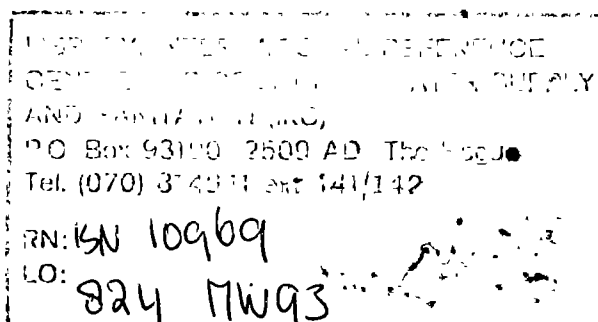


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Piped Supplies for Small Communities Project (PSSC)

Final Report
Period 1988 - 1992



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1. PROJECT BACKGROUND

1.1 General framework

The Piped Supplies for Small Communities (PSSC) Project has been implemented in Malawi between 1988 and 1992, as a second phase of the Public Standpost Water Supplies Project 1985-1987, funded by the Netherlands Government through the IRC, International Water and Sanitation Centre.

The demonstration project has been part of a two-country programme which IRC supported, the sister project was being implemented in Zambia.

The project was implemented in response to the United Nations endorsed International Drinking Water Supply and Sanitation Decade 1980-1990.

Malawi specifically strived to increase coverage of water and sanitation facilities to low income fringe urban communities. However a constraint identified at that particular time was that there was insufficient knowledge and information on the most feasible, effective, economic and sustainable way of serving this type of communities.

It was with this view in mind that the Malawi Government approached the IRC to help in generating the necessary knowledge and information through a pilot demonstration project.

1.2 Project aims and objectives

The main aim of the Piped Supplies for Small Communities Project was to stimulate the development of more appropriate, sustainable and successful methods to plan, implement and manage piped water supply systems with full community involvement for use in rural and low income fringe urban areas.

The general objectives of the PSSC Project were:

- To develop and demonstrate more efficient, sustainable and appropriate ways of planning, implementing and managing piped water supply systems, with appropriate sanitation for use in rural and low income urban fringe areas.
- To promote the sharing and application of such knowledge, information and understanding at national, programme and sector policy level and in other projects.

Specific Objectives included:

- To conduct a series of studies and to prepare guidelines on particular organisational, socio-economic, financial management and technical aspects of piped water supply and sanitation systems.
- To set up and develop a number of pilot study and demonstration schemes on these systems.

- To promote the large scale application of the strategies and methods developed.
- To contribute to the international exchange of information on aspects of piped water supplies and appropriate sanitation systems in line with the concept of Technical Cooperation amongst Developing Countries (TCDC)

2. PROJECT ORGANIZATIONAL STRUCTURE

2.1 Institutional structure

The organizational structure of the project was selected to promote multi-sectoral collaboration. Four major components were to be given priority in the project: Water Supply, Community Involvement, Hygiene Education and Sanitation and Socio-economic Research. Therefore four institutions were mobilised: the Water Department as the Project Coordinating Institution (PCI), the Ministry of Health, Ministry of Community Services and Centre for Social Research of the University of Malawi as Project Participating Institutions (PPIs). The project organizational structure is added in appendix 2.

2.1.1 *The Project Working Group*

The two PPIs, Ministry of Health and Ministry of Community Services together with the PCI formed the Project Working Group (PWG) which was the inter-ministerial management committee and policy making body for the project. The PWG was chaired by the Controller of Water Services.

The PWG was responsible for guiding the planning, implementation and evaluation of the project, it also provided a platform for co-ordination of inputs from the PCI and PPIs.

2.1.2 *The Project Team*

At the project implementation level each of the three ministries assigned a project officer to work on the project either on full-time or part-time basis. The three officers formed the Project Team.

The Project Team was responsible for planning, implementation and evaluation of project activities.

The team was also responsible for coordinating inputs from all participating institutions and monitoring of project activities, including the coordination of training and research activities.

2.1.3 *The Local Project Coordinating Teams*

At the Demonstration Centre level (local level) there were Local Project Coordinating Teams comprising field staff and extension workers from the PCI and PPIs: i.e. Water Monitoring Assistants, Health Assistants and Community Development Assistants.

The Local Coordinating Teams were responsible for the coordination of project implementation at the local level which among other activities included, community

mobilisation, data collection and monitoring including the provision of integrated extension services to the communities.

2.1.4 Auxiliary project committees

These inter-ministerial committees were established at the regional and district levels comprising regional and district representatives from the three collaborating ministries, mostly to ensure sustainability of the programme after donor support.

These committees were established as a result of recommendations which were made at workshops for regional and district officers, who felt that they were not involved enough in project activities under the existing structure.

The main responsibilities of these committees were mostly to monitor project activities and render operational support when required.

2.2 Local organizational structure

Centre Water Councils

At the community level, Centre Water Councils were established at each demonstration centre, to oversee coordination of the project.

Centre Water Councils are sub-committees of District Development Committees and membership include community representatives such as members of parliament, party leaders, councillors, chiefs and village headmen. The organigramme of the local structure is given in appendix 3.

Centre Water Councils were mostly responsible for assisting in mobilising communities, selection of sites for constructing water points and generally supporting operation of tap committees and monitoring operation and maintenance activities.

In two demonstration centres, Likuni and Mponela where Centre Water Councils proved difficult to establish, Executive Committees were established comprising of local community leaders and members of the tap committees and worked just as effective as Centre Water Councils.

Tap Committees

At each water point communities elected a ten-member committee to manage operation and maintenance activities. The committees were directly answerable to the Centre Water Councils. Ninety percent of these committees were women.

A full list of project committees etc. with names of involved and affiliated staff is appended (Appendix 4).

3. PSSC PROJECT METHODOLOGY

3.1 General description of methodology

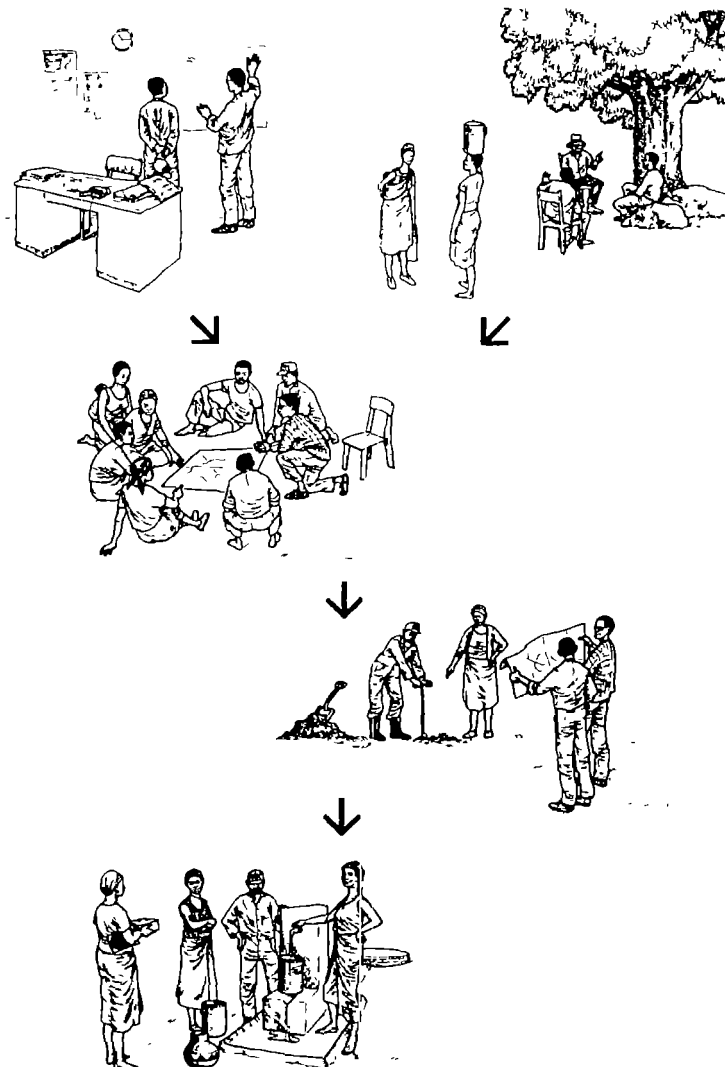
In order to achieve its objectives, the project had to develop a methodology which would among other things ensure sustainability of piped supplies implemented with full community involvement; would effectively integrate water supply, hygiene education and sanitation, and which would institutionalise inter-ministerial collaboration in piped supplies programmes. The approach was expected to utilise appropriate technology and be cost effective.

Given all these parameters, the task for the project was challenging.

Drawing from the PSWS Project phase experiences the following methodology was opted:

3.1.1 *Partnership Approach*

The approach as advocated in the project promoted increased involvement of local communities in planning, implementation and management of the project. The communities worked with the agency on a partnership basis.



