYPES OF LATRINE



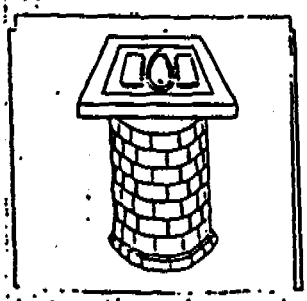
Latrine with round squatting plate (directly placed over unlined pit) without superstructure.

Approximate cost Rs. 310/-



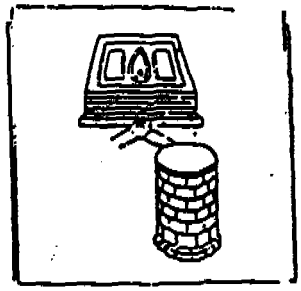
Latrine with rectangular squatting pelte (directly placed over unlined pit) Without superstructure

Approximate cost Rs. 350/-



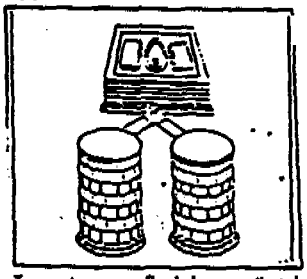
Latrine with round rectangular squating plate (directly placed over brick lined pit) Without superstructure

Approximate cost Rs. 710/-



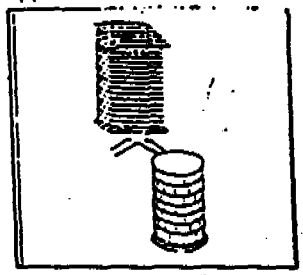
Single pit latrine (brick work upto plinth level) Without superstructure.

Approximate cost Rs. 1250/-



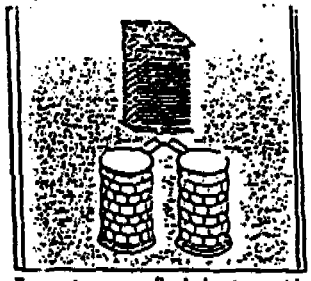
Two pit water flush latrine (brick work upto plinth level) Without superstructure.

Approximate cost Rs. 1730/-



One pit water flush latrine with superstructure.

Approximate cost Rs. 2460/-



Two pit water flush latrine with superstructure.

Approximate cost Rs. 2930/-

- The above prices of the latrines have been fixed adding additional Rs.40 or Rs.50 with that of construction cost.
- Each of the models of latrine is Sanitary pan with mosaic in white cement. There will be no foul gas or any bad odour. As a result these can be constructed adjacent to the house, even attached.
- Upgradation is posible, step by step from the less costly model to the costilier ones, without wasting almost any of earlier invested money.
- The cost of the latrines have been calculated based on the rates of materials and labour as those prevailing in and around Calcutta during the period of November 1996. These will change from place to place and from time to time.

Self-Sustained Sanitation Program
Medinipur District
West Bengal, India

Chandan Sengupta
Project Officer
UNICEF Calcutta, India

Community
Water Supply
And Sanitation
Conference
May 5-8, 1998

HANDOUT: HYGIENE AND SANITATION

The status of sanitation in India, particularly in rural areas, is not satisfactory. As per 1991 Census, almost 90% of the rural dwellers in India had no access to household latrines. In West Bengal, the situation was equally alarming. A cause for such poor status was low the low priority given by the Government to addressing the need for sanitation facilities in comparison to drinking water supply. This low priority resulted in poor fund allocation to the Rural Sanitation Program (RSP). Furthermore, the Rural Sanitation Program was implemented with a high subsidy component. As a result, very few people could gain access to safe sanitation. The few sanitary facilities provided to the villagers were not used as these were constructed without creating any demand among users. Poverty coupled with age-old habits compelled the villagers to defecate in the open.

In 1990-91, in response to this situation, a self-help sanitation strategy was conceived in UNICEF for implementation in Medinipur District of West Bengal, India. Medinipur, the most populous district of India, has a population 8.4 million and a population density of 592 persons per square kilometer. Most of the people in the district are poor. Ninety percent of them live in rural areas and are either marginal or landless farmers. However, thanks to effective land reforms carried out by the State Government, almost everybody owns a plot of land, though very small.

What is the uniqueness of Intensive Sanitation Program in Medinipur?

Demand Based

A number of studies reveal that there is demand for different kinds of sanitary facilities amongst the villagers. The demand however, is latent. People prefer to own a personal toilet for several reasons. A sanitary latrine protects one's good health, is convenient and offers privacy.

The question is why the villagers do not construct their own latrines. A common reason is the perceived lack of affordability. The villagers can construct their homes within their means, but they are not aware of the art of constructing a latrine within their financial capacity.

Keeping this in mind, the Intensive Sanitation Program in Medinipur is planned to be first and foremost demand based. Demand for different kinds of sanitation facilities is first created through extensive awareness generation activities like group discussions, video/slide shows, song squad, meetings of mothers= groups, rallies by school students, cinema slides, wall paintings, etc. Stress is given to inter-personal contact through home visits by trained local village motivators. When the demand is created, the villagers install the sanitary facilities at their premises bearing the actual cost.

Latrines as Wedding Gifts

In Tamluk areas of Medinipur District, all of a sudden men folks found it difficult to marry! Reasons? They did not have latrines in their homes! No girl was prepared to marry a man with no latrine in his house.

However, friends came for their rescue. A latrine can make a good wedding present. There are 12 models in a price range of US$7 to US$80 to choose from.

Sanitation is not a latrine construction program

Sanitation is promoted as a package in Medinipur. All aspects of sanitation e.g., safe storage and handling of drinking water; safe disposal of liquid waste, solid waste and human excreta; home and food sanitation; hand-washing; upkeeping of personal hygiene; and sanitation in the community - are given equal priority. The villagers are taught about the necessity of providing soakage pits, garbage pits, latrines, improved ovens, bathing cubicles etc. Above all, emphasis is laid on health education, so that the villagers adopt good behavioral practices and abandon old, bad ones.

A range of options to suit everybody's pocket

A wide range of options for sanitary latrines and other sanitary facilities are offered to the villagers. The poorest of the poor can afford to purchase a latrine in Medinipur. There are 12 models of household latrines within a price range varying from Rs.260/- to Rs.3000/-
(US $7 - 80). Each latrine is sanitary and can be upgraded gradually without wasting earlier investments. The slogan is simple - ***Don=t wait for tomorrow, better construct it today.***

Effective decentralized delivery system

Once the demand for a sanitary facility is generated, it is provided at the premises of the villagers as quickly as possible. A sufficient number of production centers have been established in the villages to develop sanitary wares with the employment of locally available skills and materials.

All types of low - cost sanitary materials namely, pans, traps, squatting plates, pit covers, pit lining materials, latrine doors, etc. are produced in such production centers. Sanitary facilities are constructed with the help of trained local village masons. These low cost options of sanitary facilities have also implications as income generating activities. They in fact result into employment opportunities for the villagers, particularly for women. Local resources are kept in the village, among the community members, to improve everyone's quality of life. Women masons are specially trained to manufacture mosaic pans in white cement base and other sanitary components which are not only cheap (each set of pan and trap cost US $ 1.4) but also comparable with ceramic pans manufactured industrially. Till now, through the project, about 5 million working days have been created. A considerable portion of them are for women.

A program which will never die

A social marketing of sanitary facilities is being promoted in Medinipur. Over the actual production cost of all sanitary facilities, an additional amount is charged to the user in order to meet the overhead expenses incurred in awareness generation, training, R&D, etc. This approach makes the program truly self-sustainable.

Trained human resources are required at every stage

To produce all sanitary materials locally and install them properly, a large number of skilled village masons and other workers are necessary. Extensive awareness generation activities are being launched with the support of a large number of village activists and motivators. Other professionals involved in the program are functionaries of NGOs and Panchayats (elected village local self-government), motivators, school teachers and many other government functionaries who are trained and oriented to implement activities at various levels. Around 4,600 masons, 7,600 motivators, 16,000 Local Government functionaries, 13,300 NGO functionaries, have been trained so far for implementing the program.

Implementation strategy

The program is being implemented by Ramakrishna Mission Lokashiksha Parishad (RKMLP), one of the leading NGOs of the country for rural development with close collaboration of the three tier local self-government of the district. At the village level there are about 1100 small youth clubs working for the program. At the middle level in the administrative blocks, there are 16 cluster organizations that are coordinating the activities of the youth clubs. The cluster organizations report to RKMLP. The three tier Panchayat system has 514 Village Panchayats at the village level, 54 Panchayat Samities at the middle (Block) level and a District Panchayat Council at the District level. Planning, implementation and monitoring are done at every level jointly by the NGOs and the local self-government. Weekly meetings are held at the village and the block levels. At the district level reviews are held monthly.

