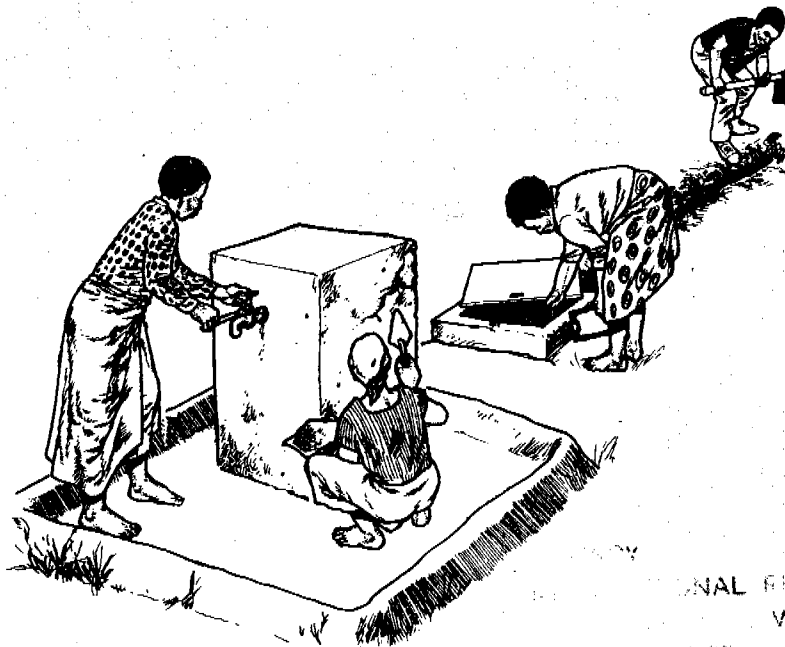




REPUBLIC OF ZAMBIA

PIPED SUPPLIES FOR SMALL COMMUNITIES
(PSSC) PROJECT
1988 - 1992



INTERNATIONAL REFERENCE CENTRE
WATER SUPPLY AND
SANITATION (IRC)

FINAL REPORT

- DEPARTMENT OF WATER AFFAIRS
MINISTRY OF ENERGY AND WATER DEVELOPMENT
- MINISTRY OF HEALTH
- DEPARTMENT OF COMMUNITY DEVELOPMENT
MINISTRY OF LABOUR AND SOCIAL SERVICES

The project was supported by the IRC International Water and Sanitation Centre, The Hague, The Netherlands

The project was financed by the Netherlands Ministry of Development Cooperation.

Lusaka, July 1993

***Piped Supplies for Small Communities
(PSSC) Project
1988 - 1992***

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Preface

Within the framework of the national water supply and sanitation programme of Zambia there is need for further improved strategies and method for the planning, implementation management of piped water supplies and appropriate sanitation for small communities in rural and urban fringe areas. In response to this need Zambia has participated (1983 - 1986) in a multi-country demonstration project on Public Stand Point Water Supplies (PSWS) supported by the IRC International Water and Sanitation based in the Netherlands. The project was financed by the Netherlands Ministry of Development Cooperation. One of the major objectives of the PSWS project was to encourage community involvement and participation through development of appropriate methods for the planning systems by the communities themselves. The PSWS project was extended from 1988-1992 into a project with broader scope on piped water supplies for small communities (PSSC). The implementation of the PSSC Project was being coordinated by Department of Water Affairs with collaboration of the Environmental Health Section of Ministry of Health, and the Social Development Department of Ministry of Community Development and Social Services.

The benefits derived from this project include the following:

- proven approach for piped water supply and sanitation projects for wider application, based on field-tested methods and using effective community participation especially women in local planning, organisation, implementation, operation, maintenance and local management, financing, evaluation and hygiene improvements;
- a number of publications including slide sets, pamphlets, guidelines and manuals for community-based piped water supply and sanitation;
- a series of workshops and meetings at local, district and national levels;
- training methods, training materials, a number of training courses and trained manpower;
- through practical collaboration in project activities, improved liaison at all levels between the Department of Water Affairs, the Ministry of Health, the Department of Social Development and other agencies.

The Government of the Republic of Zambia and beneficiaries sincerely like to thank the Netherlands Government through IRC for supporting the programme.

1. Introduction

The basic needs of water supply and sanitation have special importance as factors of economic and social development. The increasing population has had a great bearing on how best to provide adequate supply of safe drinking water and improved sanitation to millions of people in the rural and urban areas of Zambia.

Since time immemorial, the provision of water has not been a one organisation's responsibility. Instead, various government and non-governmental organisations, statutory bodies, the District Councils and indeed individuals in the communities had a share in the fragmented efforts to provide water in the rural villages, urban and the peri-urban settlements. Because of fragmentation of efforts, not all the water that is available is safe for drinking resulting in health hazards occurring almost at any time of the year. Many people have died of water-borne diseases and sanitation-related diseases.

The declaration of the International Drinking Water Supply and Sanitation Decade (IDWSSD) in 1981 - 1990 was necessary and appropriate for many developing countries including Zambia. The main Zambian IDWSSD objectives were to provide all the people in both urban and rural areas with a minimum quantity of safe drinking water and improving sanitation facilities thereby raising their standard of living. The problem of lack of water and proper sanitary facilities in Zambia within their traditional cultural set ups and environments presents big challenges to development agents of change.

Water is life yet conditions prevailing in Zambia with few sources of surface water makes it so difficult for communities to avail themselves safe drinking water. Hence for many Zambians the only choice is to have a reasonable water supply of ground sources in particular villages or communities. The economic performance of Zambia has continued to decline due to the devaluation of the Kwacha and the rocketing inflation which have pushed most Zambian communities into abject poverty; people's living standards have also gone down and these two negative aspects contribute to misery in the country.

In general developmental terms, communities in Zambia have accepted the fact that for their survival, communal efforts on self-help basis is the best way and perhaps the only opportunity to provide themselves with some social and economic infrastructures to enhance local and national development. Water and sanitation facilities are among the various infrastructures undertaken on self-help basis.

The Public Standpost Water Supply (PSWS) Project

During the IDWSSD period (1981-1990) Zambia experienced a favourable response from various donor agencies who offered to contribute to the decade activities in particular areas of the country. But as is the case with most donors, they used their own approaches to carry out their activities with little or no involvement of the communities.

Therefore, within the framework of the National Water Supply and Sanitation Programme of Zambia, there was need for improved approaches, strategies and methods of planning, implementing and management of piped water supplies and of course appropriate sanitation for rural and urban communities. Fortunately, Zambia made a proposal to the IRC to start a water and sanitation demonstration project called the "Public Standpost Water Supply" which started in 1983 and ended in 1987. Its (PSWS) main objectives were:

- (a) To set up and develop a number of demonstration schemes on application of Public Standposts in community water supply;
- (b) To conduct a series of studies, prepare and produce guidelines on particular organisations, economic, technological and socio-economic aspects of the public standpost water supply systems;
- (c) To contribute to the international exchange of information and experiences on various aspects of the Public Standpost Water Supply project and
- (d) To promote the application on a larger scale of the strategies, methods, and techniques developed in the project.

The demonstration schemes in the PSWS project were established at Chibombo and Mwachisompola in Kabwe Rural and Chongwe in Lusaka Rural District whose results after the interim and final evaluations were very encouraging. Indeed in the context of Zambia, the PSWS had a lot of lessons to be learned from particularly the overwhelming response from beneficiaries and their total involvement in the project. Community participation stood out prominently as one of the major components in the project. As indicated above, no matter how small the achievement might have been in terms of physical structures of standposts etc., the most important achievement in the PSWS project was the human element.