Efforts were directed at promoting local initiatives in identification of priorities, project planning, design, construction, operation and maintenance.

Decisions on the siting and location of Communal Water Points were made jointly with communities through discussions with their local leaders.

Communities then elected their own committees to coordinate implementation of the project and to manage operation and maintenance activities.

During the construction of Water Points, the agency provided skilled labour, cement and pipes whilst communities contributed local materials such as bricks, sand and stones.

Communities were mobilized for such activities by their Tap Committees which were set collaboratively with the local communities through elections and trained by agency staff.

The community and the agency shared maintenance responsibilities. The agency was responsible for all maintenance work up to the water meter, while as community responsibilities commenced from the meter to the standpost.

The communities are responsible for the day-to-day management of the water facilities , e.g. opening and closing of water points, cleaning of water points surrounding, taking care of the soak pits, registering of consumers and financial management.

The Agency Extension Workers assumed advisory and supervisory role in collaboration with Tap Committees to ensure that things are done correctly.

These responsibilities were discussed and agreed upon in the series of initial meetings before they were shared between the agency personnel and the communities.

3.1.2 Community-Based Approach

For the partnership to be fully effective, the agency emphasized community involvement in all project planning and decision making.

The communities in all the demonstration centres had in the first place requested the service, and in response agency worked with them to identify their needs and capacities.

To give both the agency and the communities a good overview of conditions and issues which were to be taken into account, it was necessary to collect baseline data on population, water use and needs, socio-economic status, and health and hygiene conditions of the communities concerned.

Another important aspect for planning community involvement was the identification and establishment of strong community organizations such as Tap Committees and Village Health Committees which took on the initial decision making role on behalf of the communities.

The committees usually comprise ten members. Gender and social discrimination was discouraged in the committees although women dominated in the Tap Committees, they comprised 90 per cent of committee members.



Also available to support community level activities, was local authority organizations called Centre Water Councils, which are sub-committee of District Development Committees.

Through local level organizational set up community involvement was fully realised

3.1.3 Multi-sectoral Approach

The PSSC Project approach emphasized on multi-sectoral collaboration in order to minimize fragmentation of efforts, waste of resources and competitiveness for participatory actions. From the very beginning project implementation responsibilities were in the hands of three ministries, namely, Ministry of Health, Ministry of Women, Children Affairs and Community Services, and Ministry of Works (Water Department). The Centre for Social Research of the University of Malawi also participated in the project management committee.

For effective implementation of the project the following inter-ministerial committees were set up:

- (a) **The Project Working Group:** This was the project management committee and policy making body comprising of the Controller of Water Services, the Chief Public Health Officer, the Chief Community Development Officer, and Director of Centre for Social Research of the University of Malawi.

The committee was expected to meet quarterly to review project progress and provide policy guidelines. Although the committee failed to hold meetings, support to the project by individual committee members was very strong.

- (b) **The Project Team:** This was a technical committee comprising project officers based at the headquarters level, from the three participating ministries.

This committee had the responsibility of coordinating inputs from the three collaborating ministries, coordinating implementation of the project and monitoring progress and reporting.

- (c) The District Working Group: At the district level, representatives from the three collaborating ministries worked hand in hand in support of the project.

Although inputs of this committee to the project was rather low, they however provided the necessary moral support to the extension workers which made project work to go on smoothly.

- (d) The Local Coordinating Teams: This was a technical committee of extension workers based at the demonstration centres. It comprised the Water Monitoring Assistant, Health Assistant and Community Development Assistant.

This was the most effective committee after the Project Team, without whose services the project could not have succeeded. In the PSSC Project Approach members of this committee were encouraged to work in the demonstration centres as a team. To effect this properly, the members were regularly oriented to multi-sectoral issues through workshops and seminars. They were also encouraged to hold joint planning meetings, and to work as a team in providing integrated extension service to the communities.

3.1.4 Integration of hygiene education and sanitation promotion

The PSSC Project approach would have been incomplete without the integration of a hygiene education and sanitation promotion component. It was realised from the very beginning that the provision of water supply alone to the communities would hardly make any impact on their health without complementing it with a hygiene education and sanitation promotion programme. This was the reason why the project structure included the Ministry of Health which is an authority on hygiene and sanitation issues. For the PSSC Project a participatory approach was again opted for dissemination of hygiene messages and promotion of sanitation to communities. This entailed comprehensive orientations for health promoters in participatory methods. This was achieved through a number of workshops and special orientations. The extension workers in turn trained Tap Committees and Village Health Committees who brought hygiene messages to the communities. The role of the extension workers was to support the committee efforts in educating the communities on good hygiene habits and promoting good sanitation practices. They also monitored the effectiveness of the methodology. Hygiene messages mainly focused on proper collection, transportation, storage and use of drinking water to prevent contamination from source to where it is consumed, washing of hands, use of good latrines and living in clean environment.



3.1.5 Capacity Building

The PSSC project approach also gave priority to building capacities for all groups involved in project activities. The philosophy was that "if you give a man a fish, you have helped him for that day, but if you teach him how to fish, you have helped him for the rest of his life".

Secondly, this approach recognised capacities within individuals which had to be built upon, in order to achieve the project goals. The advantage of this approach was that, sustainability was ensured, since the people trained would continue to carry out project activities throughout the lifetime of the programme.

Training was thus used as the foundation for the PSSC project activities. The project success very much depended on the skills and knowledge developed within various groups at all levels:

- Tap Committee and Consumer Level
- Local Coordinating Team Level
- District Working Group Level
- Project Team Level

3.1.6 Collection and synthesis of data information

Since the PSSC project was envisaged as a research and demonstration project, its approach also gave emphasis to collection and synthesising of data and information.

Information and data were collected through surveys, special studies, investigations and observations which were carried out at regular intervals. This information was in actual fact used in developing the PSSC project methodology itself.

3.1.7 Monitoring

The PSSC project approach also focused on monitoring. This was why at the very beginning of the project, efforts were made to establish an effective monitoring mechanism through the engagement of Water Monitoring Assistants who coordinated monitoring activities in collaboration with other members of the Local Coordinating Team. The teams monitored operation and maintenance activities, operation of Tap Committees, community financial management and hygiene education and sanitation, among other things. Information and data from this monitoring system enabled the project to know more about piped supplies, especially the public standpost and the communities served. Guideline manuals were developed utilising information from the monitoring.

3.2 Methodology at the local level

3.2.1 Development of demonstration schemes

In order to implement project activities, the PSSC project retained the four demonstration centres developed under the Public Standpost Water Supplies (PSWS) Project phase, these were: Dowa/Mponela, Kasungu, Salima, and Likuni. The idea was to monitor long term effect of the methodology which was being developed. Particularly the sustainability of the various project committees. The four centres had a total of 70 public standposts, with 70

Tap Committees. They serve a total of 2,000 families. In addition to the four demonstration centres, four additional new centres were selected for demonstration. These were: Rumphu in the Northern Region, Mulanje, Namadzi and Monkey Bay in the Southern Region. Two of the new centres, Mulanje and Rumphu had existing standposts while as Namadzi and Monkey Bay had no standposts.

Ten standposts were constructed in Mulanje, seven in Namadzi, eight in Monkey Bay and Ten in Rumphu, bring the total of new water points to 35. The total number of water points however developed in the new demonstration centres was 62, this included existing water points, serving a total of 1,800 families.

The total number of public standposts developed under the project was thus 132, serving a total of 6,000 families, residing in 9 peri-urban centres (Appendix 1).

Selection criteria

A number of criteria was used to select the demonstration centres. An important criteria used was to ensure that the project covered a cross section of the ethnic groups in Malawi. This was why demonstration schemes were selected in such a way that all regions were covered (Appendix 1).

Community involvement

Communities were involved in all stages of project implementation. They were consulted during the initial stages when a series of meetings were held with community leaders. A number of public meetings followed, to get general community consensus and views. Sites for water points were thus selected in close collaboration with the communities. Tap Committees were then elected at each of the selected sites. The project then trained the Tap Committees before commencement of construction work.

During the initial meetings, division of responsibilities was discussed and agreed upon. Communities collected sand, stones and also cleared the sites. They also provided water for construction work. The project provided the rest of materials including skilled personnel.

When the project started, promotion of the role of women was emphasised. However, when the elections for Tap Committees were held, majority of elected committee members were women, (90%).



The project therefore found very little to do in terms of fostering their full participation since it just came automatically. Apparently this was the case since water activities are considered women's activities, therefore they are left to be done mostly by women.

Later evaluations of the composition of the Tap Committee revealed the same trend in all demonstration areas, (90% women). The project encouraged more participation by men to give the committees good balance.