Present status of the program

Remarkable progress has so far been achieved in Medinipur district. Till now, 225,000 household latrines and 27,000 other sanitation facilities have been made available through the program. With time, the pace of implementation has accelerated. It should be noted that during 1996-97 and 1997-98, 51,000 and 75,000 latrine have been constructed respectively. Furthermore, thanks to the strong awareness generated by the program an equal number of such facilities have been constructed by the villagers on their own initiative.

Reasons for success

Excellent working relations between NGOs and local self-government at various level is one of the main reasons for the success of the program. Strong political commitment and conviction of the elected leaders are the driving forces behind the successful implementation of the program by the dedicated NGOs. Through this process, the community owns the program, shares responsibilities and monitors closely all activities at the grass- roots. Corrective measures, when required, can be taken quickly.

What is the impact of this program beyond Medinipur?

While world over policy makers struggle to find a viable strategy to address rural sanitation, Medinipur shows the way. The impact of the program can be measured at different levels:

- It has led to the modifications of the guidelines of Government of India for implementing the Central Rural Sanitation Program (CRSP) and to the gradual withdrawal of subsidies from the program. Subsidies are now available only to people living below poverty line. CRSP guidelines provide for a subsidy of Rs.2000 (US$50) for the poor. The Government of West Bengal has further decreased the subsidy to only Rs.200 (US $ 5). Other states of India are now considering a similar strategy.

- The Government of West Bengal has adopted the Medinipur strategy as a model for the entire state. Presently, 195 blocks out of a total of 341 blocks in the State have been brought under the program. NGOs are being extensively involved in the implementation of the program across the state.

- Interest in the Medinipur Intensive Sanitation Program has spread beyond India. Government and technical teams from Vietnam, China, Pakistan, Nepal, Indonesia, Nigeria and Egypt have visited Medinipur and expressed their interest to replicate its sanitation strategy.

- The capacity of the NGOs, which has been developed in Medinipur, has resulted into an asset for the implementation of other development programs. Community-based water quality surveillance, management of water supply systems and establishment of Oral Rehydration Salts (ORS) depots for making ORS available round-the-clock in villages are all components which are in position through these infrastructures. Further diversification of activities is being considered.

Program Develops NGO Emergency Response Capacity

On 24 March 1998, at about 3.40 p.m., 11 villages of Egra-I, Dantan-I and Mohanpur Blocks of Medinipur District were severely affected by a devastating tornado. Forty-eight people died and 3000 families rendered homeless. Water ponds became unfit for use by the villagers. As the crisis struck, the NGOs and the other workers of the Intensive Sanitation Project worked day and night to help. They monitored the quality of drinking water sources, disinfected the tube wells and enhanced the quality of pond water. Within ten days, 33 Tara handpumps and 500 latrines were constructed in the affected areas by the two cluster organizations - Vivekananda Yuva Parishad and Saurya Prabha along with other Youth Clubs. Such a prompt response backed by an appropriate advocacy strategy prevented a likely outbreak of diarrhoeal diseases.

Conclusion

Days are not far when Medinipur will show how an entire District, can be made free from the curse of improper sanitation. The Medinipur experience will lead West Bengal to have a latrine in every house by the year 2005. One day, when a history of sanitation in India is written, Medinipur will have its name mentioned and the fight of the poor against poverty and age old habits will be remembered.

Self-Sustained Sanitation Program
Medinipur District, West Bengal, India

Paper presented by:
Chandan Sengupta
Project Officer, UNICEF Calcutta, India
at the International Conference on Rural Water Supply and Sanitation
May 5-8, 1998, Washington DC

The status of sanitation in India, particularly in rural areas, is not satisfactory. As per 1991 Census, almost 90% of the rural dwellers in India had no access to household latrines. In West Bengal, the situation was equally alarming. A cause for such poor status was low the low priority given by the Government to addressing the need for sanitation facilities in comparison to drinking water supply. This low priority resulted in poor fund allocation to the Rural Sanitation Program (RSP). Furthermore, the Rural Sanitation Program was implemented with a high subsidy component. As a result, very few people could gain access to safe sanitation. The few sanitary facilities provided to the villagers were not used as these were constructed without creating any demand among users. Poverty coupled with age-old habits compelled the villagers to defecate in the open.

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Effective decentralized delivery system

Once the demand for a sanitary facility is generated, it is provided at the premises of the villagers as quickly as possible. A sufficient number of production centers have been established in the villages to develop sanitary wares with the employment of locally available skills and materials.

All types of low - cost sanitary materials namely, pans, traps, squatting plates, pit covers, pit lining materials, latrine doors, etc. are produced in such production centers. Sanitary facilities are constructed with the help of trained local village masons. These low cost options of sanitary facilities have also implications as income generating activities. They in fact result into employment opportunities for the villagers, particularly for women. Local resources are kept in the village, among the community members, to improve everyone's quality of life. Women masons are specially trained to manufacture mosaic pans in white cement base and other sanitary components which are not only cheap (each set of pan and trap cost US $ 1.4) but also comparable with ceramic pans manufactured industrially. Till now, through the project, about 5 million working days have been created. A considerable portion of them are for women.

A program which will never die

A social marketing of sanitary facilities is being promoted in Medinipur. Over the actual production cost of all sanitary facilities, an additional amount is charged to the user in order to meet the overhead expenses incurred in awareness generation, training, R&D, etc. This approach makes the program truly self-sustainable.

Trained human resources are required at every stage

To produce all sanitary materials locally and install them properly, a large number of skilled village masons and other workers are necessary. Extensive awareness generation activities are being launched with the support of a large number of village activists and motivators. Other professionals involved in the program are functionaries of NGOs and Panchayats (elected village local self-government), motivators, school teachers and many other government functionaries who are trained and oriented to implement activities at various levels. Around 4,600 masons, 7,600 motivators, 16,000 Local Government functionaries, 13,300 NGO functionaries, have been trained so far for implementing the program.

Implementation strategy

The program is being implemented by Ramakrishna Mission Lokashiksha Parishad (RKMLP), one of the leading NGOs of the country for rural development with close collaboration of the three tier local self-government of the district. At the village level there are about 1100 small youth clubs working for the program. At the middle level in the administrative blocks, there are 16 cluster organizations that are coordinating the activities of the youth clubs. The cluster organizations report to RKMLP. The three tier Panchayat system has 514 Village Panchayats at the village level, 54 Panchayat Samities at the middle (Block) level and a District Panchayat Council at the District level. Planning, implementation and monitoring are done at every level jointly by the NGOs and the local self-government. Weekly meetings are held at the village and the block levels. At the district level reviews are held monthly.

Present status of the program

Remarkable progress has so far been achieved in Medinipur district. Till now, 225,000 household latrines and 27,000 other sanitation facilities have been made available through the program. With time, the pace of implementation has accelerated. It should be noted that during 1996-97 and 1997-98, 51,000 and 75,000 latrine have been constructed respectively. Furthermore, thanks to the strong awareness generated by the program an equal number of such facilities have been constructed by the villagers on their own initiative.

Reasons for success

Excellent working relations between NGOs and local self-government at various level is one of the main reasons for the success of the program. Strong political commitment and conviction of the elected leaders are the driving forces behind the successful implementation of the program by the dedicated NGOs. Through this process, the community owns the program, shares responsibilities and monitors closely all activities at the grass- roots. Corrective measures, when required, can be taken quickly.

What is the impact of this program beyond Medinipur?

While world over policy makers struggle to find a viable strategy to address rural sanitation, Medinipur shows the way. The impact of the program can be measured at different levels:

- It has led to the modifications of the guidelines of Government of India for implementing the Central Rural Sanitation Program (CRSP) and to the gradual withdrawal of subsidies from the program. Subsidies are now available only to people living below poverty line. CRSP guidelines provide for a subsidy of Rs.2000 (US$50) for the poor. The Government of West Bengal has further decreased the subsidy to only Rs.200 (US $ 5). Other states of India are now considering a similar strategy.

- The Government of West Bengal has adopted the Medinipur strategy as a model for the entire state. Presently, 195 blocks out of a total of 341 blocks in the State have been brought under the program. NGOs are being extensively involved in the implementation of the program across the state.

- Interest in the Medinipur Intensive Sanitation Program has spread beyond India. Government and technical teams from Vietnam, China, Pakistan, Nepal, Indonesia, Nigeria and Egypt have visited Medinipur and expressed their interest to replicate its sanitation strategy.

- The capacity of the NGOs, which has been developed in Medinipur, has resulted into an asset for the implementation of other development programs. Community-based water quality surveillance, management of water supply systems and establishment of Oral Rehydration Salts (ORS) depots for making ORS available round-the-clock in villages are all components which are in position through these infrastructures. Further diversification of activities is being considered.