The change of people's attitudes to avail themselves piped water, the decision making and participation at all the stages clearly indicated that given another chance, the same communities would willingly participate in other equally important and beneficial communal self-help projects in their localities using experiences and skills learned from the PSWS project.

The Piped Supplies for Small Communities (PSSC) Project

The Piped Supplies for Small Communities (PSSC) Project was a successor to the PSWS Project and only started officially in January 1988 because the project proposal and other preparations for the PSSC project were carried out in 1987. Basically, the activities in the PSSC project were similar in nature to those of the PSWS project, its predecessor. There were a few differences in scope and planned coverage in the two projects. It should be mentioned here that both the PSWS and the PSSC projects were multi-country programmes. PSWS was carried out in Malawi, Zambia, Sri-Lanka and Indonesia and PSSC in Malawi and Zambia.

Obviously, having generated a lot of interest, having acquired a lot of valuable experiences and information from the PSWS project it became inevitable for the PSSC project to build on where the PSWS project ended. It was therefore, initially felt that instead of restricting to nearby areas or sites, the PSSC activities should be started in five (5) provinces i.e. Southern, Central, Lusaka, Northern and Western provinces. This plan was later on altered to reduce the number of sites where the project would be established and finally the Project Management Committee sanctioned the project team to start with Soloborn in Kafue. The objective of the Piped Supplies for Small Communities (PSSC) Project were essentially the same as those of the Public Standpost Water Supplies (PSWS) Project with slight differences.



2. *Objectives and Planning*

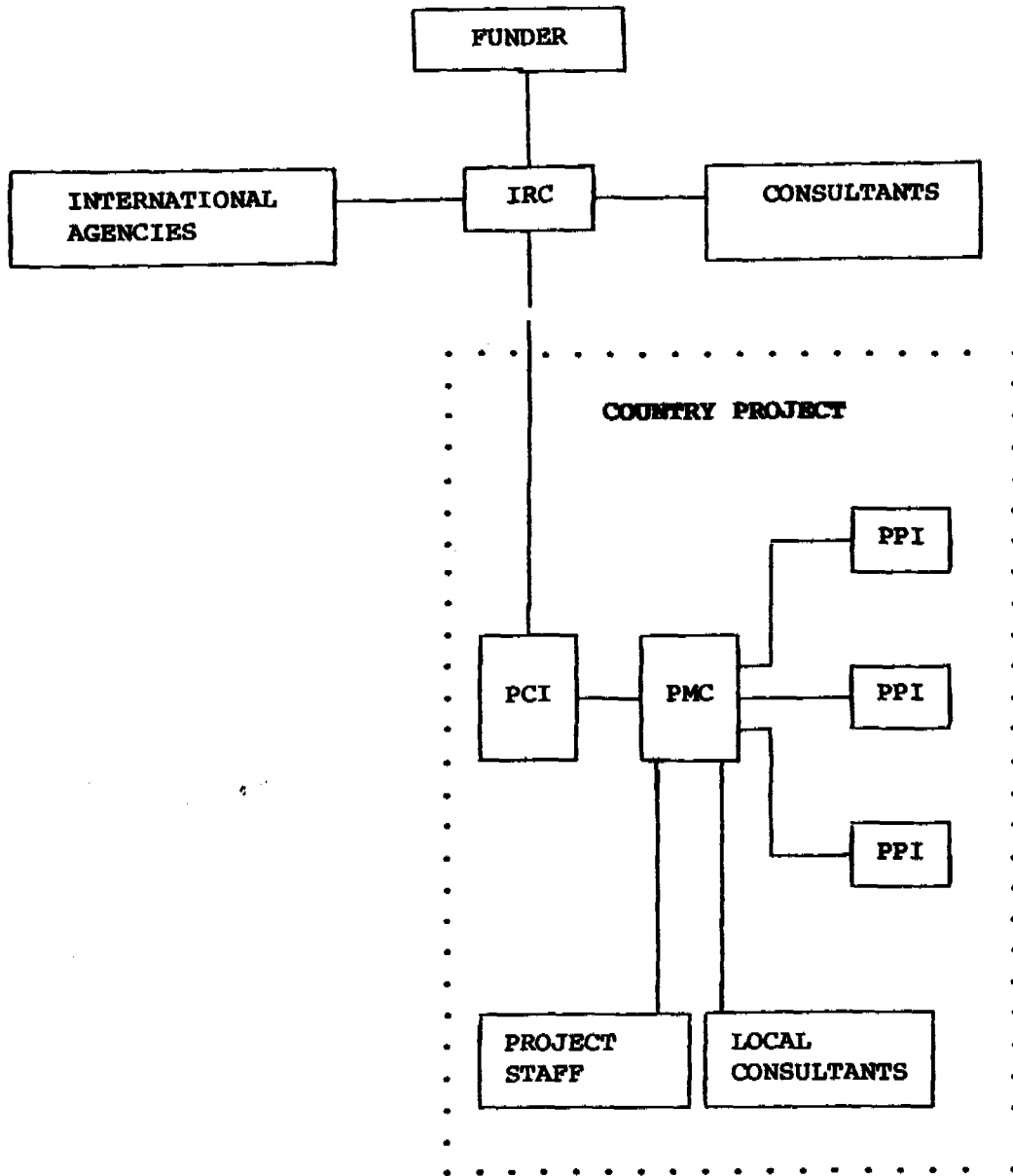
The objectives of the PSSC Zambia Project were as follows:

- (a) develop several integrated information development and demonstration schemes on Piped Supplies for Small Communities;
- (b) To develop and demonstrate more efficient and appropriate ways of planning implementing and managing piped water supply systems with appropriate sanitation for use in rural and peri-urban areas;
- (c) To promote the sharing and applications of such knowledge experiences and understanding at National and/or Sector Policy level as well as in other water and sanitation projects in Zambia;
- (d) To continue to strengthen and monitor the PSWS activities, and
- (e) To investigate wide types and mixes of piped water supplies and sanitation facilities.

Institutional Framework

During both periods of the PSWS and PSSC projects it was arranged and decided upon that the projects be carried out jointly by the Department of Water Affairs as co-ordinating organisation whilst the Department of Community Development and the Ministry of Health as participating institutions offering professional services to the projects. The Ministry of Local Government and the university of Zambia provide administrative and technical support to the projects.

To facilitate this joint effort a Project Management Committee was formed - chaired by the Director of Water Affairs. Members were drawn from the participating institution at a higher level. Below the Project Management Committee was the project team whose members also came from the same institutions. The project team had a Manager to oversee the daily tasks being carried out and an Advisor for advisory services. A team of extension workers was trained and formed a formidable task force at the project site where their efforts were supplemented by water committees and the tap committees. This organisational structure was to a large extent responsible for activities which are hereunder presented.



Legend:

PCI = Project Coordinating Institution

PMC = Project Management Committee

PPI = Project Participating Institutions

Institutional framework of PSSC-Zambia

3. Organisation

3.1 General Description

The agreement signed for Zambia's participation in the piped supplies for small communities (PSSC) Project clearly specified the Department of Water Affairs of the Ministry of Energy and Water Development as the arrangement was felt appropriate since the department is responsible for all water activities at the national level.

Major responsibilities for the PCI included coordination of intersectoral collaboration. Coordinating, planning and implementation of the project, preparation of work plans, programmes, budgets, accounts for approval by the Project Management Committee (PMC) and the IRC. To ensure the integration of developed approaches and to provide general policy guidelines at national level, a Project Management Committee (PMC) was established at the beginning of the project period. The PMC consisted of representatives of the Ministry of Energy and Water Development (Department of Water Affairs), the Ministry of Health and the Ministry of Labour and Social Services (Department of Community Development). Other PMC members were the University of Zambia, Faculty of Engineering and Department of Adult Education, Ministry of Local Government, and Women's league. A list of PMC members is attached (Appendix 1). The PMC was chaired by the Director of the Department of Water Affairs.