The Tap Committees operate the water points, they fix the opening and closing hours and also fix rate to be contributed per family. The rates have been fixed in such a way that each household pay a flat rate of US \$ 0.30 per month. This rate is enough to cover water fees and leaves a balance which the committee keeps in a bank for maintenance. Tap Committees collect the money monthly from the individual households. The committee treasurer keeps the money and after everyone has paid, part of the money is used to pay for the bill and the remainder is banked. As a result of prudent financial management, most committees have very big balances on their accounts in the bank.

3.3 Description of supporting provisions

Transport

The PSSC Project inherited a Datsun Pick-up vehicle which was purchased under the PSWS Project. This vehicle was used by the Project Manager and Project Team members.

Other transport requirements were met by the Water Department and the Ministry of Health who provided transport for specific project activities such as for transporting materials for construction of Communal Water Points and during training activities where the project pick-up was not appropriate.

Office Accommodation

The Water Department provided an office for the project manager in Lilongwe. Offices were also made available for the Water Monitoring Assistants in all the eight demonstration schemes in the PSSC project.

Administration

The PSSC Project utilised the existing administrative support in Water Department.

Secretarial Support

Secretarial Support was also provided by the Water Department. The Project Manager used the existing Typing Pool and Machine Room.

Technical Support

Technical support was provided to the project through an arrangement where a Water Engineer was attached to the Project on part-time. All technical activities were also handled at the Regional Level where construction work was coordinated.

The IRC also provided the necessary technical support through the Programme Manager, Consultants and Technical Publications on issues requested by the project.

3.4 Financial Aspects

Project budgets were prepared, reviewed and updated at regular intervals.

The project had an Account with the Central Bank, the Reserve Bank of Malawi. Financial transfers from IRC were made directly to the Treasury, who in turn allocated funds to the project in accordance with project budgets but also taking into account ceilings by the Public Sector Investment Programme.

The mechanism of expenditure for the project were in line with the Government Procedures. The project expenditures were authorised by the Project Manager. Auditing of Project Accounts were carried out by Government Auditors.

The system of working advance, declaration and transfer of project funds from IRC worked satisfactorily.

Financial contributions were received only once from the United Nations Capital Development Fund, to construct Communal Water Points in some of the PSSC Project Centres.

The overall financial pattern of expenditure on different aspects of the project is summarized in appendix 5.

4. PSSC PROJECT ACTIVITIES

Among the major activities carried out during the project period were:

- Review of PSWS project experience
- Summary review of piped water supplies
- Development of methodology for planning and implementing piped supplies with communities
- Development of new demonstration schemes
- Training activities
- Hygiene education and Sanitation
- Special subject studies
- Cost recovery and resource coverage
- Project self-evaluation
- Technical activities
- Monitoring and operational support to old demonstration schemes
- Dissemination of project knowledge and information.

The programme schedule of activities is appended (Appendix 6).

4.1 Review of PSWS Project Experience

A review of the PSWS project experience was carried out in order to look back at what had been achieved during the first phase, the Public Standpost Water Supplies Project phase 1985-1987 in order to summarise both successes and failures, to capitalise on the successes and find means of rectifying the short comings during the PSSC project phase.

4.2 Summary review of piped water supplies

A Summary Review of national experiences in Piped Supplies was commissioned in early 1988, to try and look at past experiences with piped supplies in Malawi, to identify key issues which would be taken up by the demonstration project and assess the potential need and appropriate uses for Small Piped Supplies in Malawi Schemes.

The review, which was carried out by the Centre for Social Research of the University of Malawi, provided essential data which was used as baseline for project implementation and also helped to direct on which main activities the project was to give focus.

4.3 Development of methodology for planning and implementing piped supplies with communities

This activity lasted through the entire project period. Being the key to the whole project development, a lot of efforts and resources were utilised to accomplish this task. Constraints and possible problem areas were identified through monitoring the operation of existing demonstration, use of baseline data and evaluation reports. These were discussed in workshops and solutions suggested were documented and tried in the field.

Through this slow and laborious method, the best methods of involving communities at all stages of project development were developed, protocols for approaching communities were developed, modalities for inter-ministerial collaboration were refined in line with practical field experiences and guidelines on crucial project issues were drafted.

The approach, which was finally developed, has proved effective.

4.4 Development of new demonstration schemes

In ordinary implementation schemes, this activity would have been highlighted, considering that it is a hardware activity. However in PSSC this activity had to wait for a methodology to be developed and therefore took a secondary position. Four new demonstration schemes were developed in Mulanje, Namadzi, Monkey Bay and Rumphu with a combined total of 62 Public Standposts.

The main aim for developing these schemes was to further refine and field test the methodology which was developed in the former PSWS demonstration schemes.

The schemes are all operating very successfully, with effective Tap Committees which are capable and well-motivated.

4.5 Training Activities

Training was given top priority in the PSSC project approach. It was one of the major activities considered to enhance long term sustainability of the project.

Among the major training activities which the project carried out were:

4.5.1 Tap committee training courses

After their formation, all Tap Committees were trained, to enable them effectively manage operation of the water points. The training covered a wide range of general topics ranging from leadership, operation and maintenance, financial management, and hygiene and sanitation.



A total of 15 such courses were organised during the project period involving a total of 2,000 Tap Committee Members and Community Leaders.

4.5.2 Local Coordinating Team courses

Short integrated training courses were organised for Local Coordinating Teams, the field extension Workers from the three collaborating ministries.

Such courses were aimed at enabling the Extension Workers to appreciate the value of multi-sectoral collaboration and give them skills necessary to support Community-Based Management.

A total of three such courses were conducted during the project period involving a total of 36 extension workers, Health Assistants, Water Monitoring Assistants and Community Development Assistants from all the nine demonstration centres.

4.5.3 Specialised course

In February 1992 a specialised course on Water Quality Monitoring was organised for Local Coordinating Teams. The main objective of the course was to equip the Local Coordinating Team Members with skill for Monitoring Water Quality, particularly after the water leaves the communal water point, that is during transportation and storage in the house.

A total of 18 Local Coordinating Team members, nine Health Assistants and nine Water Monitoring Assistants attended the course which was held at the Central Water Laboratory.

4.5.4 Orientations

Special orientations were conducted for Centre Water Councils, District Working Group members and Community leaders. The main aim of such orientations was to provide adequate project information to enable participants give appropriate support to project activities.

The orientations were jointly organised by Local Coordinating Team Members and Project Team Members.

4.5.5 Project Team Courses

A number of courses were organised for the Project Team, some of them are listed below:

(a) Guideline manual development courses

Two courses on guideline manual development were organised for project staff, to give them skills in developing, field testing and publishing guideline manuals. The idea was to ensure that draft guideline manuals which were being prepared by project staff were developed further and published in presentable and usable format. The two courses, which were attended by both Project Team and Local Project Coordinating Team Members, were facilitated by a consultant from IRC.

(b) Course on Participatory Training Techniques

In order to strengthen Community Based management in Piped Water Supplies, a course on modern tools for community participation was organised with assistance from IRC and UNDP/PROWESS. The main aim of the course was to train trainers in participatory training techniques known as the SARRAR METHODOLOGY. The course was conducted by two facilitators provided by PROWESS from Kenya and Togo.

A total of 11 Malawian Trainers took part in the course drawn from the three collaborating Ministries both within the PSSC Project and outside the project (Health and Community Development training institutions). The idea was that the 11 trainers will be utilised to train others in the participatory techniques which should be applicable not only in piped water programmes, but also in other community programmes.

(c) Course on Participatory Self-evaluation

A course on Participatory Self-Evaluation was organised jointly by IRC and the Zambian Government. Three Project Team Members from PSSC Project/Malawi attended the course.

GUIDELINES FOR OPERATION AND
MAINTENANCE OF PUBLIC STANDPOSTS
FOR
TAP COMMITTEES



BY
FABIANO KWAULE
Water Department

PIPED SUPPLIES FOR SMALL COMMUNITIES (PSSC)
PROJECT MALAWI

The main objective of the Evaluation Course was to give participants skills in Self-Evaluation to enable them to evaluate their project.

4.6 Hygiene Education and Sanitation

The Hygiene Education and Sanitation Promotion (HESP) Programme, in the PSSC project aimed at changing people's behaviour, to make them accept the value of good hygiene, encourage the full and proper utilisation of safe water and good sanitary facilities.

The programme specifically intended to teach people how to achieve good health through their own action and efforts.

4.6.1 *Specific Objectives*

Specific objectives of the HESP Programme in Malawi were:

- To increase community awareness on hygiene issues
- To increase utilization of improved sanitation facilities.
- To promote good housing.
- To promote personal and domestic hygiene.
- To increase awareness in water and sanitation-related diseases.

4.6.2 *HESP Activities*

In order to achieve the above objectives, HESP activities included:

- (a) Health baseline surveys (data collection)
- (b) Village inspections.
- (c) Sanitation Promotion:
 - coverage and utilization of sanitation facilities.
 - introduction of Sanitation Platforms to improve traditional latrines.