Program Develops NGO Emergency Response Capacity

On 24 March 1998, at about 3.40 p.m., 11 villages of Egra-I, Dantan-I and Mohanpur Blocks of Medinipur District were severely affected by a devastating tornado. Forty-eight people died and 3000 families rendered homeless. Water ponds became unfit for use by the villagers. As the crisis struck, the NGOs and the other workers of the Intensive Sanitation Project worked day and night to help. They monitored the quality of drinking water sources, disinfected the tube wells and enhanced the quality of pond water. Within ten days, 33 Tara handpumps and 500 latrines were constructed in the affected areas by the two cluster organizations - Vivekananda Yuva Parishad and Saurya Prabha along with other Youth Clubs. Such a prompt response, backed by an appropriate advocacy strategy prevented a likely outbreak of diarrhoeal diseases.

Conclusion

Days are not far when Medinipur will show how an entire District, can be made free from the curse of improper sanitation. The Medinipur experience will lead West Bengal to have a latrine in every house by the year 2005. One day, when a history of sanitation in India is written, Medinipur will have its name mentioned and the fight of the poor against poverty and age old habits will be remembered.

MIDNAPORE AT A GLANCE

Location and Area

Midnapore District lies on the southern part of West Bengal. It is bounded on the south by the Bay of Bengal, on the west by Bihar and Orissa and on the east by Bangladesh. The total geographical area of the district is 14,081 sq. km. The district has an average rainfall of 1428 mm.

Population and Habitation pattern

In terms of population (8.35 million), Midnapore is the single largest district of the country and accounts for 1/8th of West Bengal's population. The population density is 593 per sq. km. The decennial growth rate (1981-91) was +23.83% against +24.55% of West Bengal. Urbanisation in the district is quite low with only 10% of the population living in urban areas. The total literacy programme resulted in Midnapore being declared in 1992 as a fully literate district.

Economy

Most of the main workers of the district are either cultivators or agricultural labourers. As a matter of fact, out of the main workers, 43.26% are cultivators, 30.97% are agricultural labourers, 4.39% are household industry workers and 21.37% are other workers. Out of the agricultural families, landless farmers are 37%. Marginal, small, medium and large farmers are 39.7%, 15.8%, 5.7% and 1.8% respectively.

Soil status

A large part of the district is plain alluvial (52%). However, considerable areas of laterite and coastal types of soils are also present (30% and 18% respectively).

Diarrhoeal Diseases

Diarrhoeal diseases continue to take heavy toll of lives of children under the age of 5 years. The control of diarrhoeal diseases poses a major challenge as the aethiology of diarrhoeal diseases are multifactorial in origin. As a consequence of repeated diarrhoeal diseases and other infections in children, high levels of malnutrition are found in the district. The incidence of malaria in the district along with malnutrition form a vicious circle, leading to increased susceptibility to diarrhoeal diseases and thus causing serious public health problems.

Drinking Water Supply

This district suffers from acute scarcity of drinking water. Only 405 villages have been covered under the Piped Water Supply Scheme, benefiting a population of 5,35,000 (8.7%). There are 17,592 spot sources serving a population of 26,39,000 (42.7%). Thus, a large population (48.5%) still requires access to a safe drinking water supply. Again, most of these spot sources are shallow tube wells. Many of the handpumps installed in these tube wells remain out of action due to fall in the ground water table, particularly in the dry season when pumps in the fields meant for irrigation are in action. Moreover, there is the problem of saline water intrusion in certain blocks of the district. Due to the acute crisis of drinking water, villagers are forced to use the water of unprotected open dug wells and ponds. The problem of iron in the ground water is prevalent in some areas. Iron removal plants could not be provided in these handpumps.

Sanitation

The situation of sanitation in 1991 was characteristically very alarming. Over the past 6 years, an intensive sanitation effort has been undertaken in the state which resulted in sanitation coverage in the district increasing from 4.74% in 1991 to 22% in 1997.

Administrative set up

Sub-division	07
Blocks	54
Gram Panchayats	514
Towns	19
Mouzas (villages)	11,796

Area and Population

Geographical area	14,081 sq. kms.
Total population	8,349,890
Urban population	838,973
Rural population	7,510,917
Density of population	529 per sq. km.
Sex ratio (Female/1000 males)	944
Main workers	30.34%
Marginal workers	4.81%
Non workers	64.85%

Literacy Rate

Persons	57%
Male	67%
Female	47%

Climate

Normal rainfall	1428.0 mm

Health

District Hospital	1
Sub-divisional Hospitals	5
State General Hospital	2
BPHC	54
PHC & A.G. Hospitals	135
Health sub-centres	1,284
Clinics	19
Dispensaries	5
No. of beds	3,826
No. of doctors in Govt. hospitals	595

Water Supply

Piped water supply	405 villages covered
Spot sources	17,592 (42.7%)
Total coverage under water supply	51.44%

Schools/Educational Institutions

Primary schools	7,627
Junior High	591
High/Secondary	626
Higher Secondary	141
Non formal centres	3,580
Adult Education centres	1,601

Others

No. of ICDS blocks	22
No. of Anganwadi centres	2835

Ministry of Housing and Urban Development

CWSSP

Community Water Supply and Sanitation Project

Sri Lanka

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P.O. Box 30, Battaramulla, Sri Lanka
Fax (941) 872143, e-mail: cwssp@sri.lanka.net

Ministry of Housing and Urban Development

CWSSP
P.O.Box 30, Battaramulla, Sri Lanka
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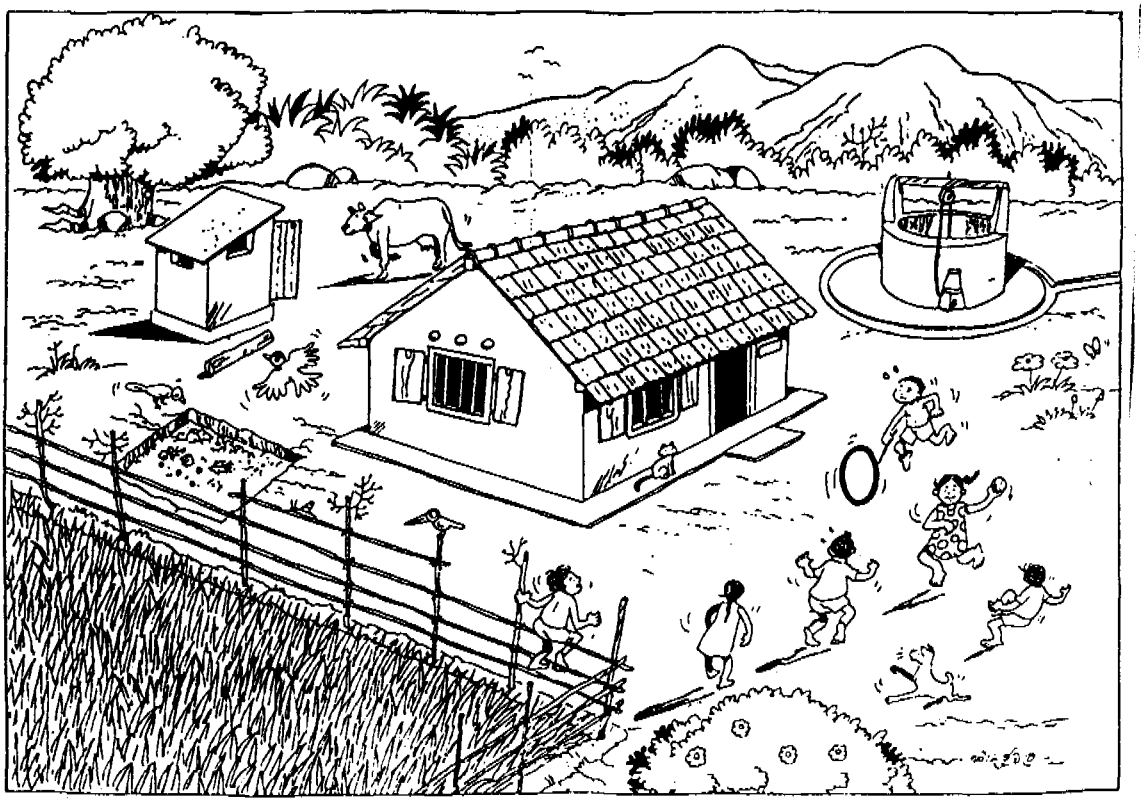
Project Information

1. Project Name:	**Community Water Supply & Sanitation Project (CWSSP)**	2. Country: **Sri Lanka**
3. Project Costs:	USS million 39.5	4. Community Contribution: 20% mandatory
5. Population served:	0.85 million	6. Settlements: Served 3000
7. Launch Date:	March 93	8. Scheduled completion: December 1998

9. Implementing Agency: Ministry of Housing and Urban Development, Community Water Supply and Sanitation Project Unit

Major partners:

gov't: Divisional Secretariat, Ministry of Health, Ministry of Education
ngo's: 88 partners, among whom SANASA, Arthachariya Foundation, Sarvodaya, MPCSs at district level
local gov't: Pradeshiya Sabha
others: National Water Supply and Drainage Board and Community Based Organizations