The two Project Participating Institutions (PPI) provided Project Support Officers to work with the Project Manager. The Project Manager and the six members formed a project team (see appendix 2 for list of Project staff). It should be noted that the new project Manager was full-time and also assumed the responsibilities as a project Engineer.

The PCI was the executive level operational unit which coordinated both the national level project activities and demonstration centre level activities. The members of the PMC were kept informed on the project progress through regular reports, meetings and also through district discussions with members of the Project Team.

Coordination of all project activities was done by the Project Manager appointed by the PMC. Responsibilities for the Project Manager included liaison with other ministries, coordination, implementation of the project, and reporting to relevant authorities.

An engineer was appointed to the PSSC Project, mostly as an advisor on technical issues. Unfortunately he died and was replaced. The project was also privileged to have an advisor from the PPI (Department of Community Development), and to have a local IRC Consultant.

PMC meetings were held once every quarter. The attendance to these meetings was excellent at the start of the project meetings and later as the project advanced the attendance of members to meetings steadily dropped. The project team held meetings at least every Friday to review the activities of the week and subsequently plan activities for the forthcoming week.

There were also limited inputs into the project by the PPIs; quite contrary to the project goal of collaboration. One of the reasons was that the Project team members were part-time hence they were occupied with their prime duties as spelt out by their respective ministries. Another reason was that the project agreement had no provision for PPIs to utilise part of the project funds which were controlled by the PCI. As a result it was difficult for the PPIs to carry out their project activities within to demonstration centres as funds were not directly available to them.

At the demonstration centre three extension workers, one from each frontline ministries, were engaged to coordinate centre level activities. Responsibilities for extension workers included consultations with local authorities and sectoral agency officials dialogue with communities and monitoring standpost activities. They also acted as a link between the community and the project team staff.

3.2 Cooperation between ministries, departments and government institutions in the project

The formation of the Project Management Committee PMC at the national level made the cooperation between Ministries of Health, Energy and Water Development and Department of Community Development quite satisfactory. Staff in these ministries, in particular the project team and extension workers, shared knowledge and skills in the project management. Regular meetings seminars/workshops were conducted for all these staff and exchange of documents was also promoted during the project life time.

At times the Project Participating Institutions (PPIs) assisted the project with transport and resources for specific tasks. The Project Team members also shared their knowledge and skills with NGOs and other agencies including UNICEF, Rural Water for Health Project (RWFH) (Dutch-supported) and UNDP.

3.3 Cooperation between government levels

(National - District - Local)

The project team members supervised and worked together with the extension worker through the District Council Officials. Extension workers were a direct link between the community and the project team members, and these extension workers worked through the Water Committees.

In general the cooperation can be said to have been very good at all levels. At times it was difficult to work with extension workers as they constantly demanded allowances for doing project work.



3.4 Supporting roles

Through the PMC the project team members enjoyed support through the technical input and guidance on the project implementation. The District Council also provided their staff (extension workers) who have been working together with the project team members. At times the District Council (Kafue) helped with transport to transfer construction materials to the demonstration centre.

The IRC staff provided tremendous support in terms of coordinating the activities of the PSSC project in Zambia. Several advisory visits were undertaken by the IRC staff for either re-planning for the project, resources persons at workshops, and conducting visits to the project sites where technical, organizational, managerial suggestions were given.

The Rural Water for Health project (RWFH: Dutch supported project withing Department of WA) also sent its manager to attend a workshop on participatory training methodologies together with the PSSC project members in Malawi.

3.5 Other supporting provisions available for the project

Transport

The project owned a pick-up which proved inadequate for the project activities. This vehicle was previously used for the PSWS Project. A Toyota Land Cruiser was purchased for the PSSC Project. Although this vehicle was new it was not ideal for project activities in terms of transporting project supplies, such as cement, blocks pipes etc. This vehicle was controlled by the project manager.

At times, the PPIs in particular the Department of Community Development provided a lorry to ferry building materials to the demonstration site.

Office Accommodation

Appropriate office accommodation and secretarial support was provided by the Project Coordinating Institution, the Department of Water Affairs. Use was made of the project computer for secretarial work.

The project was able to utilise the Department of Water Affairs administrative and accounting facilities. Financial and other contributions to the project from Government budgets were controlled and accounted for by the Department of Water Affairs. The budget, work plans and programmes, were reviewed and updated at regular intervals.

Technical Support

This support was sought from the PMC members and from the local consultant. The IRC staff also supplied the team with technical inputs whenever the team members requested for it, and during their advisory visits to the country.

Advice

The PSSC/IRC local consultant provided technical and organizational support. The Chief Health Inspector assisted in the appropriate designs for latrine models. The IRC staff advised the team amongst others on the need of an appropriate drainage system in Soloborn. IRC staff and consultant advised for instance on the preparation of self-evaluation tools, hygiene education materials and monitoring systems.

3.6 Financial aspects of the PSSC project

The project budget was being, prepared, reviewed and update at regular intervals in conformity with the purchasing power of the local currency, since prices kept on rising almost everyday. The mechanisms for expenditure and field visits requests, authorization, book keeping and auditing are as follows:

- (a) **Expenditure**
All expenditures made for the project were being approved by the Project Management Committee during the PMC meetings. The Director of Water Affairs was the approving authority.
- (b) **Field visit request**
All field visits requests were processed and approved by the Department of Water Affairs on the behalf of the Project Management Committee.
- (c) **Authorization**
The authorization of either expenditure or visits had to be made by the Director of the Department of Water Affairs (DWA) after the PMC had already approved the requests.
- (d) **Book keeping**
The bookkeeping was being done perfectly well by a Government employee in the Ministry's Accounts Section, who has got a broad spectrum in accountancy.
- (e) **Auditing**
Though the project did not have an auditor of its own, when Government auditors carried out the audit exercises for the Ministry, the accounts books for this project were also incorporated. This auditing is being carried out twice a year. i.e. first by the Ministerial Internal Auditors and secondly by the external Auditors. All these groups put up their reports accordingly.
- (f) **Funds transfer**
The system of a working advance, declaration and transfer of project funds from IRC has worked satisfactorily well. The financial and other contributions to the project from other sources (particularly Government of Zambia) have been forthcoming.
- (g) **Overview of expenditures**
The overview of expenditures of the PSSC Zambia project is attached (Appendix 3)

4. Project Approach

4.1 Activities and results of the project at the demonstrating schemes (Soloborn)

The following activities have been executed in the project demonstration centres, particularly at Soloborn in Kafue District. Five standposts were constructed and completed, the only works which are not complete is the drainage channel for these standposts. Two standposts need to be completed and the washing stands need to be constructed at each standpost.



Sanitation

The demonstration pit-latrine was constructed at the pre-school for use by the school pupils and also as a teaching model for the community.

Health and Hygiene

Hygiene and health education was given on prevailing health problems and particularly on water-related diseases and sanitation as a component of the project. The education methodology was in most cases based on dialogue.

Training

Training for tap committees was undertaken although very late. This was due to many logistical problems in terms of funds. Although Tap Committees were elected by the respective communities, the members did not know their specific responsibilities and the membership to these committees continued to decline due to transfers and retrenchment of workers. Re-organization of these committees is needed for sustainability purposes.