- (d) Promoting good water handling and water use practices:
 - promoting construction and use of laundry slabs.
 - encouraging maintenance of drainage channels and soakaway pits to existing water points.

- (e) Training:
 - workshops, seminars and short courses for staff and communities.
 - orientation meetings.
 - field tours/educational visit for staff and communities.
 - health talks
 - demonstrations.

- (f) Hygiene Education:
 - proper handling and storage of domestic water.
 - promoting washing of hands
 - encouraging the use of safe water supplies
 - promoting personal and domestic hygiene.

4.6.3 Constraints

In implementing this programme the leading institution, Ministry of Health faced some problems, which included manpower shortages, inadequate transport and financial resources for hardware materials. The result was that there were coordination problems between headquarter staff and field staff, leading in delays in starting of main HESP activities. Although this improved a bit towards the end of the project, progress was still slow.

Inadequate funding of the programme was however the major constraint. With improved inputs such as good transport, adequate training materials, motivated personnel, and adequate time for implementing the component activities increased achievements in sanitation and hygiene practices would have been expected.

4.6.4 HESP problems and successes

Despite the above mentioned problems the HESP programme has indeed made achievements.

- * Evaluation reports showed a positive impact, with data on coverage of sanitary facilities showing an upturn over the baseline data. (For more details see evaluation reports 1992).
- * Community knowledge on hygiene and sanitation issues also showed remarkable improvements over what it was when the project started in 1988.
- * Environmental improvements were also remarkable compared to the situation when the project started.
- * Water handling practices, according to the evaluation, also improved remarkably, among other things, hand washing practice increased, more people covered their water during storage in their homes than before.
- * Water consumption increased tremendously, among other things indicating that more people were using the standpost water for all uses and stopped using water from traditional sources as the case was before.
- * Coverage of latrines increased over the baseline figures. However the San Plat was not properly demonstrated because the project did not have sufficient funds for this.

However these results might have been triggered by other external factors, all the same it is believed that the project has achieved its objectives, although health impact studies were not attempted due to lack of baseline data.

One of the major achievement is however the fact that most of these HESP activities were promoted through the communities themselves, What the project assisted was in training of Tap and Village Health Committees, who have done the job successfully, of course with supervisory support from project staff.

These gives all the hope of sustainability of the activities after the end of the project.

4.7 Special subject studies

Among the main objectives of the PSSC Project was carrying out studies which would shed more light on issues crucial to piped supplies systems.

Due to time constraints only five studies were carried out on:

- Operation and maintenance
- Financial Management
- Technical Aspects
- Hygiene Education and Sanitation
- Sustainability of Tap Committees

The studies were carried out by members of the Project Team to try to get more insights into various aspects of public standposts, the environment and the communities they are intended to serve. In this way, it was hoped, areas which required more and careful attention during the rest of the PSSC Project period would be identified and given focus.

These studies proved to be very useful throughout the project period. Findings from such studies helped to develop the methodology further and also highlighted areas which required more inputs. For example, the technical study highlighted the need to involve communities in the design of the facilities. The original standpost design had to be revised in consultation with the communities, to suit community preferences.

Issues which required the development of guidelines were also highlighted in the study findings. For example, the study on Operation and Maintenance highlighted weaknesses in operation and maintenance by the communities which came in as a result of lack of proper knowledge on operation and maintenance on the part of the communities.

This prompted the writing of a simple guideline manual on operation and maintenance for Tap Committees.

4.8 Cost recovery and resources coverage activities

In order to directly focus on sustainability issues in Piped Water Supplies and also raise national awareness on cost recovery issues, the project took up an additional activity, to look at Cost Recovery and Resources Coverage as one of the means for achieving sustainability.

This was set within the framework of a series of institutional development activities under the umbrella of the World Health Organization (WHO) in collaboration with IRC .



PSSC Project Team Members attended a Southern Africa Sub-Regional Working Group meeting on Cost Recovery and Resources Coverage which was held in Zambia in 1989. The primary objectives of the meeting was to review a draft guideline manual on cost recovery and Resources Coverage developed by the WHO.

Follow-up plans proposed for Malawi included organising of a multi-sectoral workshop to review the draft guidelines, field testing of the guidelines and hosting an international workshop to discuss findings of the field testing (March 1991).

These activities came at the time when the policy of cost recovery in the water subsector, was being debated, and the activities enhanced the debate.

The outcome of these activities is that there has been increased awareness nationally on sustainability issues, within the framework of cost recovery and resources coverage.

The project has continued to utilise the guideline manual in carrying out reviews and other baseline surveys.

4.9 Project self-evaluation

A self-evaluation was carried out to review progress which the project had made in trying to achieve original project goals. The evaluation was jointly carried out by Project Team Members and two members of the Project Working Group.

Findings of the evaluation were very encouraging. Good progress had been made on all activities. (For full details see evaluation report June 1992)

4.10 Technical Activities

Technical activities in the PSSC project were aimed at improving a number of issues including:

- how to increase community participation in construction.
- Finding ways of involving communities in the design of public standpost,
- Finding better methods of discharging waste water from the standposts in areas of different soil formations.

4.10.1 Community Participation in design

This task was undertaken through consultations with the Communities, particularly the women, who suggested improvements to the existing design to make it more convenient.

Bricks were used by the communities to make models of more convenient standpost structure. Technicians assisted in taking measurements. The models, whose outline looked similar to the existing standposts, differed on platform height and the length of the standing area. In general the community perception as expressed in the models was that the existing designs had low bucket stands which made lifting of buckets difficult. The standing area of the old design was filled with aggregate stones which women did not like since most did not wear shoes when drawing water. The old design was thus modified, taking into account community suggestions.



The modified design has been tried in the new demonstration centres in Mulanje, Namadzi, Monkey Bay and Rumphu. A completely new design, also incorporating suggestions and comments from communities was also field tried in the new demonstration centres.

Preliminary evaluation of the new design proved that it is favoured by women as it is more convenient to them. The new design is also cost effective as it uses less materials and takes less time to construct than the old design. From these initial findings, the design was adopted for wider use by the Water Department.

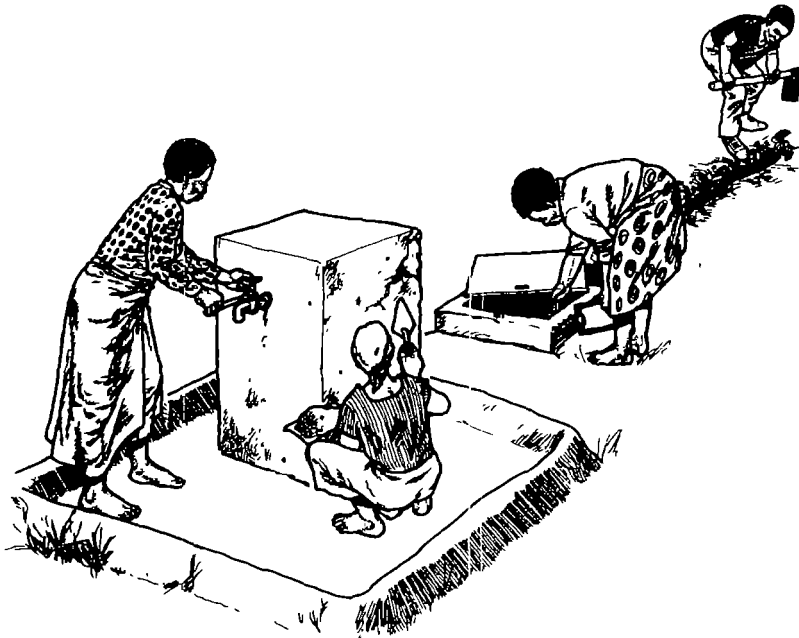
4.10.2 Waste Water Drainage System

Investigations were made to find means of improving the drainage system of public standpost systems, to suit different soil formations and topography. Problems on existing drainage system was experienced in low land areas such as Salima where soil get water logged during the rainy season.

As a temporary measure the project adopted construction of multiple soakpits in low land areas, to ensure that as much water as possible is drained. The number of soakpits depends on the severity of the flooding in the area, but three have proved effective in areas like Salima.

4.10.3 Maintenance System

Another activity of for the project was to find ways to improve the maintenance system for the public standposts systems. The old maintenance system did not define roles for the communities and the agency in maintaining public standposts.



Spare parts for maintenance of the standposts were not readily available, which posed serious problems to demonstration centres which were far from main trading centres.

The project made consultations with the communities and came up with clear roles for the community and the agency. It was agreed that the communities would be responsible for maintenance from the meter box to the standpost, whereas the agency would be responsible for the rest of the system. The project also established a revolving fund for maintenance whereby spare taps and rubber washers are stocked at each demonstration centre, where communities can easily buy them.