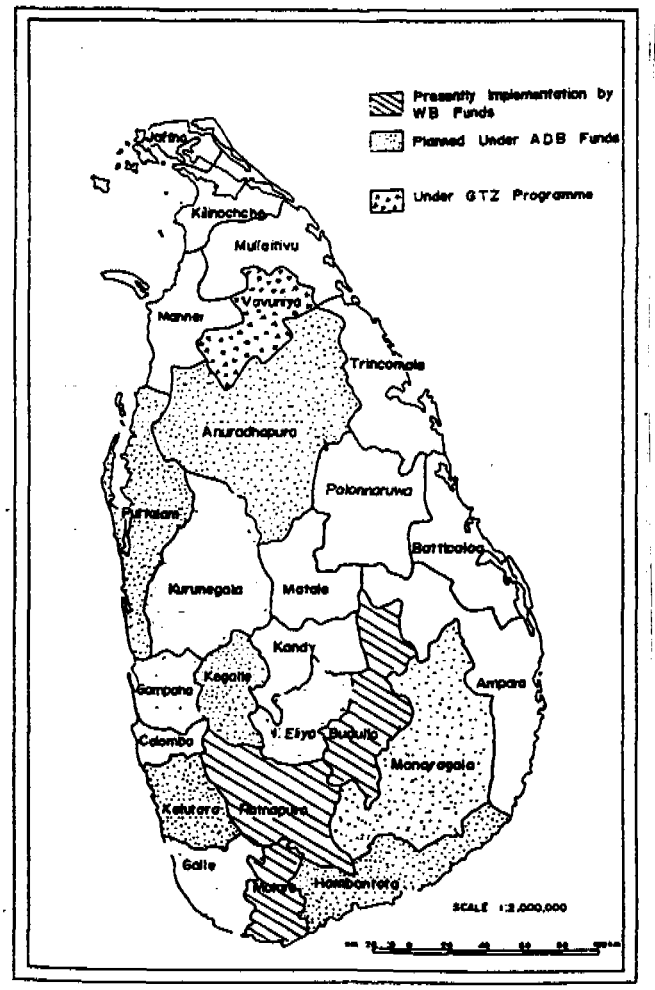


Project Components	Costs Staff Appraisal Report Nov. 1992		Costs after Mid-Term Review Nov. 1996	
	in US$ Million	Percentage	in US$ Million	Percentage
A. Water Supply	14.7	45.5%	18.4	46.6%
B. Sanitation	1.9	5.9%	1.7	4.3%
D. Hygiene Educat.	1.5	4.6%	0.3	0.8%
E. NGO/SO	1.0	3.1%	2.5	6.3%
F. Technical Asst.	3.9	12.1%	2.3	5.8%
H. Training/HRD	0.4	1.2%	0.4	1.0%
I&J. Equipment & Institutional/Staff	3.4	10.5%	3.2	8.1%
K. Studies/Sector	2.3	7.1%	0.03	
L. Proj. Prep. Fac./ Fut.Project.Prep.	0.7	2.2%	1.3	3.3%
Subtotal	29.8	92.3%	30.1	76.2%
M. Comm. Contr.	2.5	7.7%	9.4	23.8%
N. Grand Total	32.3		39.5	
Physical Production (A + B + M)	19.1	59.1%	39.5	74.7%
Community Share (M/(A + B + M))		**13.8%**		**31.9%**

1. Introduction

The Community Water Supply and Sanitation Project is an ambitious joint initiative of the Government of Sri Lanka and the World Bank aimed at establishing a demand led community based approach for the development of water supply and sanitation facilities to the rural people in Badulla, Matara and Ratnapura Districts.

CWSSP is an innovative project adopting a new concept along with participatory methodology and strategies in the process of development of affordable and sustainable facilities to rural communities. It is people centred. They are the doers and owners of their projects. Through a process of motivation many communities have responded with genuine feeling and enthusiasm to CWSSP and have now become leading and effective partners in its process. Projects are identified, planned, organized, constructed and maintained by themselves with community development and technical assistance from Partner Organizations. Communities contribute far more than the 20% investment of the capital cost. They display a significant degree of ownership feeling and protect and maintain their schemes.



2. Objectives

Overall Objective of CWSSP

- Enhance the physical quality of the rural population in the selected Districts by :
  - Providing water supply and sanitation facilities, and hygiene education services,
  - establishing and strengthening of the institutional framework to ensure the sustainability in operation and maintenance of service provided.

Specific Objectives

- Develop systems and institutions for community based planning, implementation, operation and maintenance of cost effective and sustainable water supply and sanitation facilities and hygiene education services.

- Implement community based water supply and sanitation schemes in selected rural centers and small towns in Badulla, Matara and Ratnapura Districts.

- Prepare follow up projects applying the community based approach developed and tested in this Project to extend the water and sanitation coverage of other districts.

3. Institutional Arrangements

The CWSSP has introduced a novel institutional arrangement to implement a rural water supply and sanitation project. The cornerstone of this institutional arrangement is the concept of partnership with Community Based Organizations and Public and Non-Governmental Agencies working as Intermediary Organizations (Partner Organizations).

The institutional arrangements of CWSSP are shown in Figure I, together with roles and responsibilities of the main partners.

- **Community Water Supply and Sanitation Project** Unit (CWSPU)

The project unit acts as an intermediary between the Government and the Partner Organizations, and is responsible for the overall management, coordination, and supervision of the project activities. It is located in the Ministry of Housing and Urban Development and serves as the link between the Government of Sri Lanka and the Partner Organizations in implementing the project. The project unit is responsible for:

- developing a strategy for implementing the government's policies on community-based rural water supply and sanitation;
- monitoring and modifying the project strategy as and when necessary;
- contracting with partner organizations for project development and implementation;
- exercising overall financial control, and
- contributing to general policy formulation.

The CWSPU has offices in the three districts where the project is being implemented in addition to its headquarters in Colombo. To reduce the distance to the Partner Organizations and CBOs, zonal offices have been created as sub-district level. The district and zonal offices coordinate day-to-day operations of the project and work directly with the partner organizations and community-based organizations.

♦ National Steering Committee (NSC)

The National Steering Committee is chaired by the Secretary of the MOHUD. It consists of representatives of relevant ministries, public agencies, provincial councils, partner organizations, and NGOs. Its main functions are inter-agency coordination, policy review and refinements, conflict resolution, policy decisions, and monitoring of overall progress.

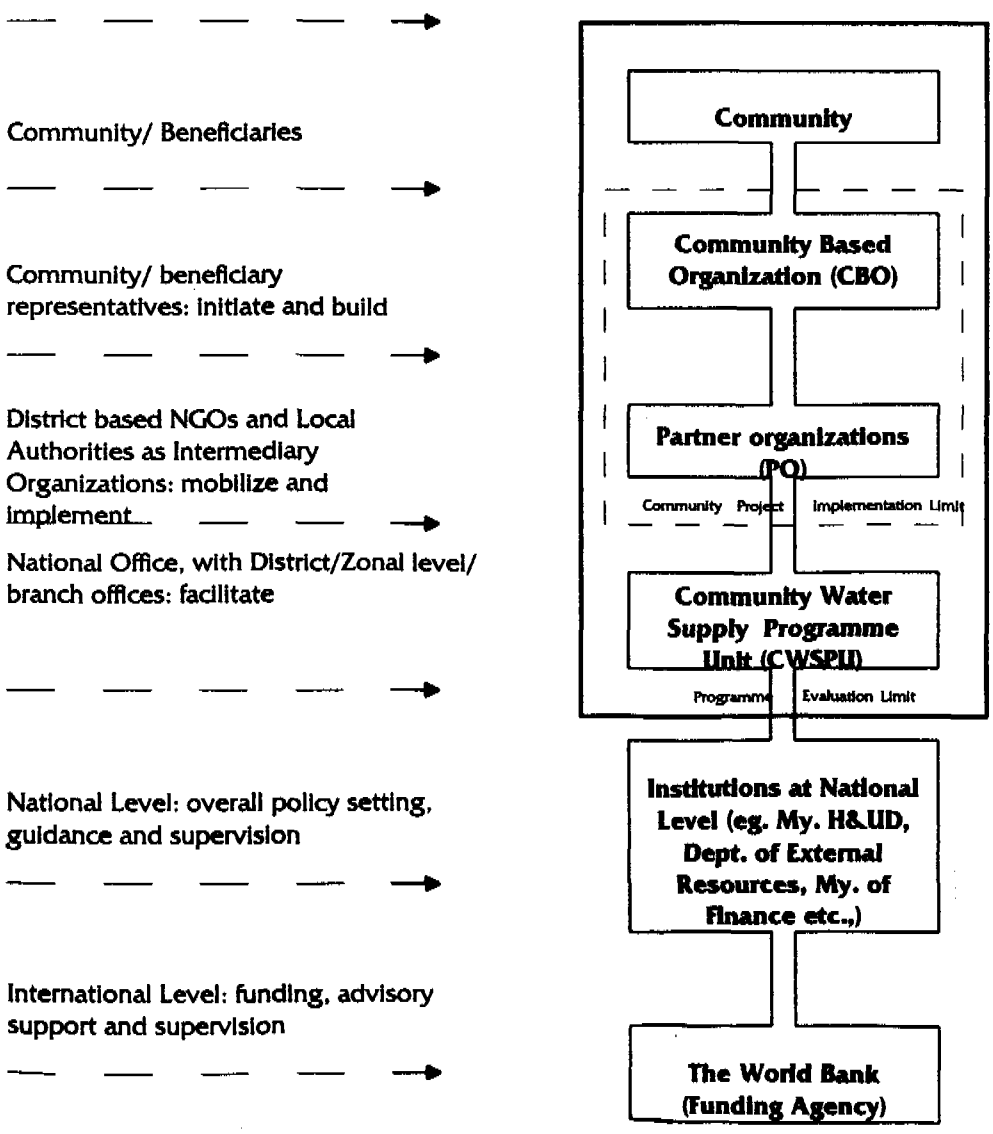
♦ Partner Organizations (POs)

The project is implemented through partner organizations. These include organizations that are capable and willing to assist the communities in implementing the project. The eligible partner organizations include NGOs, local government organizations or Pradeshiya Shabas (PSs), the National Water Supply and Drainage Board and the private sector.