Old water supply situation
with flooded surroundings





The PSWS Demonstration Schemes

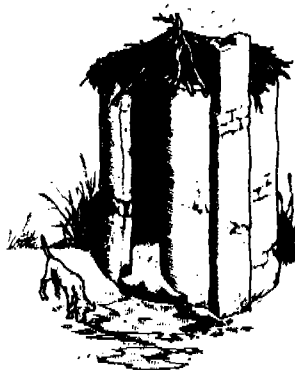
The PSSC Project continued to monitor the activities of Mwachisompola, Chibombo, and Chongwe. Staff in these areas attended a workshop where issues on community participation, health and hygiene education, and operation and maintenance of standposts were discussed.

The monitoring tools developed by the Project Team were sent to these sites. These monitoring forms were supposed to be administered every month and returned to the Project Manager. The response has been very disappointing indeed, possibly the need for such information was not understood by the extension workers.

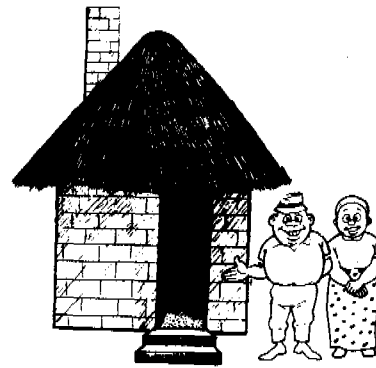
4.2 Integration of the various components of the project

The component of community participation was a prominent feature at all levels of the PSSC Project. The inclusion of the Department of Social Development in the PSSC Project was a major asset because the project got off the ground with a powerful element of community participation built in. In the activities of the Department of Social Development, the emphasis was laid on the promotion of self-help and self-reliance in order to create self-reliant rural communities, capable of taking on more responsibilities in their local development.

The Ministry of Health, Department of Water Affairs, Department of Social Development the party cadres (politicians) and District Council workers joined hands with community leaders to organize and educate communities about the PSSC Project through formal and informal meetings held in project demonstration centres. In Soloborn these meetings were also attended by existing community organizations eg. branch and ward officials including the women's club and the committee responsible for the pre-school based at the demonstration site. As pointed out already, community participation was aimed at involving communities in their own development projects and for them to appreciate and realise that the project was actually theirs and not for the Government or other organizations.



BAD LATRINE



NICE LATRINE

The communities had then elected tap committee members to manage the standposts. Actual construction of standposts was done by the artisans from the Department of Water Affairs. The community's role was to bring materials such as blocks, building sand, and clearing of the site for construction, this also included clearing of the drainage line. The tap committee had wide responsibilities including collection of revenue from consumers and remitting the money to the bank.

This collection of money-arrangement has caused a lot of problems, since the District Council also collects money on monthly basis for the water supplied to Soloborn. However, the Committees have been informed that the money the Council levies is meant to cover the costs and distribution of water to the community. They were further advised that the money collected from the households by the committee is meant for repairs for the standposts.

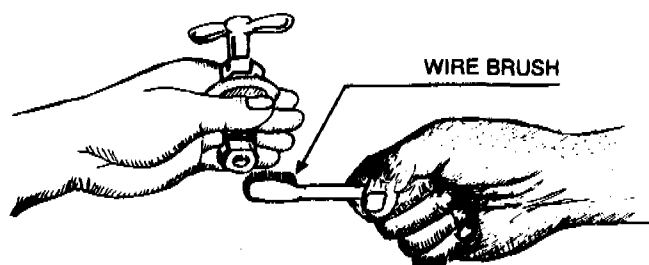


The PSSC Project therefore has made every effort to promote community participation and install a new sense of ownership and pride into the user groups. This has been achieved through information and promotional campaigns and active dialogue with communities.

Operation and Maintenance

Through tap committees which the communities themselves elected, operation of the standposts was effected. However, due to poor monitoring and lack of proper guidelines

under the PSSC Project operation of most standposts was not favourable to consumers as some members felt there was no need to pay for water until all the standposts were completed. Each household contributed to meet water charges by paying K 10/month¹ to the council. Some members of the main water committee once contributed the sum of K 50 (US\$ 0.16) to the tap fund. The project team members held a workshop for tap committee members where they stressed the need of the tap fund in view of the end of the project.



Health and Hygiene Education

The PSSC project approach stressed that maximum benefit of a good water supply cannot be fully realised unless it is complemented with improvements in hygiene practices and sanitation. Since water from the standpost has to be carried some distance to the houses, chances are there that the water may get contaminated in the course of drawing, transportation, storage or using it. The project impressed upon the communities that basic hygiene practices are essential to ensure that the water drawn from the standpost is finally consumed while it is still safe. Safe water is a basic condition to improve the community's health.

Hygiene education was undertaken informally through project staff discussing with communities at the taps, during meetings with individuals and during house to house visits.

Issues discussed with the community members and the tap committees included

- The role of women in water supply
- Water committee responsibilities
- Community participation
- Health and hygiene education
- Collection of funds
- Sanitation and latrines

4.3 Workshop and training activities

*** National Workshop on Piped Supplies for Small Communities in Zambia**

A workshop was conducted in January 1989, in Siavonga, Zambia and sponsored by IRC. The main issue of the workshop was to discuss the strategies and methods for carrying out the planning, implementation, management of piped water supply for rural areas. 32 participants from different organizations attended.

¹US\$1 = ZKwacha 310 (December 1992)

* Training workshops on guidelines and manuals development

Two training workshop on preparation of guidelines and manuals were conducted in July 1989 and November 1990 in Lusaka. 14 participants from different organizations attended. The main purpose of the workshop was to learn how to prepare manuals and guidelines. Three manuals were identified and written. The authors were asked to further review them.

The manuals are:

- Community participation
- Why a pit-latrine ?
- Operation and Maintenance of Public Standposts

Facilitation and inputs were given by two IRC consultants from the Netherlands and from the University of Zambia.

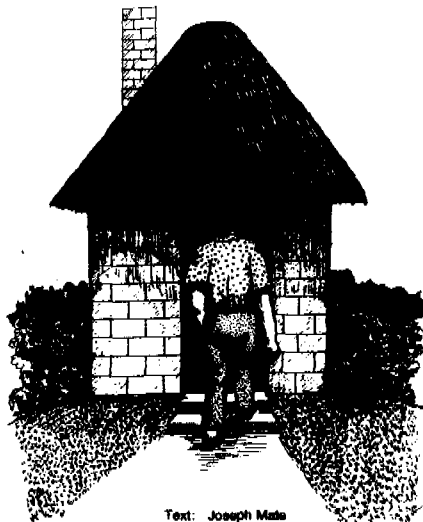
A MANUAL ON COMMUNITY PARTICIPATION



Text: Agnese Simasku
Illustrations: G.L. Lufeyo, K. de Waard and IRC

PIPED SUPPLIES FOR SMALL COMMUNITIES
(PSSC) PROJECT ZAMBIA

WHY A PIT LATRINE
A Manual for Extension Workers
and Latrine Builders



Text: Joseph Mada
Illustrations: G.L. Lufeyo and IRC

PIPED SUPPLIES FOR SMALL COMMUNITIES
(PSSC) PROJECT ZAMBIA



A MANUAL ON OPERATION AND MAINTENANCE
OF COMMUNAL STANDPOST
FOR EXTENSION WORKERS AND CARETAKERS



Text: Douglas Ng'ambi
Illustrations: G.L. Lufeyo and IRC

PIPED SUPPLIES FOR SMALL COMMUNITIES
(PSSC) PROJECT ZAMBIA

* Extension Workers Workshop

A workshop for extension workers operating from Soloborn (Kafue), Chongwe, Chibombo and Mwachisompola was conducted by the Project Team members. The role of extension workers in the PSSC Project was emphasized as being the link between the community and project team. Issues related to health, community participation, and operation and maintenance of public standposts.