4.11 Monitoring and operational support to old demonstration schemes

The PSSC project continued to monitor and further improve the operational procedures and community support methods at each of the four PSWS demonstration centres in Kasungu, Likuni, Dowa/Mponela and Salima. These mature PSWS schemes were adopted as demonstration schemes within the PSSC project for longer term monitoring along side the new demonstration schemes. A lot has been learned from these schemes such as the long term effect of extension support on the operation of Tap Committees, sustainability of Tap Committees, community financial management and others important issues.

4.12 Dissemination of project knowledge and information

One of the major objectives of the PSSC project was to promote the sharing and application of knowledge and information and understanding of issues pertaining to piped supplies.

The following are some of the strategies which the project utilised to achieve this objective:

- (a) Planning meetings which grouped all project personnel from the three collaborating ministries at both the national project level and demonstration centre level. The objective of these meetings was to discuss forward planning, prepare annual schedules and share responsibilities, and get commitments, in addition to sharing project information.
- (b) Training courses for extension staff - a total of three integrated training workshop were held for extension workers drawn from Water Department, Ministry of Health and Ministry of Community Services. A lot of project information was shared and exchanged at this forum.
- (c) Training courses for Tap Committee Leaders, these have been successfully held in all the demonstration centres. These were the best forums for sharing information since there was a two way exchange of information between the communities and agency staff.
- (d) Exchange of information between communities from different demonstration centres was also encouraged. The project organised exchange visits between Tap Committee leaders to provide them the opportunity of sharing knowledge and experiences. Such visits proved to be very effective.
- (e) Orientations for Centre Water Councils have also proved to be one of the best means of disseminating project information.
- (f) Informal discussions with communities were also used by the project to share and exchange information.
- (g) Workshops and seminars organised at national, regional and district levels were also utilised as the main forum for sharing and exchanging information.

5. ACHIEVEMENTS

In line with original project objectives, the PSSC has managed to develop improved methods of approach to small community water supplies which give priority to and focus on:

- Integration of social, economic, cultural, organizational and technical issues;
- Coordinated development of piped water supplies, hygiene education and sanitation in order to achieve the higher goal of good health for all communities;
- Community-based approaches in planning and preparation, design, construction and maintenance of small community water supplies and sanitation;
- Institution strengthening by developing capacities;
- Inter-agency coordination through the creation of strong national, district and demonstration centre level committees to ensure promotion of integrated approaches and avoiding duplication of efforts;
- Improve community financial management, promoted through a number of measures initiated under the project;
- Effective local organization through the development of local committees;
- Training for all groups involved in community water supply;
- Guidelines developed for various groups at all project levels;
- Information exchange at both national and international levels;
- Information application at both programme and national sector levels;
- Demonstration of improved approaches through the development of new schemes in Mulanje, Namadzi, Monkey Bay and Rumphu.

5.1 Other achievements

Other achievements of the PSSC Project are:

- Methodology has been developed for Piped Water Supply and Sanitation projects for wider application, based on field -tested methods and using effective community participation in planning, design, implementation management, operation and maintenance including hygiene improvements;
- The methodology has been successfully field tested and demonstrated in four new PSSC project demonstration centres in Mulanje, Namadzi, Monkey Bay and Rumphu, where community-based management has worked very well.

- The methodology is now being applied in a new UNDP funded borehole rehabilitation programme, the Community-based Management Project, which aims at involving the communities in the rehabilitation of boreholes including operation and maintenance.
- There is now generally an increased practical knowledge and further understandings of piped supplies and appropriate sanitation
- Operational demonstration schemes have now been successfully developed in nine centres spread in all the three regions, as examples for larger scale use;
- Communities in demonstration schemes are taking a bigger role in the maintenance of the water supply system in addition there is remarkable improvements in community financial management, as a result all committees have big surpluses which have been kept in bank accounts to be used for maintenance;
- Five analytical studies which the project carried out provided essential information which is of use to other projects. The study findings have also provided inputs into the development of Guidelines;
- A number of reports, slide sets, guidelines and manuals for community-based piped water supply and sanitation have been developed and utilized for dissemination of project information. These can now be used in other programmes;
- Series of workshops and meetings at local, regional and district levels were organized, as a means of disseminating project information;
- Training methods and training materials have been developed; the training material will have to be reviewed before publication;
- Guidelines and manuals for use by various groups in the project have been developed. These again will have to be published and distributed widely, although drafts have already been used in the field.
- A national level core group of trainers was trained in participatory training techniques, using the SARAAR Methodology and also on project self-evaluation methodology. These trainers are now available to any community development programme in the country;
- Evaluation procedures have been developed which can also be used in other projects;



- Through practical collaboration in project activities, improved liaison has been developed among the Water Department, Ministry of Health and Ministry of Community Services, at all levels. This collaboration is already being utilised in other new programmes;
- The project has added vigour to the concept of integrated extension service, through the creation of Local Coordinating Teams, with a completely different mode of working together as teams;
- Through a series of training courses for Tap Committees and local leaders, and also for project staff, cadres of skilled people have been developed who are expected to sustain community based management in the absence of donor funding;
- An appropriate public standpost design has been developed. The fact that it has been developed locally with the full involvement of the users, gives all the hope that it is appropriate and will find wider application.



5.2 Utilisation of project findings

Project findings have so far successfully been used in effecting improvements, in Operation and Maintenance; Community Financial Management and Monitoring in the national Communal Water Point schemes in Malawi.

The new methodology is also being used in planning, designing and implementing all new public standpost programmes throughout the country.

6. FOLLOW-UP ACTIVITIES

The main follow-up activities for the project are the introduction of the PSSC Project approach to the remaining urban water supply schemes in the country.

Proposals have already been made, however, this introduction will have to be implemented in phases.

The first phase, which will be funded by ODA, will cover 14 urban water supply schemes which are to be expanded and additional public standposts will be constructed. The PSSC project approach will be implemented in constructing the new public standposts as well as rehabilitation of the existing water points.

The Government is also seeking funding for expanding 30 more schemes which will include construction of additional public standposts. The PSSC project approach will also be applied there.

Other planned follow-up activities include the conversion of PSSC project organizational structure into the Community-Based Management Section through a project funded by the UNDP.

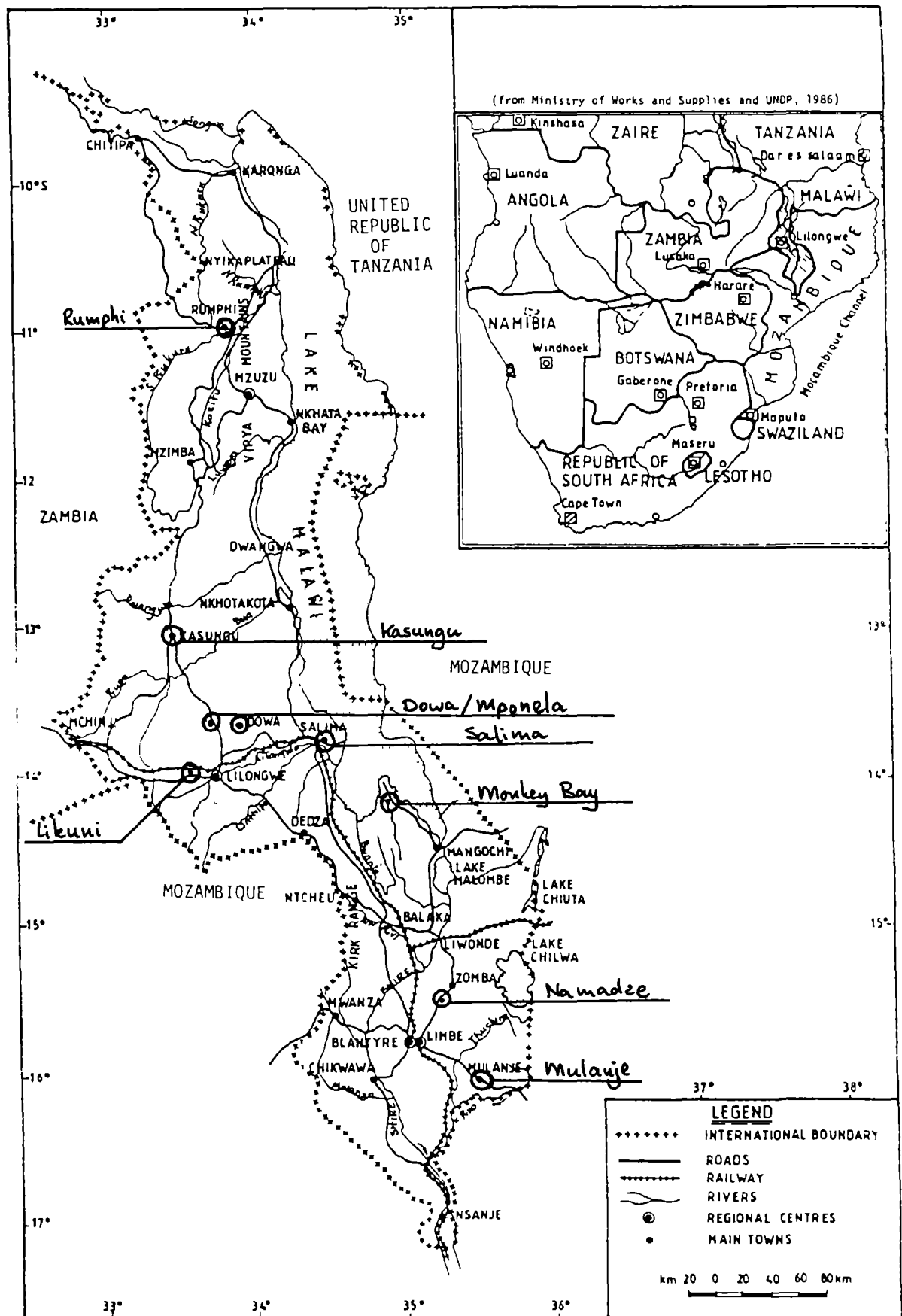
This section will now be responsible for planning, implementation, and operation and maintenance of all community water supplies which include the urban communal water points, rural gravity piped water supplies and borehole programmes.