Partner organizations are contracted by the CWSSP to:

- initiate a dialogue with the communities interested in water and sanitation services, undertake community mobilization activities to aggregate community preferences and demand, and assist the communities in establishing community-based organizations;

Figure 1. CWSSP Institutional Framework



- assist the community-based organizations in initiating water and sanitation schemes consistent with CWSSP policy, prepare detailed designs, and provide technical support in constructing, operating, and managing schemes;
- monitor project implementation; and
- provide community health and hygiene education.

♦ Community Based Organizations (CBOs)

The partner organizations help to create community-based organizations that represent the users. Community-based organizations are actively involved in planning, designing, and implementing water supply and sanitation schemes. They contribute cash and/or communal labor for construction and assume responsibilities for operations and maintenance of facilities, and for collecting user fees.

4. Project Status

Current Date: March 31, 1998 Total expenditure: 73.1% of proj.cost

Village water supply schemes started scheme completed	 946 360	 no. of people reached beneficiary population sofar	 774,590 326,670
CBOs registered	973	Partner Organizations	82
Sanitation target	45'000	latrines constructed	42'941
School water supply and sanitation target	750	schemes completed	202
Small town water supply schemes No of Schemes started	 12	 completed under construction	 4 8

The CWSSP sub-programmes are executed by Partner Organizations (POs) and Community Based Organizations (CBOs). The implementation of Community Projects started in early 1993 with the launching of seven Pilot Projects in Ratnapura District by six POs. Based on the experience gained from Pilot Projects, a **Small Scale Programme (SSIP)** (10 projects in each district) commenced 6 months later. In order to accelerate project implementation, a **Large Scale Implementation Programme (LSIP Round I)** was subsequently launched with 70 projects after 04 months. Taking into consideration lessons learnt from Small Scale and Large Scale, finally consolidated programme was introduced amalgamating small scale and large scale programme.

New rounds of SSIP and LSIP and consolidated programme commence with new Partner Organizations as well as existing POs with proven capabilities as measured by a Performance Evaluation conducted after the completion of each round. SSIP is an introductory programme under which each small scale PO can cover one or two villages whereas each LSIP PO implements more than 5 projects concurrently.

Delays come in many different forms. Sometimes they are caused by the procedure or the lack of clarity on changes made. Sometimes delays are beyond project control as these have to do with government procedures or with underdeveloped market mechanisms. Some of the more common delays are described below:

* **Cash flow**

Until the end of 1995 when the project was only executing a limited number of projects, cash flow was adequate. However, upon scaling up, project management had difficulty in convincing the Treasury that substantially more funds were needed. Thus, even in early 1996 the project already had to ask for supplementary estimates from the Treasury to avoid a shortfall. In 1997 the World Bank consented to increase the standing advance of the project from US$ 1.2 million to U$ 3.0 million. This has helped a lot. Even then cash flow problems occurred at time due to the long turn around time between issuing the advance to the districts and receiving the invoices, etc. for reimbursement claims. A recent The recent work-to-rule campaign at the Central Bank also affected the cash flow.

* **Staffing**

Partner organizations find it hard to retain experienced technical staff. Staff changes can seriously affect progress in the village or school project if the Partner Organization is not capable of replacing the Technical Officer quickly.

In addition, some POs lack the institutional strength to deal decisively with implementation problems, thus causing delays in execution.

* **Construction materials**

Temporary shortage of construction materials causes stoppages in work. Though the situation has improved considerably lately as compared to 1995 and 1996, short supply of G.I. pipes and fittings, wire meshes (for ferrocement) and cement has caused considerable delays in the past.

* **Water rights issues**

It regularly takes more time to settle the right of abstraction from a particular source. Various parties are involved an depending on the personal interests and the bureaucratic procedures applied it takes more or less time to get (written approval). Furthermore, sources in use by farmers or on private land may take quite some negotiation to be freed for use.

In some instances the sources initially identified are not made available and other water sources need to be found. This can seriously delay the project planning, especially so when people initially had opted for a solution that had to be changed, e.g. the change to rainwater harvesting in the face of unsuccessful deep wells.

* **Maha rains 1997**

Monsoonal rainfall since July 1997 up to the end of December 1997 has been very severe in all the three districts the CWSSP is active. This has caused serious delays due to reduced inaccessibility of sites, general difficulties to transport goods and get the work done (including shramadana), while it has also reduced (temporarily) the need for communities to look after their water problems as most traditional village sources were producing plenty of water.

A overview of the delays in implementation of each programme is given in Table IV together with specific reasons for the delay in each case.

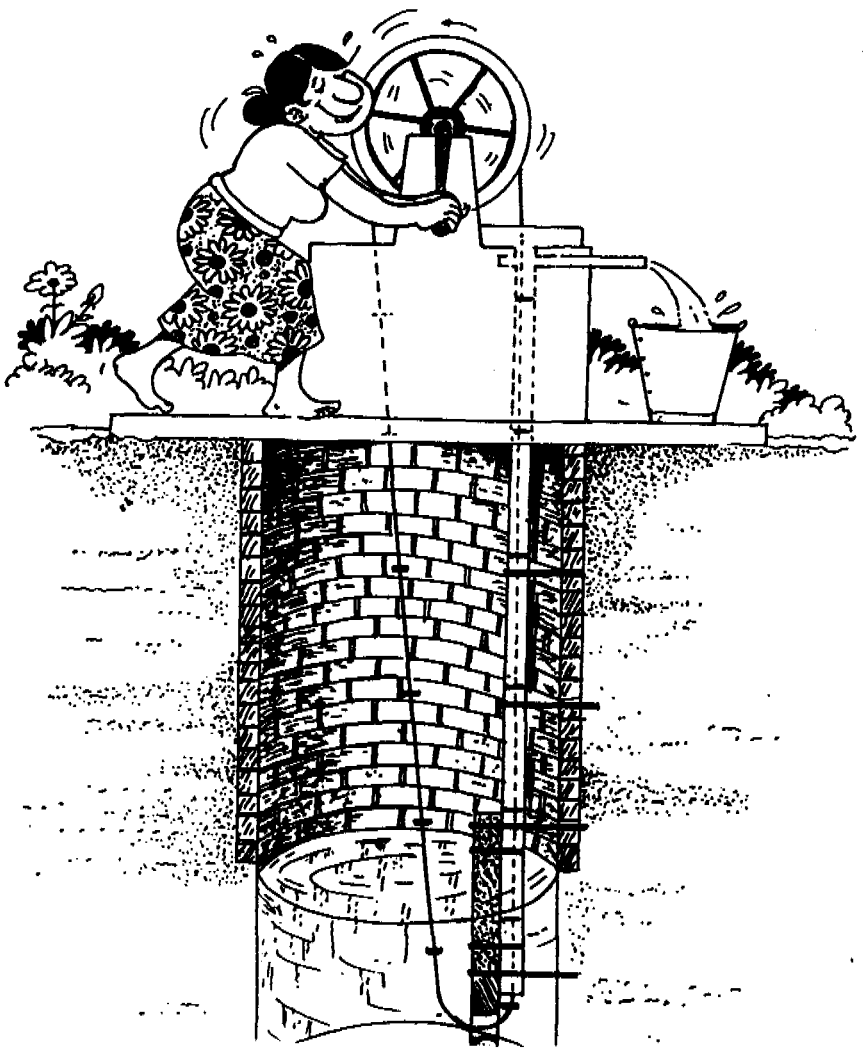
5. Project Implementation Cycle

The project implementation strategy focuses on active community decision making, leading to community contributions, construction, and ultimately community ownership of the improved facilities.

Development phase : (6-9 months). The activities in this phase help and ensure community participation, communicate project rules, aggregate users preferences, and enable community management. The community establishes a community-based organization, plans and designs their water supply scheme and sanitation program, and mobilizes resources. Partner organizations begin training and health and hygiene education activities.