On community organization the project team discussed with the extension workers the need for the formation of the water committee and tap committees for the purposes of sustaining the PSSC Project.

It should also be noted that two of the extension workers from Kafue were privileged to attend the PROWESS Workshop on participation methodologies in Malawi. Another workshop for community leaders, water and tap committees was conducted by the Project Team and extension workers at Soloborn.

* Training workshop on participatory methodologies in water supply and sanitation projects

This training took place in 1991 in Malawi and was organized by the Water Department in Malawi with support from IRC and UNDP/PROWESS. The main objective was to introduce the participants to participatory training techniques (incl. SARAR) and to practise with some techniques. From the PSSC project in Zambia, the project team, the advisor and two extension workers participated. Furthermore, an artist and the principal of the Social Development Staff Training College (Monze) participated.

* District Officers's workshop - Kafue

A one day workshop for the above officers belonging to the participating Ministries was organised by the Project Team. The purpose of workshop was:

- to orientate the District Officers and the extension workers about the activities and expected outcomes of the PSSC Project;
- to discuss sustainability of the PSSC Project in the absence of the donor;
- to determine their roles and involvement in the PSSC Project.

Ten participants attended the workshop. Three Ministries were directly involved, i.e. Energy and Water Development, Health, and Department of Community Development.



* Training workshop on self-evaluation methodology

In preparation of the participatory self-evaluation exercise planned for November 1991 a Training Workshop was organized by the Zambian PSSC project, and assisted and facilitated by IRC. The workshop took place in August 1991 and was also attended by members of the PSSC Malawi project team. The workshop covered self-evaluation methodologies, participatory techniques in evaluation, tools, evaluation workplan, questionnaires and observation schedules, and the field testing and practising of tools and methods.

The Project members have benefited and learnt a lot through these trainings, workshops and seminars, and have been able to impart knowledge to other interested parties.

4.4 Self-evaluation exercise

The Project Team was privileged to conduct a self-evaluation exercise in November, 1991 in Soloborn - Kafue. The objectives were:

- to find out to what extent community participation has been developed and supported within the framework of the project;
- to assess the organization, the activities and the results of the sanitation programme introduced together with improved water supply in the area;
- to assess the relevance of the training programmes for extension workers;
- to assess the institutional organization activities and the extent of integration of the PSSC project;
- to use the evaluation results to improve planning and execution of the integrated piped water supply project.

Data tabulation, interpretation and conclusions were done by the Zambia Project Team together with the IRC Programme Manager and the Project Manager from Malawi. The PMC Members were given the report.

4.5 Guidelines for Extension Workers

In order to assist the extension workers with their work planning and implementation, terms of reference for each participating institution were written in order to guide the extension workers in the Project area.

4.6 Monitoring System

Monitoring forms were developed by the Project Team members for all project aspects, i.e. on water supply, latrines, waste disposal, hygiene education, and community participation. These forms were expected to be filled out every month by the Tap Committees and the Extension workers and submitted to the Project Manager. The forms allowed for participation of the users in monitoring of their improved systems.

4.7 Reporting

All project documents and reports were sent to IRC, through the PMC members. In many cases reporting by the Project Team members was through meetings and written documents.

Progress reports were critically studied and analysed by the PMC members, who gave advice where it deemed necessary and later approved. Progress reports were also sent to IRC.

5. *Wider dissemination of knowledge*

Ideas and experiences gained in the PSSC Project have effectively been shared with many others concerned with water supply programmes. This has been accomplished through project papers describing the methodology and results of the project. Regular reports on the progress of the projects were also prepared and circulated locally to project participants through papers presented at local seminars organized by project staff and also seminars organised by other institutions.

Guideline manuals developed under the PSSC project have also been used extensively to disseminate project knowledge especially within the government ministries dealing with Water, Health and Social Development. A number of these manuals distributed during training workshops are now in all project sites, both PSSC and PSWS. Some of the published manuals have been distributed to the external supporting agencies, such as UNICEF, WHO and Rural Water for Health Project (RWFH) in DWA (Dutch-financed). (A full list of project publications is attached (Appendix 5)).

The current strategy in Zambia is to ensure that the majority of the personnel who are concerned with water supply should be conversant with approaches for effective implementation, operation and maintenance of small community water supply as developed under the PSSC Project. In order to achieve this, the PSSC Project guidelines and instructional materials are incorporated into training syllabuses and discussion topics for workshops and seminars for water personnel. The project Manager and Project staff are often invited as resource persons or lecturers to such seminars.

The developed manuals by the PSSC Project are expected to be printed for distribution to other interested parties and these will be translated into Zambian languages for easy use by the committees.

6. *Problems and constraints*

The following were some of the problems experienced by the project.

The Project Co-ordinating Institution (PCI), DWA, had exclusive access to funds and also provided both the Chairman of the Project Management committee and the Project Manager. DWA perhaps played an excessively leading role while the project participating institutions tended to remain in the background of project activities. In fact the two main PPIs suffered as they had no access to funds.

The staff from the participating ministries were part-time involved and as such it was not easy to plan and execute the project work all times since they had to do their ministries work which was a priority activity.

Due to the low incomes of many people and the continuous devaluation of the kwacha, the communities failed to contribute money towards major cost of improvement and maintenance of the standposts, although they were able to participate in physical work.

Lack of securing building and other materials in time seriously delayed implementation of project activities.

7 *Follow-up Activities*

7.1 **Follow-up activities directly related to the project activities**

- There is need for the project team to assist in the completion of the remaining standposts 6 and 7 and a demonstration pit-latrine and also to put up a large distributing water pipe from Bata Company in order to increase water to Soloborn compound. More washing stands for cloths should be constructed.
- Sanitation aspects of the project particularly the demonstration pit latrine built at school need further attention. There is need to construct another pit latrine at the market as planned, this will serve as a teaching model to the community.
- For continuity purposes the developed monitoring tools by the project team should be used in all project sites.
- Hygiene education programme should be followed by both the project team members and the extension workers.
- Follow-up workshops for both Tap Committee members and the caretakers for the standposts are to be planned.
- Printing of the developed manuals locally especially after translation into local languages is needed.
- Project Team members should continue to educate communities on the need of cost recovery system.

7.2 **Utilization of the PSSC Project Approach in other programmes or projects**

The community-based approach developed by the project team can be fully utilized in other projects, dealing with community work. The positive experiences of these three Ministries of Energy and Water Development, Health and Community Development Staff, District Council officials and the extension workers including the influential leaders both politicians and church leaders can be used to start a similar project.

The aims of these approaches are to allow the villagers to rehabilitate operate and maintain their water and sanitation systems. Also the people will be responsible for managing their own finances.



8. *Conclusions*

The PSSC Project in Zambia can be considered successful in the following ways:

- A number of Ministries, departments and other institutions were brought together in the Project Management Committee and the Project Team to work together and share experiences and expertise.
- Dissemination of knowledge and experiences have been effected through various methods (e.g. networking, publications, seminars and workshops). The approach and results are gradually being adopted for wide application.
- The approach of the Project Team towards the promotion of community participation has been quite successful.
- Health and hygiene education and sanitation have been important components of the project. The team was able to develop a hygiene education programme.

9. *Recommendations*

- To continue monitoring and developing the existing schemes according to the needs of the population, provided they can be sustained from a financial and maintenance point of view.
- The project funds or budget lines should clearly cater for participating institutions also so that they can execute their responsibilities as set in the objectives.
- To disseminate the project experiences and approach to a wide audience by publication and distribution of manuals and guidelines.
- Encourage more institutions and external support agencies to participate in the project in order to share experience and expertise.