APPENDICES

1. Map Of Malawi indicating PSWS and PSSC demonstration centres
2. Project organizationalstructure
3. Community Organizational Structure
4. List of Project Committees etc.
5. Financial Summary of PSSC Malawi Project
6. PSSC Programme: schedule of activities (revised)

Appendix 1
Map Of Malawi indicating PSWS and PSSC demonstration centres

Map of Malawi indicating PSWS and PSSC demonstration centres

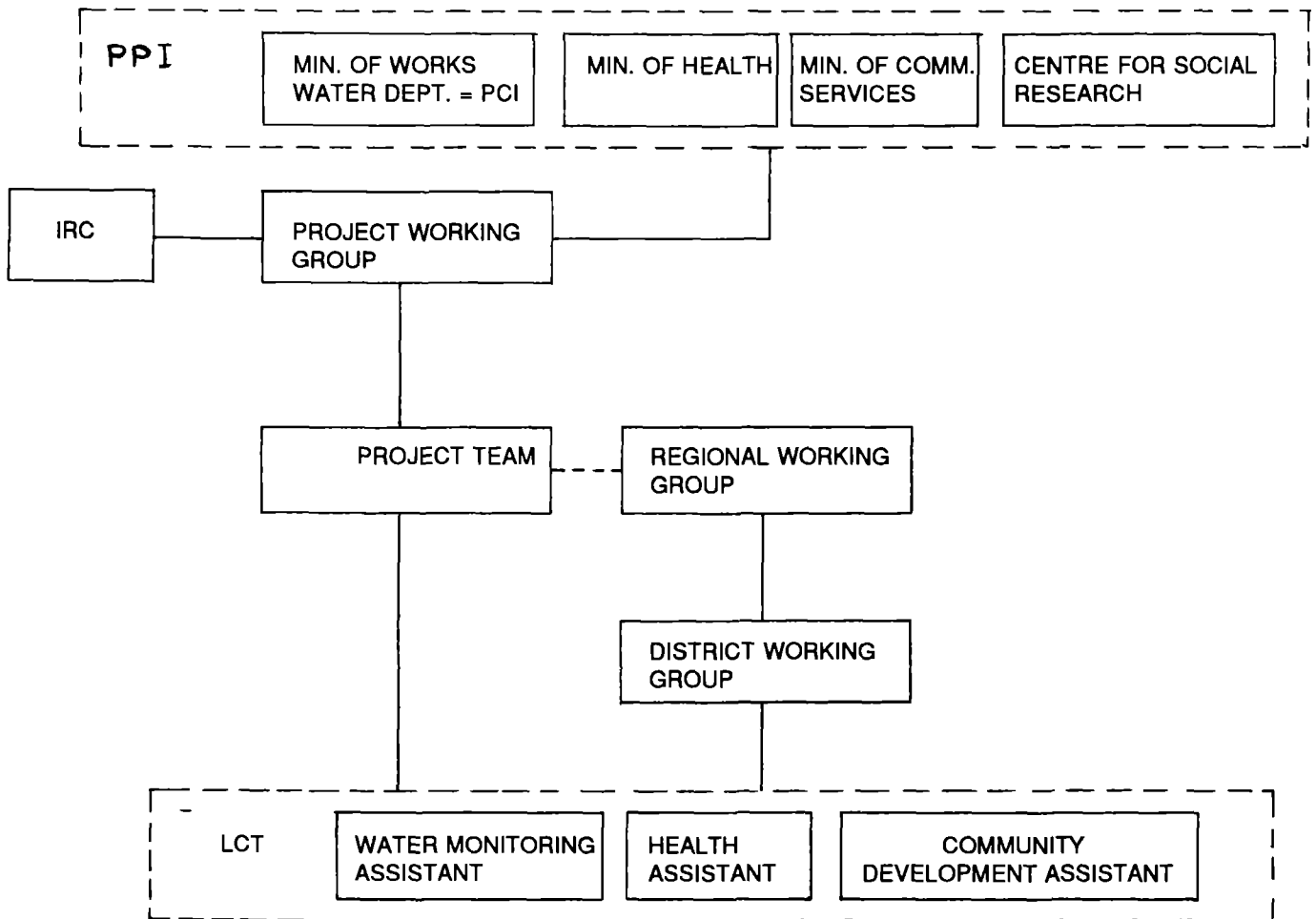




Appendix 2
Project organizational structure

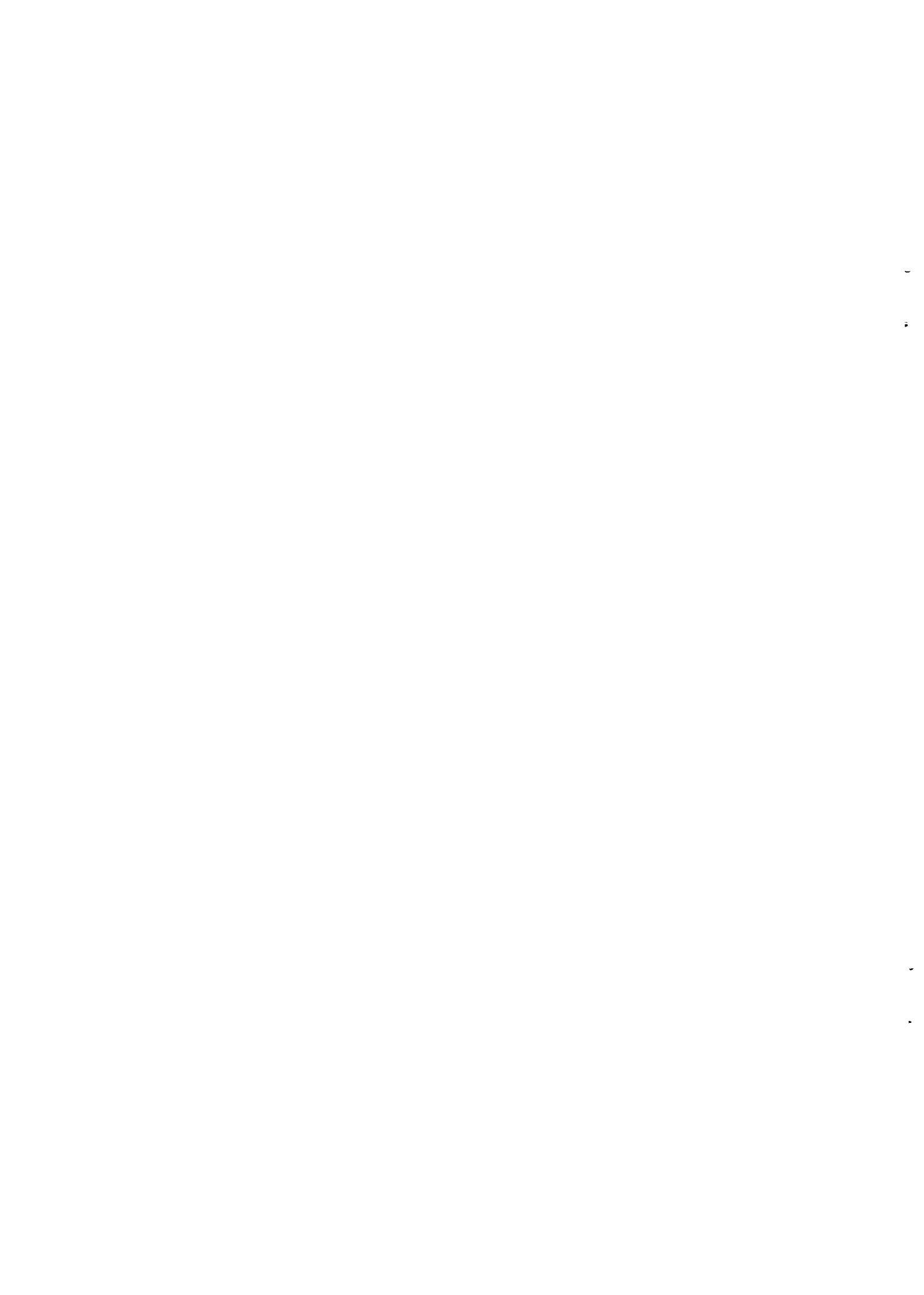


PROJECT ORGANIZATIONAL STRUCTURE



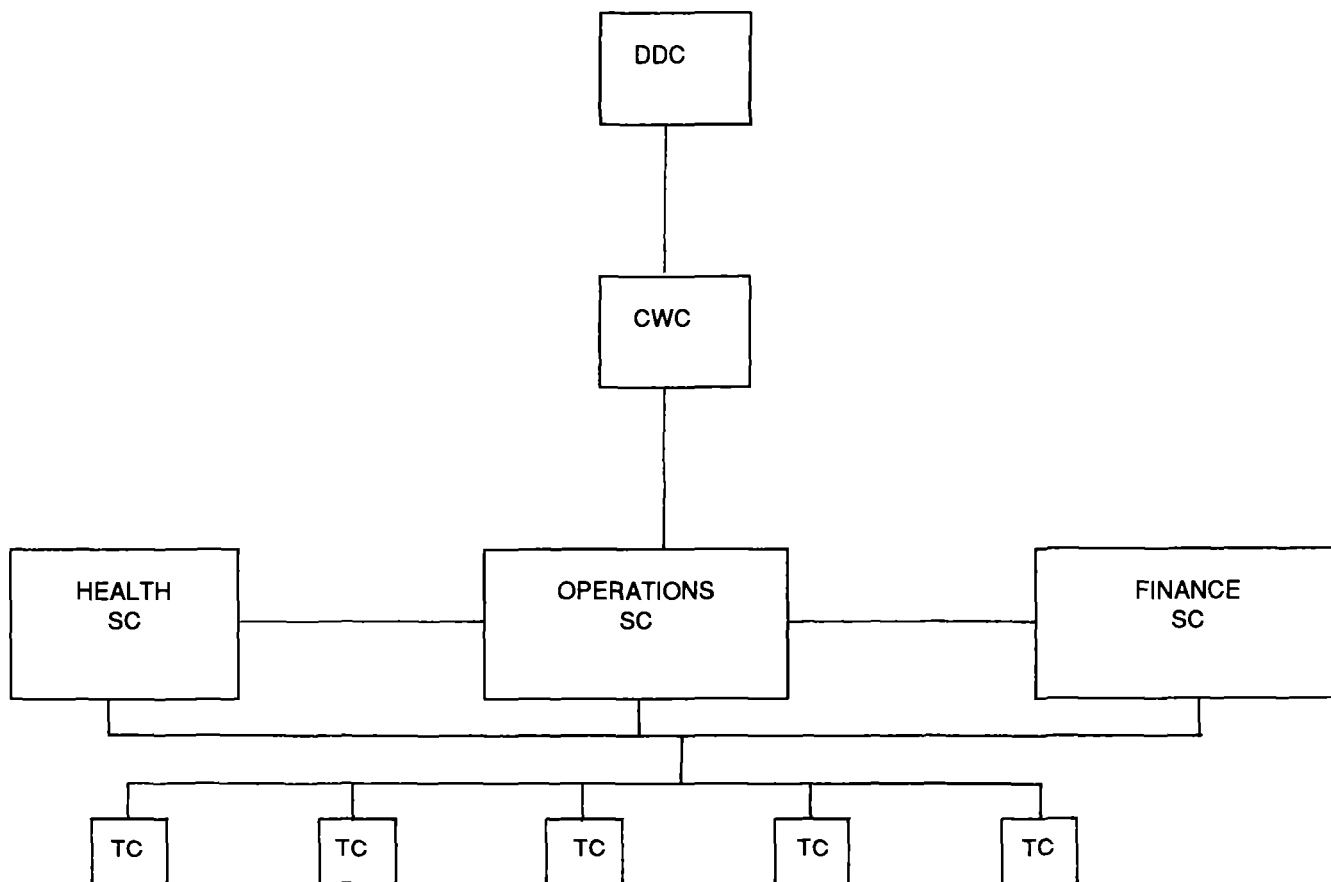
Legend

- IRC = IRC International Water and Sanitation Centre
- PPI = Project Participatory Institution
- PCI = Project Coordinating Institution
- LCT = Local Project Coordinating Team



Appendix 3
Community Organizational Structure

COMMUNITY ORGANIZATIONAL STRUCTURE



Legend

- DDC = District Development Committee
- CWC = Centre Water Council
- SC = Sub Committee
- TC = Tap Committee

Appendix 4
List of Project Committees etc.

LIST OF PROJECT COMMITTEES

ORGANISATION

POST

NAME

PROJECT WORKING GROUP

Water Department	Chief Water Supply Officer	Mr. O.M. Kankhulungo
Ministry of Health	Chief Public Health Officer	Mr. P. Chindamba
Ministry of Women and Children's Affairs and Community Services	Chief Community Development Officer	Mr I.Z Nkunika

PROJECT TEAM

Water Department	Project Manager	Mr. F. Kwaule
Ministry of Health HESP	Coordinator	Mr. B.B. Chandiyamba
Ministry of Women And Children's Affairs and Community Services	Community Development Officer	Mr M.C.K. Nyimba

REGIONAL WORKING GROUPS

Southern Region

<u>Organisation</u>	<u>Post</u>	<u>Name</u>
Water Department	Chief Water Supervisor	Mr. G. Uzamba
Ministry of Health	Regional Health Inspector	Mr. K.F.V. Msowoya
Ministry of Women and Children's Affairs and Community Services	Regional Community Development Officer	Mrs. L.C. Kholomana

Central Region

Water Department	Chief Water Supervisor	Mr.J.F. Filiyamu
Ministry of Health	Regional Health Inspector	Mr F.P. Jumula
Ministry of Women and Children's Affairs and Community Services	Regional Community Development Officer	Mr. A. Shawa

Northern Region

Water Department	Water Superintendent	Mr R.J. Banda
Ministry of Health	Regional Health Inspector	