Construction phase (5-10 months). The community-based organization takes responsibility for constructing the water supply systems and implementing the sanitation program with support from the partner organization.

Consolidation phase. (9-15 months). This phase helps to ensure the long-term sustainability of the facilities. The partner organizations provide follow-up support to the community-based organizations in operation and maintenance; provide training to community-based organizations, individuals, and user groups as needed for user fee collection. Partner organizations also provide for follow-up support.



The village Water Supply and Sanitation is the core programme and Small Town Water Supply and School Water Supply and Sanitation are subsidiary programmes. Each programme is implemented by the villages through small community projects following the three phases described above.

The project implementation process is illustrated in the box below

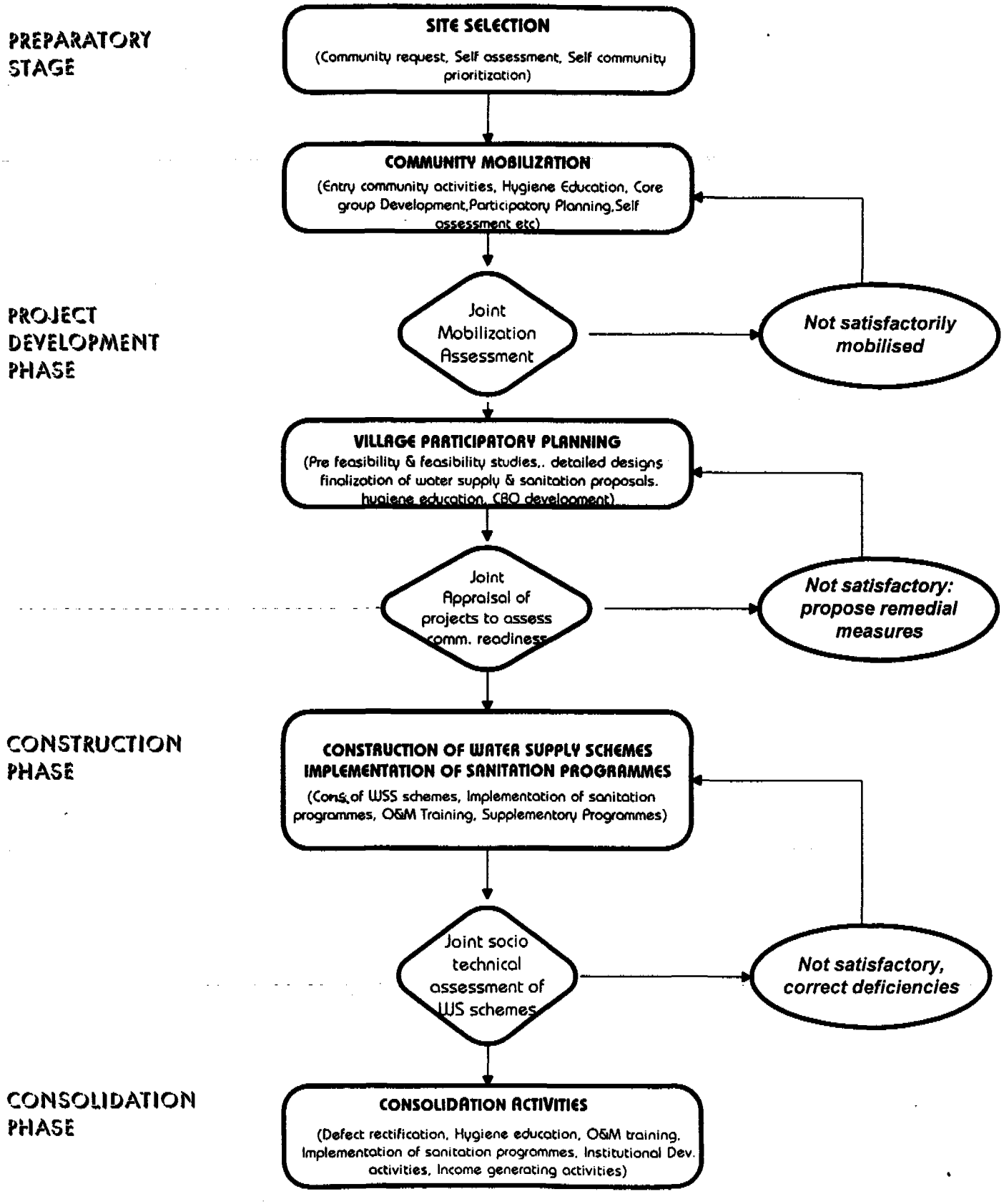
Box 3: Project Implementation Phases.

Project Implementation Phase	Activity	Actor
Development Phase 6 months planned 6 - 9 months rescheduled	* identification of village * mobilization of users * formation of CBO * fund mobilization * plan and design * training, hygiene education	PO CWSPU District Office
Construction 6 months planned 12 months rescheduled	* procurement of materials * construction * caretakers training * hygiene education * sanitation programme	CBO PO CWSPU
Consolidation 12 months planned 9 - 15 months rescheduled	* commissioning * O&M training * revenue collection * conflict resolution * sanitation programme * routine O&M * CBO sustenance	CBO PO CWSPU Local Govt. Agencies

The project implementation cycle is basically a partnership between the community and the Partner Organization. CWSPU facilitates and through the partner organization finances between 70 and 80% of scheme costs. Refer to figure 1 for the specific roles of each partner/management level. On the next page the various activities showing up in the CWSSP implementation cycle are visualized.

Project Cycle Duration	Planned	Rescheduled
Site Selection	3 mths	3 mths
Community Mobilization	3 mths	3 mths
Participatory Planning	3 mths	3 - 6 mths
Construction	6 mths	12 mths
Consolidation	12 mths	9 - 15 mths

Community Project Implementation Cycle



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Village Participatory Planning is a time consuming process, which is further compounded by the fact that the new water and sanitation situation should really make a difference as compared to the pre-project situation. Thus, various options are presented and weighed by the consumers in respect of costs, water security, quality and convenience.

The topography of Sri Lanka offers many water supply development opportunities but also has a lot of technical and cost limitations. Thus the planning of the schemes usually took more time than was expected for the following reasons:

* lack of technical experience in WSS of technical officers employed by the Partner Organization. Limited understanding on the part of community facilitators of the technical possibilities and limitations, thus reducing their impact in the participatory planning phase.

* initially limited technical options were developed. More options were needed and were developed (eg. rain water harvesting, rope pump) to offer a possible technical solution to projects that otherwise could not be served, or to offer a higher level of service (yard taps, house connections). So some projects kept on searching for solutions before the project proposal was submitted for funding.

* CWSSP works with a Grama Niladhari Division (GND) as a "project". A GND is often quite large with 3-5 villages or even more. The GNDs have a varied topography and so one "project" is likely to have a range of different technologies and levels of service: several piped schemes, wells, rain water harvesting systems and deep wells with handpumps. Matching the technical options with the people's wishes takes time.

The reasons for delays in completion of the construction of schemes has been given above. Large project areas, remoteness, lack of technical expertise and regular supervision, changes in field staff, low project management capacity of POs, bureaucratic delays and cash flow problems, delays in material supply, electioneering, lack of shramadana (labour provision by the community) due to community events (agriculture, funerals), climatic conditions all contribute in different degrees to delays in completion. Thus, on the basis of the community water supply and sanitation proposal additional months are now given for completion of the scheme taking into account those aspects of projects as mentioned above that one can directly plan for.

For the consolidation period no real experience is as yet available and so the length of the consolidation period has been adapted only to take into account the technical and management complexity of projects.

6. Procurement

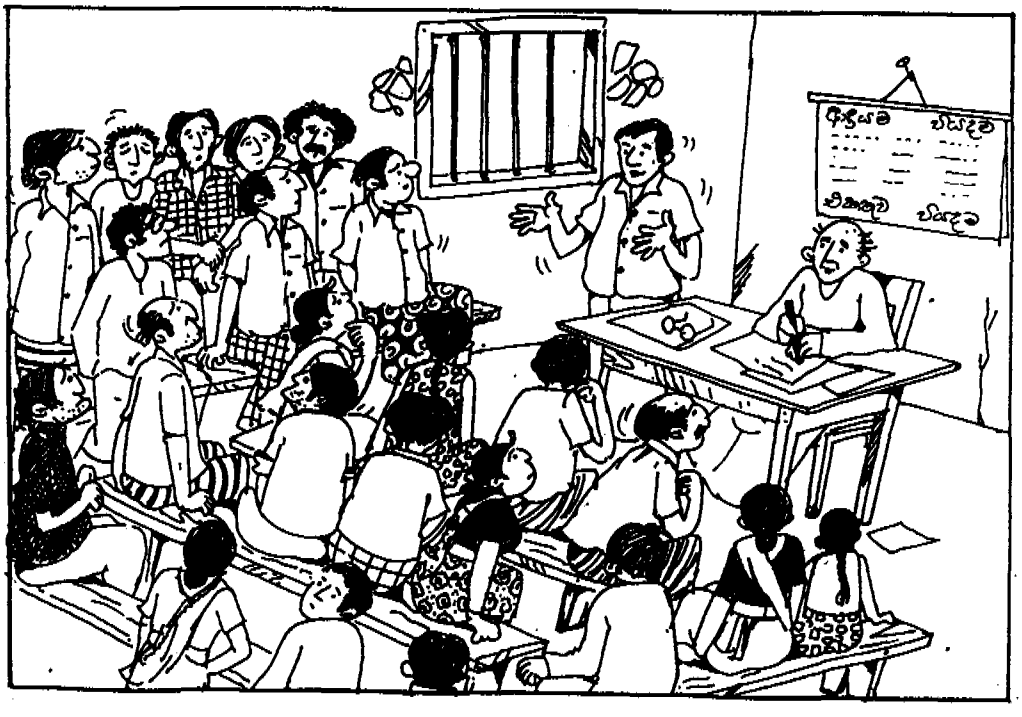
Procurement	Project Design	Actually
Community Based Organization	none	Local Materials (sometimes)
Partner Organization	Construction Materials	
CWSSP	none	none