LIST OF APPENDICES

- 1 List of Projects Management Committee Members
2. List of Project Staff
3. Overview Expenditures 1988 - 1993
4. Monitoring System - Water Supply Checklist
5. List of PSSC Zambia Project Output

Appendix 1

List of Project Management Committee Members

LIST OF PROJECT MANAGEMENT COMMITTEE MEMBERS

| | |
|--------------------|--|
| Mr. L.L. Mbumwae | Chairman Director of Water Affairs |
| Mr. K.L. Kamalata | Project Advisor Department of Community Development |
| Mr. S.T. Chisanga | Chief Health Inspector Ministry of Health |
| Mr. P.C. Mpande | Deputy Chief Health Inspector Ministry of Health |
| Mr. O.M. Chanda | Project Manager (Engineer) Department of Water Affairs |
| Mr. Tambatamba | Technologist TDAU, School of Civil Engineering, UNZA |
| Mr. Phiri | Civil Engineer School of Civil Engineering, UNZA |
| Dr. I.L. Nyumbu | Project Consultant for IRC |
| Mr. R.C. Zimba | Project Officer PMO, Lusaka Province |
| Mr. J. Mate | Project Officer Chairman College of Health Sciences, Lusaka |
| Mrs. I.I. Kabombo | Project Officer Department of Community Development |
| Mrs. I.A. Simasiku | Project Officer Department of Community Development |
| Dr. E. Mumba | Head, Department of Continuing Adult Education, NZA |
| Mr. E.M. Konsolo | Accountant Department of Water Affairs. |

Appendix 2

List of Project Staff

LIST OF PROJECT STAFF

| | |
|--------------------------|--|
| Mr. O.M. Chanda | Project Manager Department of Water Affairs |
| Mr. D. N'gambi (late) | Project Engineer Department of Water Affairs |
| Mr. J. Mate | Project Officer Ministry of Health |
| Mr. R.C. Zimba | Project Officer Ministry of Health |
| Mrs I.I. Kabombo | Project Officer Department of Community Development |
| Mrs I.A. Simasiku | Project Officer Department of Community Development |
| Mr. K.L. Kamalata | Project Advisor Department of Community Development |
| Dr. I.L. Nyumbu | PSSC Project Consultant |

ADDRESSES

Ministry of Energy and Water Development
Department of Water Affairs
Mulungushi House Independence Ave./Nationalist Road
P.O. Box 50288
Ridgeway
LUSAKA
ZAMBIA.

Ministry of Health
Woodgate House, Cairo Road
P.O. Box 3005
LUSAKA
ZAMBIA.

Ministry of Labour & Social Services
Department of Community Development
Lechwe House.
Freedom Way
P.O. Box 31958
LUSAKA
ZAMBIA

Appendix 3

Overview Expenditures 1988 - 1993

PSSC Zambia:

OVERVIEW EXPENDITURES 1988-1993

| ITEM/ACTIVITY | Budget | EXPENDITURE | IN PERIOD | DIRECT IRC | TOTAL EXPD. | BALANCE US\$ |
|--------------------------------------|--------------|-------------|-----------|--------------|--------------|--------------|
| | balance US\$ | in Zamb. Kw | in US\$ | US\$ /period | US\$ /period | |
| 1 Transport (vehicle, spares & fuel) | 51,800 | 348,867 | 13,769 | 39,294 | 53,063 | (1,263) |
| 2 Local demonstration | 65,400 | 1,467,507 | 20,201 | 262 | 20,463 | 44,937 |
| 3 Project Equipment | 2,200 | 37,742 | 1,007 | 1,336 | 2,343 | (143) |
| 4 National Workshop | 28,400 | 0 | 0 | 18,518 | 18,518 | 9,882 |
| 5 Local Workshop | 3,900 | 157,080 | 9,547 | 1,620 | 11,167 | (7,267) |
| 6 Trainig courses | 4,500 | 145,831 | 2,867 | 2,448 | 5,315 | (815) |
| 7 Guidelines/supporting Mtls | 15,200 | 187,126 | 4,360 | 10,558 | 14,918 | 282 |
| 8 Special Studies | 15,300 | 0 | 0 | 0 | 0 | 15,300 |
| 9 Evaluation | 4,800 | 128,883 | 1,680 | 1,070 | 2,750 | 2,050 |
| 10 Travel subsistence for PT | 26,900 | 373,920 | 10,322 | 10,698 | 21,020 | 5,880 |
| 11 Establishment of Ref Material | 2,000 | 15,210 | 189 | 682 | 871 | 1,129 |
| 12 PMC Honorarium | 2,900 | 164,144 | 3,380 | 0 | 3,380 | (480) |
| 13 Project Team supplement | 8,900 | 13,392 | 562 | 5,687 | 6,249 | 2,651 |
| 14 Inter country Activities PT | 14,800 | 43,486 | 2,113 | 13,199 | 15,312 | (512) |
| 15 Contigencies | 9,000 | 3,582 | 95 | 10,516 | 10,611 | (1,611) |
| | 256,000 | 3,086,770 | 70,092 | 115,888 | 185,980 | 70,020 |

Appendix 4

Monitoring System - Water Supply Checklist

PSSC PROJECT ZAMBIA

MONITORING SYSTEM: WATER SUPPLY CHECKLIST

WS 1

Name or Area: Date:

Standpost No.: No. of Households:

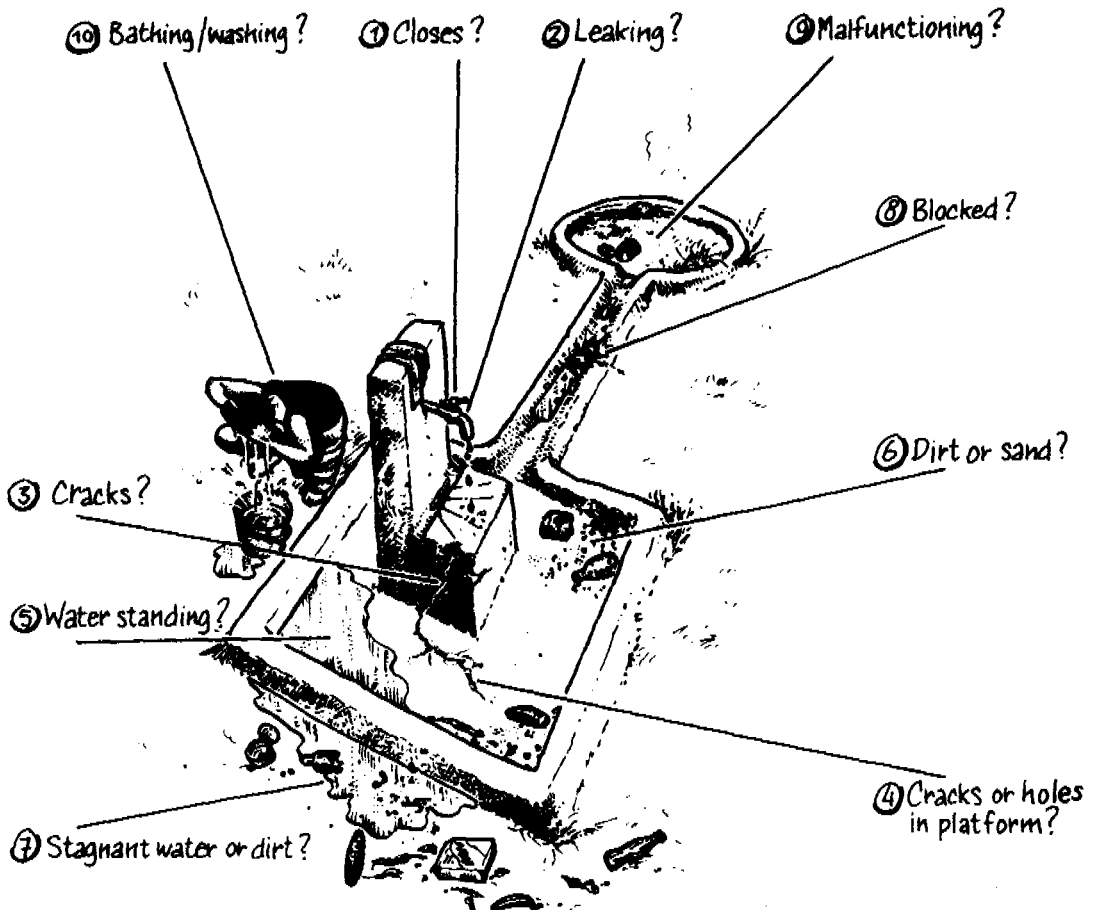
Name of field Officer:

N.B.: This checklist shall be administered every two weeks by a field worker and returned to the Project Engineer

A. OBSERVATIONS

- 1. Is it impossible to close the tap? y/n
- 2. Is the tap leaking? y/n
- 3. Are there any cracks on the standpost? y/n
- 4. Are there any cracks or holes on the apron? y/n
- 5. Is water collecting on the apron? y/n
- 6. Is there dirt or sand accumulating on the apron? y/n
- 7. Is there any stagnant water or dirt around the apron? y/n
- 8. Is the drainage channel blocked? y/n
- 9. Is the soakaway system malfunctioning? y/n
- 10. Are there people bathing/washing near or on the standpost? y/n
- 11. Is the number of people seen at the platform at the time of monitoring more than eight? y/n

TOTAL SCORE NO



B. QUESTIONS

- 1. Is the caretaker capable to make adjustments and do minor repairs on the tap? y/n
- 2. Did caretaker need any help from the users? y/n
- 3. If yes, did the users provide this support? y/n
- 4. Does the caretaker have any complaints against the cooperation of the consumers? y/n
- 5. If yes, what are they?
- 6. Do the consumers have any complaints about the way the caretaker works? y/n
- 7. If yes, what are they?
- 8. Is the water being supplied by opening the main valve at standpost for at least six hours per day? y/n
- 9. What is the number of households which paid water charges for the previous month (for Treasurer)

Compliance rate: CR = .../total no of HH y/n
(if CR > 0.8: fill in yes) _____

TOTAL SCORE YES

- 10. Any other observations or comments:

PIPED SUPPLIES FOR SMALL COMMUNITIES PSSC PROJECT - ZAMBIA

MONITORING SYSTEM:

SANITATION CHECKLIST

S1

Name of area: Month:

Name of Officer: Date:

NB: This checklist shall be administered monthly by a field worker and return it to the Project Manager.

INSTRUCTIONS

- New improved pit latrine refer to latrines built or permanent materials eg. slab; concrete, walls: bricks, blocks, etc.
 - Traditional pit latrines which have been upgraded refer to latrines which have been provided with concrete slabs, san-plats.
-

A. Progress on latrines (for extension worker health).

1. How many new, improved latrines have been constructed since last month? No.
2. How many traditional latrines have been upgraded since last month?
3. How many latrines are being constructed or being upgraded since last month?
4. How many new or upgraded pit latrines collapsed last month?

B. Progress: Refuse Collection, Storage and Disposal

1. How many new refuse pits have been dug since last month?
2. How many refuse pits have been filled up since last month?

Name of area: Month:
 Name of Officer: Date:

NB: This checklist shall be administered monthly by a field worker and return it to the Project Manager.

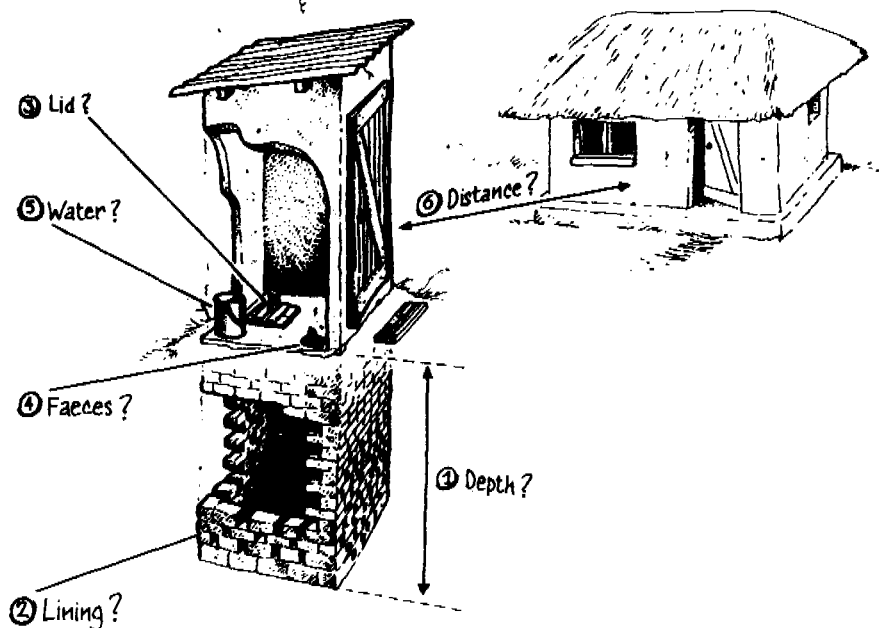
INSTRUCTIONS

- Use a separate form for each completed latrine.
- New improved pit latrine refer to latrines built or permanent materials eg. slab: concrete, walls: bricks, blocks, etc.
- Traditional pit latrines which have been upgraded refer to latrines which have been provided with concrete slabs, san-plats.

CONSTRUCTION OF PIT-LATRINE FOR INDIVIDUAL HOUSEHOLD

Tick/circle the appropriate. Y (yes) N (no)

- | | | |
|-------------|---|---------------|
| 1. | Is the pit latrine more than two metres deep? | y/n |
| 2. | Is the pit latrine lined with blocks or drums? | y/n |
| 3. | Is the hole covered with a lid? | y/n |
| 4. | Are the faeces absent/non-visible on the floor/or inside walls? | y/n |
| 5. | Is there a container of water for washing hands after using a toilet? | y/n |
| 6. | Is the latrine built further than five metres from the house? | y/n |
| 7. | Is the slab constructed by a skilled person? | y/n |
| 8. | Was the pit latrine constructed by a skilled person? | y/n |
| 9. | Is it used by all members of the family? | y/n |
| TOTAL SCORE | | YES |
| 10. | How much was the total cost of the latrine construction | |
| 11. | Was the pit dug by the family | y/n |
| 12. | Was the pit latrine constructed by the family? | y/n |



Name of area: Month:

Name of Officer: Date:

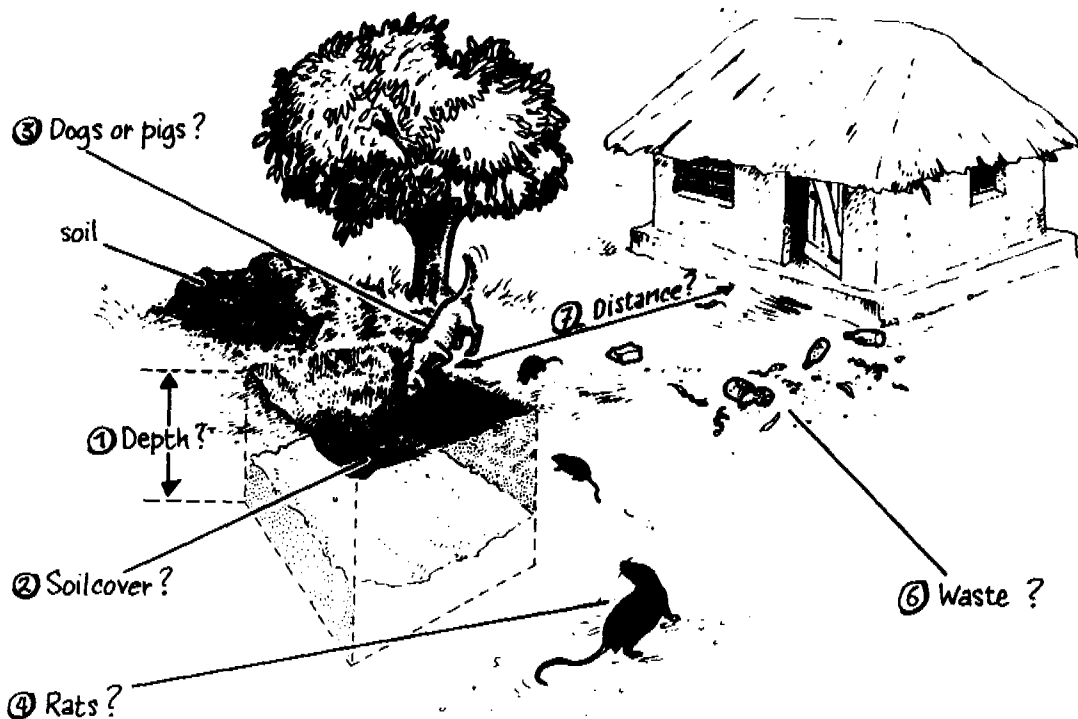
NB: This checklist shall be administered monthly by a field worker and return it to the Project Manager.

INSTRUCTIONS

- Use a separate form for each completed refuse pit.
- New improved pit latrine refer to latrines built or permanent materials eg. slab concrete, walls (bricks, blocks) etc.
- Traditional pit latrines which have been upgraded refer to latrines which have been provided with concrete slabs, san-plats.

- | | | |
|----|--|-----|
| 1. | Is the depth of refuse pit less than one metre deep? | y/n |
| 2. | Is refuse uncovered with soil/exposed? | y/n |
| 3. | Are dogs/pigs/chickens/goats seen on the refuse? | y/n |
| 4. | Are rats seen at the refuse? | y/n |
| 5. | Is the refuse pit badly smelling? | y/n |
| 6. | Is solid waste seen laying around? | y/n |
| 7. | Is refuse put more than five metres away form any house? | y/n |

TOTAL SCORE NO



Date of Hygiene Education:

Name of area

Name of Officer:

Use a separate sheet for each hygiene education conducted

1. What was your target group?
- | | | |
|---------------------|-----------|------------------------|
| School children: | Grades | No. of people attended |
| | | |
| | | |
| Tap Committees | | |
| Water Committees | | |
| Individual families | | |

2. Did you use any posters?
- Produced by Ministry of Health? y/n
 - Produced by the PSSC project team? y/n
 - PROWESS material/approaches? y/n
- Other specify
-

3. What was the community's target group participation to the session?

| | VERY GOOD | GOOD | FAIR | BAD |
|----------|-----------|-----------|-----------|-----------|
| MEN | | | | |
| WOMEN | | | | |
| CHILDREN | | | | |

4. Do you see any need for change or improvement of hygiene education materials?
- If yes, suggestions?
-
-

PIPED SUPPLIES FOR SMALL COMMUNITIES

MONITORING SYSTEM:COMMUNITY PARTICIPATION CHECKLIST

Name of area:.....

Filled in by:..... Date:.....

NB. This checklist shall be administered once every month by a field worker and returned to the Project Manager.

(a) The Community and the Water Committee (ORGANISATION)

(i) How many meetings were held during the month by each of the following groups ?

- Community
- Water Committee
- Tap Committees

(ii) What were the main issues/subjects of discussion at these meetings by the :-

| | <u>Subject</u> | <u>Result</u> | <u>Agreed follow up</u> |
|-------------------|----------------|---------------|-------------------------|
| - Community | | | |
| - Water Committee | | | |
| - Tap Committees | | | |

(iii) Were issues and resolutions from the previous meeting followed up ? y/n

(iv) What are your impressions about the performance of water and Tap Committees this month?

.....
.....
.....
.....

(b) What training Activities were undertaken during the month?

| | <u>Type of training.</u> | <u>Participants</u> | |
|-------|--------------------------|---------------------|-------|
| | | Men | Women |
| (i) | Extension workers..... | | |
| (ii) | Community leaders..... | | |
| (iii) | Water Committee..... | | |
| (iv) | Tap Committees..... | | |

(c) Construction Work (Community Participation)

- (i) How was the division of work done ?
- per household y/n
- per group or section y/n

(ii) How many people on average participated in the work ?

| | <u>Men</u> | <u>Women</u> |
|-------|------------|--------------|
| | | |

(iii) What is the community's attitude towards involvement in the project ?

| | <u>Excellent</u> | <u>Good</u> | <u>Fair</u> | <u>Poor</u> |
|-------|------------------|-------------|-------------|-------------|
| | | | | |

(d) Financial contributions by the Community

- (i) Does the community show willingness to contribute financially ?
- Men - y/n
- Women - y/n

(ii) Has the community set up a village project fund y/n

(iii) If yes is it running well ? y/n

(iv) What was contributed this month by :-

| | |
|-------------|-------------|
| Tap 1 | Tap 5 |
| Tap 2 | Tap 6 |
| Tap 3 | Tap 7 |
| Tap 4 | |

(v) What are the main methods/ways used by the community to raise money for the project:

- 1
- 2
- 3

(v) What are the other Community contributions towards the project ?

.....
.....
.....

(e) What would you say about the working relationships:-

Excellent Good Fair Poor

- (i) Community with Extension workers.
- (ii) Extension workers with Committees.
- (iii) Extension workers with Proj.Team.
- (v) Where it is poor, suggest cause:.....

.....
.....
.....

(f) What specific problems were encountered during the month by:

- (i) Extension workers.....
- (ii) Water/Tap Committees
- (iii) The Community

.....
.....

(iv) What are the suggested solutions to the problems experienced by (i) - (iii)?

- (i)
-

-
- (ii)
-
-
- (iii)
-
-

(g) What achievements were made during the month by:-

(i) The Community

.....

.....

(ii) The water/tap committees.....

.....

.....

.....

(iii) The Extension workers.....

.....

.....

(h) What are your general comments on community participation ?

.....

.....

.....

Appendix 5

List of PSSC Zambia Project Output

LIST OF PSSC ZAMBIA PROJECT OUTPUT

| | |
|--------------------------------|---|
| O.M. Chanda | A paper on cost recovery in Water Supply and Sanitation, presented in a seminar in Malawi. March 1991. |
| Dr. E. Mumba/ K.L. Kamalata | A report on the second short course on the preparation and production of guidelines and other communication skills. November 1990 |
| Project Team | Report on the first Extension Workers Workshop April, 1991 |
| Project Team | Report on the information workshop for District supervisors |
| Project Team | Report on Self Evaluation Exercise in Soloborn November, 1991 |
| Project Team | Terms of reference for extension workers |
| J. Mate | A manual for extension workers and the community " Why to build a toilet, 1991 |
| Mrs. I.A. Simasiku | A manual of Community Participation, 1992 |
| Mr. D. Ng'ambi | Operation and Maintenance of communal standpost, 1991 |
| Project Team | Monitoring tool/checklist for Extension workers, 1991 |
| Project Team | A report on the first workshop for tap committees, December 1992 |
| Project Team | Final Report for the PSSC Project in Zambia, June 1993 |