Ministry of Women and Children's Affairs and Community Services	Regional Community Development Officer	Mr. R.J. Njewa

DISTRICT WORKING GROUPS

Rumphi

<u>Organisation</u>	<u>Post</u>	<u>Name</u>
Water Department	Water Supervisor	
Ministry of Health	District Health Inspector	Mr k. Nsapato
Ministry of Women and Children's Affairs and Community Services	District Community Development Officer	Mr R.H. Kumwenda

Kasungu

Water Department	Water Supervisor	Mr A.F. Bello
Ministry of Health	District Health Inspector	Mr C.S.C. Tasaukadala
Ministry of Women and Children's Affairs and Community Services	District Community Development Officer	Mr M.W. Kaipsya

Dowa

Water Department	Water Supervisor	
Ministry of Health	District Health Inspector	Mr J. Makaula
Ministry of Women and Children's Affairs and Community Services	District Community Development Officer	Mr FGY Chisambi

Salima

Water Department	Water Supervisor	Mr W.B. Mkanda
Ministry of Health	District Health Inspector	Mr S. Taulo
Ministry of Women and Children's Affairs and Community Services	District Community Development Officer	Mr B.R.W Banda

Lilongwe (Likuni)

Water Department Water Supervisor Mr J.F Filiamu

Ministry of Health District Health
Inspector Mr Mandevu

Ministry of Women and
Children's Affairs and
Community Services District Community
Development Officer Mr S. Kalako

Mangochi (Monkey-Bay)

Water Department Water Supervisor

Ministry of Health District Health
Inspector Mr Mwakalagho

Ministry of Women and
Children's Affairs and
Community Services District Community
Development Officer Mr S.K. Kalako

Chiradzulu (Namadzi)

Water Department Water Supervisor

Ministry of Health District Health
Inspector

Ministry of Women and
Children's Affairs and
Community Services District Community
Development Officer

Mulanje

Water Department Water Supervisor Mr A.B. Chiwongola

Ministry of Health District Health
Inspector Mr A.M. Phiri

Ministry of Women and
Children's Affairs and
Community Services District Community
Development Officer Mr I.M. Nikisi

LOCAL PROJECT COORDINATING TEAMS

RUMPHI

<u>ORGANISATION</u>	<u>POST</u>	<u>NAME</u>
Water Department (WD)	Monitoring Assistant (MA)	Mr S. Mlelemba
Ministry of Health	Health Assistant (HA)	Mr F.L. Nyirenda (MoH)
Ministry of Women and Children's Affairs and Community Services (MoCS)	Community Development (CDA)	Mr M. Phiri