At the scaling up of the project in the beginning of 1996 shortages arose in G.I.Pipes and fittings, and temporarily in wire meshes. Cement on and off is giving problems. As CWSSP does not want to procure construction items in bulk and store these until needed, it has to try and work the market. That has worked with the supply of PVC pipes were a well developed private sector segment is available for all sizes, but not so with G.I. pipes and fittings as only the National Water Supply and Drainage Board and the CWSSP are purchasing these materials in bulk. The Water Board can rely on tendering as there orders are project specific and large. However, so far the G.I. requirements of the CWSSP have not attracted the commercial sector, neither is tendering an option for such relatively small quantities. Therefore, the Building Material Corporation (BMC), a Government corporation, has been brought in to tender internationally, purchase and stock the G.I.materials in their depots at district level. This has worked to a large extent but has the disadvantage of relatively high costs (50% down payment upon order, and still fairly high prices upon purchase by POs.).

The shortage of wiremeshes was caused by a strike in the only mesh factory in Sri Lanka. This problems has since been resolved.

Material shortages have been quoted often as reasons for delays by POs. Whereas this is sometimes true, it is the project's perception that shortages are mentioned to cover up for shortcomings of the POs in forward planning and project management. Also, when POs are undertaking more projects they should be able to shuffle staff and activities somewhat to overcome a delay of a month or so. Unless there is a benefit for POs to really finish a project in time and become more proactive in the process, material shortages may continue to be quoted as a problem. However, in reality, shortages have been of limited real significance, as compared to other reasons why projects are delayed.

Only in the case of boreholes and the installation of handpumps (which are subcontracted to the NWSDB) has project completion been affected. As boreholes with handpumps form only a small portion of the technology package offered by CWSSP, this has so far not had a large influence on the overall project.



7. Management of Schemes

Aspect	As per project design	Actually
Ownership	community	community, but legal status of CBO unclear vis-a-vis PS (local authority) or NWSDB.
Legal Status of CBO	registered with MH&UD	registered with MH&UD, Divisional Secretary, and some with Social Services or within Companies Act
O&M revenue deposited	in bank by CBO	in bank by CBO
O&M fund operated by	CBO	CBO
Consolidation Unit (facilitates capacity building of CBOs, caretaker training, etc.) no repairs!	-	Deputy Director at HO Engineer, Community Relations Officer and District Training Officer at District Level

Altogether 305 schemes have been commissioned by the end of 1997. These display a great variety of technologies and so it is difficult to list the projects by type of scheme. As far as Sri Lanka is concerned such a division is not possible. It also goes against the philosophy of the project to offer people the service option of their choice as far as possible and reasonable. Such an approach thus leads to diversity in technologies even in one project site.

Technology applied in 305 completed schemes (in units)	
Gravity Water Supply	456
Shallow Dug Wells	3064
Rain Water Harvesting Units 3000 being constructed	1148
Hand Pumps	206
Pumped Piped Schemes	08

It obviously makes sense for a CBO to know what type of technologies they have in house. Depending on the complexity they will have to decide what skills and what management is necessary to look after a particular scheme. For instance, a well project does not need a heavy O&M management component, while a pumped scheme is much more critical.

CBOs already develop their institutional set-up in such a way as to look most efficiently after their schemes, e.g by having specific area or subject subcommittees. In some cases, CBO have split up along piped scheme service areas and new CBOs have been established to look after such individual schemes.

A physical audit of the CWSSP is presently underway by the Operations and Evaluations Department of the World Bank as part of an impact evaluation. Results are not yet available.

8. Changes to enhance project sustainability

Village identification and selection criteria.

At the beginning of the project, no clear criteria or procedures were set out for the selection of villages. Instead, very comprehensive design criteria were established that included a need assessment of quantity, quality, and reliability of existing sources; details of the yield of water sources; and the technical feasibility. The assumption was made that partner organizations would select communities which would participate in the project.

In the course of several revisions, CWSSP revised the eligibility criteria to improve its demand-responsiveness. The project introduced community selection criteria that required communities to demonstrate interest and take initiative by completing a self-assessment format. The communities were asked to have each interested family assess their existing water supply and sanitation facilities and express their willingness to pay for improved services. Based on these self-assessments the communities can be prioritized on the basis of the percentage of families requesting improved services.

Service levels and technical options

The original project design was based on the assumption that communities could afford only the most simple technical options and would be satisfied with basic levels of service. The project encouraged the partner organizations to guide the communities towards predetermined technologies and service levels, and produced guidelines on the types of technologies, distance to improved sources, number of sources, and number of households per source. The present approach differs significantly from the initial one. The project has evolved into one that focuses on responding to the community choices about water and sanitation by offering a choice of technologies and service levels based on willingness to pay.

Financial policy and cost sharing

The CWSSP financial policy differs from the traditional government policy since it focuses on ensuring sustainability as well as on increasing service coverage. The project requires a strong community contribution, or more than 20% of the capital cost in cash or in-kind, to foster a sense of ownership and commitment to their schemes, and also to ensure that facilities are provided on the basis of effective demand. Communities manage their own resources, instead of paying tariffs to a government agency.

The project has learned that the level of community contribution is higher than the requirement of 20 percent with an average of 30 percent. This higher percentage is due to a revision of the financial policy during the small-scale implementation phase that required communities to make mandatory contribution of 100 percent of the unskilled labour and local materials to be used, irrespective of their percentage share of the total cost. The project has also found that the community-based organizations have been able to collect sufficient funds for the routine operations and maintenance of their water schemes.

At the beginning of the project, multiple subsidy ceilings were determined for each technical option. Ceilings were based on an assessment of the economic benefits of each option and the cost per water and sanitation scheme. Multiple subsidy systems proved too complicated to implement and a universal subsidy was introduced.

The universal subsidy ceiling has two benefits. First, the government risks financing very costly projects with high investment costs per capita when no ceiling exists. The same resources could finance projects with lower investment costs and benefit a much larger number of people. Second, governments only subsidize a basic level of service, and communities that demand higher levels must bear the entire additional cost above this level.

The project is continuing to learn about whether the level of the ceiling encourages the communities to make choices based on demand for services. If the ceiling is too high, it creates incentives for the communities to choose more expensive technical options without regard to cost. The required 20 percent community contribution may not be sufficient to influence choices between service levels and may even bias communities towards higher levels of service to utilize the full amount of the subsidy.

Lessons Learnt

Community Based organizations (CBOs)

1. Communities have shown their willingness to contribute substantially to water supply and sanitation development. There are communities who are willing to pay even more than 30% of the capital costs involved, expecting a higher level of service. A new cost sharing formula is being developed by the project to cater to their needs. However, priority should still be focussed to cater to the most needy, while the possibility of introducing a declining subsidy level should be explored.

2. Generally, communities are often interested to build services that match their needs and aspirations. Continuous improvements on technological packages that meet the needs of communities and individuals is essential to offer them an improved service.

3. The legal status of CBOs to own and take care of the project they constructed has to be clarified. If so needed, existing laws may have to be amended to enhance the development of a broader civil society. Simultaneously, the right to abstract water needs to be clearly spelled out in future legal enactments, and the right of a CBO to own a water right needs to be laid down by act.

4. Instead of organizing new CBO, attention should be given to make use of the existing, active village organizations to take up the project responsibilities.

5. Attention has to be given to the strengthening of CBOs by providing external support to become a productive organization while linking them with existing mainstream development in order to ensure the long-term sustainability of the facilities provided.

Partner Organizations (POs)

6. The POs were leaking the skills and abilities in long term planning, technical aspects etc. and in the overall project management aspects. Thus making the PO staff development was crucial at the beginning of the project. However, with the inputs and guidance received from the project, they have now been transformed in to a set of capable rural water supply development is recognized an externally important element in project of their nature.