KASUNGU

Water Department	Monitoring Assistant	Miss C. Chatha
Ministry of Health	Health Assistant	Mr E.R Chongwe
MoCS	Community Development Officer	Mr A. Ndoya

Mponela

Water Department	Monitoring Assistant	Mr H.G. Pondeponde
Ministry of Health	Health Assistant	Mr R.C. Kachila
MoCS	Community Development Officer	Mr R.D. Banda

DOWA

Water Department	Monitoring Assistant	Mr H.G. Pondeponde
Ministry of Health	Health Assistant	Mr A.J. Chikaphonya
MoCS	Community Development	Mrs B.W. Kumwenda

SALIMA

Water Department	Monitoring Assistant	Mr Kambona
Ministry of Health	Health Assistant	Mr J. Nazombe
MoCS	Community Development	Mr Matress

LIKUNI

Water Department	Monitoring Assistant	Miss R. Banda
Ministry of Health	Health Inspector	Mr Mbewe
MoCS	Community Development Officer	Mrs B. Phiri

MONKEY-BAY

Water Department	Monitoring Assistant	Mr C.N Manjawira
Ministry of Health	Health Assistant	Mrs J. Somanje
MoCS	Community Development Officer	Miss Borozo

NAMADZI

Water Department	Monitoring Assistant	Mr A.K. Phiri
Ministry of Health	Health Assistant	Mr G.T. Chilima
MoCS	Community Development Officer	Mr Phiri

MULANJE

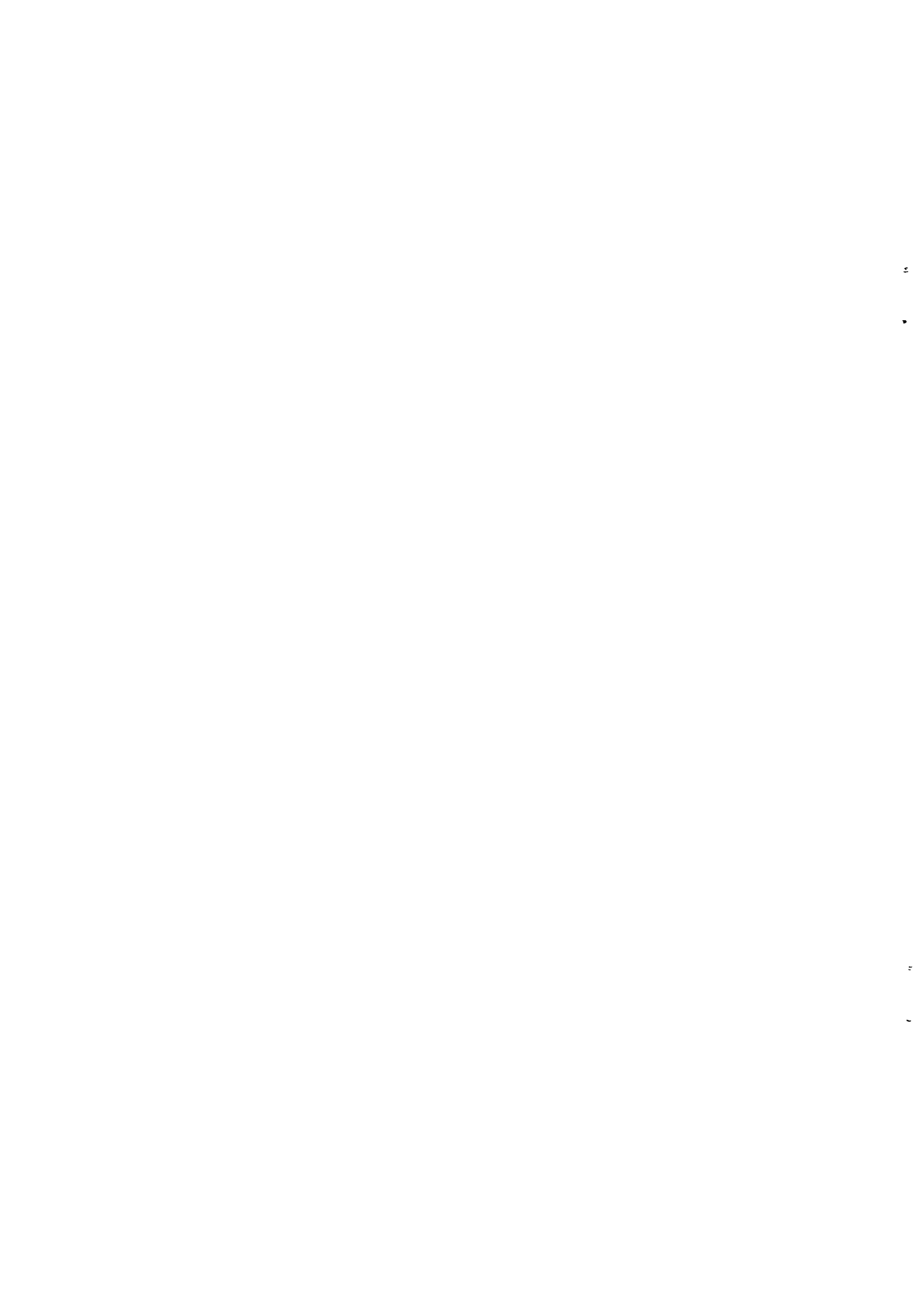
Water Department	Monitoring Assistant	Mr P. Juba
Ministry of Health	Health Assistant	Mrs I. Ndalama
MoCS	Community Development Officer	Mr W.A. Ntopa

Appendix 5
Financial Summary of PSSC Malawi Project

FINANCIAL SUMMARY OF EXPENDITURES PSSC PROJECT MALAWI 1988-1993

Budget item	Total budget	expenditures		Direct exp by IRC USDollars	total US\$	balance US\$
		Malawi Mal Kwach	USDollars			
1 Guidelines/manuals	3,100	5,405	1,575	2,053	3,628	(528)
2 Meetings/Training courses at local level	6,800	12,000	3,796	0	3,796	3,004
3 Workshops/training courses at dept level	21,400	53,975	16,276	16,459	32,735	(11,335)
4 National workshops/ seminars	13,200	0	0	28,303	28,303	(15,103)
5 Evaluations	1,600	0	0	0	0	1,600
6 Special Subject Studies	8,500	0	0	7,320	7,320	1,180
7 New Demonstration Schemes	50,100	63,875	15,208	0	15,208	34,892
8 Sanitation /Hyg Education	16,300	0	0	0	0	16,300
9 Water Quality Monitoring	900	0	0	900	900	0
10. Project Equipment	900	2,665	635	789	1,424	(524)
11 Technical material for testing	700	0	0	700	700	0
12 Visual aids	2,700	712	263	795	1,058	1,642
13 Project Working Group Meeting	200	0	0	0	0	200
14. Project Assistants	18,700	19,585	5,294	0	5,294	13,406
15 Travel Subsistence for project team	14,700	58,125	15,300	4,348	19,648	(4,948)
16 Housing Project Manager	38,500	144,610	45,229	0	45,229	(6,729)
17 Project Transport	33,800	130,680	33,199	7,131	40,330	(6,530)
18 Reference Materials	1,800	0	0	157	157	1,643
19 Project Team Supplement	5,500	0	0	5,067	5,067	433
20 Inter-country activities	7,500	0	0	11,311	11,311	(3,811)
21 Resource coverage activities	19,700	0	0	18,107	18,107	1,593
Sub-total	266,600	491,632	136,775	0 103,440	0 240,215	26,385
Contigencies	13,400	540	129	12,250	12,379	1,021
Totals	280,000	492,172	136,904	0 115,690	0 252,594	27,406

Appendix 6
PSSC Programme: schedule of activities (revised)



PIPED SUPPLIES FOR SMALL COMMUNITIES (PSSC) MALAWI OUTLINE SCHEDULE OF ACTIVITIES
 BASED REVISED PROGRAMME - FEBRUARY 1990

	1988			1989			1990			1991			1992	
A. DEMONSTRATION														
1. Planning/preparation														
2. Review of experiences to date														
3. National workshop														
4. Support studies														
5. Development of improved approaches and procedures														
6. Preparation of preliminary guidelines														
7. Selection and preparation of local demonstration schemes														
8. Implementation of demonstration schemes														
9. Monitoring, feedback, adaptation														
10. Observing and supporting operational phase of existing PSWS														
11. Interim and main evaluations demonstration schemes														
B. SHARING INFORMATION AND PROMOTING APPLICATION														
1. Analysing and describing methods used														
2. Assessing cost-benefit/efficiency procedures developed														
3. Comparing new procedures with those currently used														
4. Testing, refining and finalising guidelines														
5. Helping adapt sector policies and programme procedures														
6. Developing training procedures														
7. Helping adaptation of national training programmes														
8. Staff familiarisation														
9. Information-transfer in Malawi and internationally														
10. Identifying and planning follow-up action														

===== Actual Progress