7. Selection of POs and project implementation contracts should be executed so that optimum returns are achieved for the project.

8. An environment should be created to ensure that the activities of POs should have a greater measure of transparency and their relationships with CBOs would be based as mutual understanding and support.

Institutional Aspects

9. Linking the CBOs with the local authorities and the General administrative set up of the area from the inception of the project facilitates managing of Operation & Maintenance of the schemes thereby, ensuring the sustainability.

10. Reducing the development phase with a view to address the future challenges with regard to consolidation issues.

11. The importance of the involvement of the local private sector providing an opportunity to the communities to have easy access to technical assistance and follow-up in their O&M issues.

12. CWSSP has proved beyond doubt that the participatory approach has been extremely successful in the community water supply and sanitation development in Sri Lanka. As a result, the donor agencies are quite satisfied with the results achieved and are ready to found more & more such projects, for example, the ADB has finalized an agreement with the national water supply & Drainage Board, Sri Lanka to implement a community Water supply and sanitation projects on the same principles in 6 more districts in Sri Lanka.

13. The need to disseminate information as best practices adopted in cwssp would be extremely useful to the WSS section.

Ministry of Housing and Urban Development

Project Brief — March 31, 1998

Name: **Community Water Supply & Sanitation Project (CWSSP)**

Objective: Improve the physical living conditions of the rural population in the districts by supporting improved and sustainable water supply and sanitation facilities with special emphasis on hygiene education and environmental sanitation.

DURATION and SOURCES of FUNDING

duration:	1993 - 1998	
funding:	Government of Sri Lanka	US$ 6.4 million
	Beneficiary contribution	US$ 9.4 million
	World Bank (IDA)	US$ 23.7 million
	Total	US$ 39.5 million

IMPLEMENTING AGENCY and major partners

implementing agency:	Ministry of Housing and Urban Development
major partners:	gov't: DDC, DS, MoE, MoH
	ngo's: 88 partners, among whom SANASA, Arthachariya Foundation, Sarvodaya, PSs, MPCSs at district level
	others: NWSDB and Community Based Organizations
project districts:	Matara, Ratnapura and Badulla.

MAIN ACTIVITIES/OUTPUTS

The CWSS Program Unit located within the Ministry of Housing and Urban Development coordinates the project. The Regional Directorates in Badulla, Matara and Ratnapura, execute the CWSSP and support Partner Organizations and Community Based Organizations in implementing projects.
CWSSP consists of the **Community Water Supply & Sanitation sub-component, the School Water Supply & Sanitation sub-component and the Small Town Water Supply & Sanitation sub-component.**

CWSSP supports improvements in water supply and sanitation as follows:
Rural Water Supply 850 - 1000 schemes serving 600'000 population
Sanitation 50'000 latrines
School Water Supply and Sanitation for around 1000 schools
Small Town Water Supply 17 schemes serving over 50'000 population
Hygiene Education is an important element in support of the above.

To facilitate the community initiated approach, CWSSP supports training to Partner Organizations and Community Based Organizations. Consolidation of project achievements through strengthening of CBOs and through proper O&M arrangements is further an essential element of the strategy for sustainability. In view of present and future needs, more general capacity building of partner organizations is also undertaken.

Monitoring, evaluation, research and documentation are a regular task of CWSSP aimed at ensuring learning from project experiences and dissemination of the lessons learned.

CWSSP
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IMPLEMENTATION STATUS as of March 31, 1998

Village water supply schemes started no. of people reached	 976 782,540	 schemes completed beneficiary population	 360 326,670
CBOs registered	973	Partner Organizations	85
Sanitation		latrines constructed	42'941
School water supply and sanitation schemes completed			139
Small town water supply schemes		completed under construction	4 8

CWSSP is an innovative project that aims to establish an alternative system of water supply and sanitation delivery in rural Sri Lanka, based on the needs and aspirations of the people, through community initiated projects, supported by a variety of local governmental, quasi governmental, non-governmental and private agencies. The contribution of CWSSP would be to show that people can themselves sustainably improve water supply and sanitation conditions in rural areas, assisted by knowledgeable local partners. Acceptation of this project approach when extrapolated across the country would mean a substantially faster rate of acces to adequate WS&S services for rural communities, with a higher level of service at a lower cost for both the beneficiaries as well as the government.

In the process CWSSP engages itself in training the CBOs and POs for direct tasks in facility development, and provides government and sector development partners with a rural water supply policy, and a development approach and project delivery mechanism for rural water supply and sanitation.

EXPERTISE DEVELOPED

Community Development:	mobilization techniques village self assessment methods participatory monitoring techniques
Technology:	appropriate technology (ferrocement construction, rain water harvesting, rope pump, water ram) technical standardization and type plans
Management:	project procedures reporting, monitoring and evaluation
Training:	participatory training techniques modular packages for community development and technical training for project staff and partner organisations caretaker training
Hygiene Education:	participatory delivery methods behavioral change for hygiene

CHALLENGES

* CBO functioning during consolidation phase
* Water rights issues
* PO strengthening for enhanced performance
* Legal ownership and transfer of facilities constructed
* Effective Hygiene Education practices at village and school level

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IMPLEMENTING DEMAND RESPONSIVE APPROACHES

Experiences from Indonesia

Herman Haeruman
BAPPENAS

Indonesia at a glance

Large Variation of Villages and Village communities:

Population (1997):	200 million
Rural population (1995):	60%
Number of villages (1997):	64,000
GDP per capita (1997):	US$ 983
Human Development Index (1997):	64.1
Estimated rural water coverage (1993):	52%
Estimated rural sanitation coverage (1993):	39%
Public investment in RWSS (1990-94):	US$ 235 million

How government knows community demand on water and sanitations ???

Policy framework for rural development

- **Village community** organized around a Lembaga Ketahanan Masyarakat Desa *(Village Community Resiliency Council)*
- **LKMD** consists of village chief (elected) and informal village leaders and several active divisions, such as village environment, water resources, village development planning, women's groups.

Policy framework for rural development

- **Objectives of rural development:**
  - *improve resiliency of village community*
  - develop and maintain capacity of village community to improve their welfare
  - reduce poverty, provide access to resources and develop modern villages to improve urban-rural linkages for the benefit of rural

Policy framework for rural development

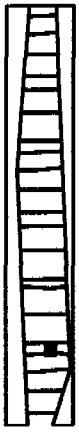
- **Strategic objectives:**
  - empowering rural community and community organizations
- **Priority activities:**
  - rural poor
  - basic village infrastructure
  - health and basic education
  - village productive systems
  - access to markets, capital, technology
  - community organization.

Policy to implement rural water and sanitation: demand responsive approaches

- **Decentralization of decision making to rural community organization (LKMD)**
  - Equip LKMDs with capacity to manage RWSS projects
  - Provide technical and community development advisor (i.e. NGOs)
  - Assist LKMD in implementation of projects as owner, with capital formation and accumulation, training, technological innovation, modern administration, and communication with bureaucracy.

Government-assisted village program, related to water and sanitation

- Health services
- Basic education
- Re-greening program
- Agricultural extension program
- Poverty alleviation program



Village community role in sustaining water and sanitation services

Recognize water as economic as well as social commodity, and its linkages with other economic infrastructures in the villages

Community organization in managing water and sanitation

Innovative RWSS project:

VIP (Village Infrastructure Project)

- Multi-sectoral approach with LKMD as owner/operator of the project
- Assisted by technical advisor, government assistance of Rp 120 million (US$ 20,000) per village provided to LKMD through banking system.
- Provided for a cluster of villages (combining poor and potential villages).
- Capital accumulation in village is encouraged to to improve village economy.

Innovative RWSS project:

WSSLIC (Water Supply and Sanitation for Low Income Communities)

- Community participation in cash to improve water supply and sanitation.
- Sectoral approach with government assistance delivered by Health Sectoral Department.

WSSLIC and VIP: key findings

- Household and community level water managers and collectors (who are most often women), should be key actors in the planning and decision-making process for community water supply
- Flexibility and pragmatism is needed when developing local water management arrangements in order to capitalize on traditional roles and responsibilities
- It is easier to ensure equity and accountability with piped water supply systems than it is with dug wells

WSSLIC and VIP: key findings

- Ownership and responsibility are not always the outcome of community contributions in cash or kind; financial responsibility needs to be linked to control over decision-making and payments
- Cost-effectiveness and ownership can be increased by emphasizing accountability and financial transparency
- Empowerment of water users and collectors by giving them voice in decision-making, and the knowledge required to make informed choices, leads to more effective, sustainable water systems.

The future model at hand : kecamatan development program

- We are learning through experience what works, what doesn't : *broader input in infrastructure and village economic development activities and opportunities*
- The decisions we take on the basis of this learning, are going to shape the futures of our beneficiary communities : empowered community organization for infrastructure and social-economic management, and linkage to outside economic system
- So that more and more needy people will be able to avail of sustainable water and sanitation services : multisectoral aproached decided by community organization, and decentralization of decision and government technical services as demanded by community