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PUBLIC STANDPOST WATER SUPPLIES PROJECT

INTERIM EVALUATION REPORT

December 1985

project supported by

International Reference Centre
for Community Water Supply and Sanitation (IRC)

The Hague
The Netherlands

CONTENTS

PART B: COUNTRY REPORTS

LIST OF ANNEXES

PREFACE

This is a report of the interim evaluation of the Public Standpost Water Supplies Project, a multi-country demonstration project being carried out in Indonesia, Malawi, Sri Lanka and Zambia.

The evaluation process was designed to promote self-evaluation by the national participants themselves. Consequently the project in each country was evaluated by mixed teams of both resident and visiting participants. Support was provided by a senior developing country national as team leader and, in two countries, by participants nominated by the funder, the Netherlands Government.

The reports prepared by each country team are presented within. They form the basis for a summary report prepared by the team leader Dr. S.W. Yun which also covers international aspects of the project and IRC's role.

Further details of the evaluation methodology and other background information are included in the Annexes.

SUMMARY

As direct follow-up to the study on public standpost water supply systems carried out for the World Bank (IBRD), and interest from a number of developing countries, IRC prepared proposals for a demonstration project on public standpost water supplies. In 1982, the Netherlands Directorate General for International Co-operation (DGIS) agreed to provide Dfl. 2 056 000 (equivalent to US$ 755 500 at that time) to finance the project and IRC was designated as the executing agency. The project adopted a multi-country, inter-regional approach. Four countries agreed to participate: Indonesia, Sri Lanka, Malawi and Zambia. Project activities started in Indonesia, Sri Lanka and Zambia in 1983 and in Malawi in the beginning of 1985.

During 1985, it was decided jointly by the participating countries, DGIS and IRC to undertake an interim evaluation of the project. The evaluation team, comprising a team leader, members from participating countries and, in two countries, a DGIS appointed adviser, visited Sri Lanka, Indonesia and Zambia, each for a period of two weeks. In addition, the team leader visited Malawi and IRC and DGIS in The Hague.

The project was evaluated against its main objectives which are to develop more appropriate and succesful methods to plan, implement and manage public standpost water supplies through:

- promotion of community participation at every stage;
- use of broad but integrated approaches;
- development of project activities by nationals;

These objectives have been well accepted and adopted in all four participating countries.

Although the situation varies from one country to the other, progress in implementation, particularly in the demonstration schemes, has been slower than anticipated. The main reason is the time required to develop project approaches, to formulate the detailed workplan, to prepare the management systems in the initial stages, and thereafter to develop the processes of community education and participation.

The community-based project approach, integration of non-technical aspects and project implementation by national staff have been successful and should be used more widely in future.

The contribution of IRC has been very appropriate in developing the project concepts and supporting project implementation. Project funds (US$84 000 for each country) have played an important part in the implementation of project activities.

Since the construction of the remaining demonstration schemes must be completed, initial progress consolidated and operation and maintenance monitored and supported, it is strongly recommended that the project be extended for a further period. It would be desirable to widen the scope of the project to include other types of water supply and also sanitation, and to apply the approaches both to other parts of the participating countries and to several other interested countries. It is recommended that the project be renamed to reflect its wider scope, possibly "Community-based Water Supply and Sanitation".

Water quality control, methods of operation and maintenance, training of personnel at all levels and financial management for completed schemes, which are not adequately covered at present, should be given greater emphasis in future.

In the current project, in some countries, funds have not been allocated for construction materials and equipment, and therefore there have been difficulties in obtaining them. Some provision must be made either by the project, or by other agencies, in future projects.

Most of the participating countries are considering setting up a section with full-time staff to widen the project and to promote community-based approaches to water supply and sanitation. Linked with this and to further assist integration into national programmes, it is suggested that the procedures developed within the project are set out and the roles of various agencies and training requirements for wider use identified.

Through the multi-country and inter-regional approach adopted, the participants have taken the opportunity to learn from each others experiences and this has also stimulated the development of the project. Close co-operation among the participating countries should be maintained and relevant information made available to other developing countries.

All those involved in the supported self-evaluation of the project felt that the evaluation objectives had been well achieved. The members of the teams, participating governments, officials and community leaders all found the evaluation process to be stimulating.

LIST OF ABBREVIATIONS

DJCK	Direktorat Jenderal Cipta Karya, (Directorate General for Human Settlements), Indonesia
DGIS	Directorate General for International Co-operation, Ministry of Foreign Affairs, The Netherlands
DWA	Department of Water Affairs, Zambia
FIT	Foundation for International Training (Canada)
HEO	Health Education Officer
HFA/2000	Health for All by the Year 2000
IDWSSD	The International Drinking Water Supply and Sanitation Decade (1981-1990)
IHS	Institute of Human Settlements, Bandung, Indonesia
IKK	Ibu Kota Kecamatan (Administrative District Capital)
IRC	International Reference Centre for Community Water Supply and Sanitation, The Hague, The Netherlands.
lcd	litres per capita per day
LGH&C	Ministry of Local Government Housing and Construction, Sri Lanka
NGO	Non-Governmental Organisation
NWSDB	National Water Supply and Drainage Board, Sri Lanka
O & M	Operation and Maintenance
PCI	Project co-ordinating institution
PPI	Project participating institution
PMC	Project management committee
PSWS	Public standpost water supplies
TCDC	Technical Co-operation among Developing Countries
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization

PART A

SUMMARY REPORT

1 INTRODUCTION

The work of the International Reference Centre for Community Water Supply and Sanitation (IRC) focuses on the rural and semi-urban areas of developing countries where the need for technical collaboration is greatest. The United Nations Water Conference (1977) concentrated world attention on the urgent problems of water supply and sanitation and as a result, the UN declared the decade 1981 to 1990 to be the International Drinking Water Supply and Sanitation Decade (IDWSSD). In recommendations made at the International Conference on Primary Health Care (1978), organized by the World Health Organization (WHO) and the United Nations Childrens Fund (UNICEF), most countries, in particular the developing countries, adopted the Primary Health Care approach as the tool to achieve the goal for Health for All by the year 2000 (HFA/2000). In Primary Health Care, the provision of safe drinking water and sanitation facilities are included as important components.

A study on public standpost water supply systems was carried out for the World Bank by IRC in 1969 and was followed by the publication of two IRC technical papers on the subject. Growing recognition of the world-wide problems associated with this type of water supply and a number of requests for information from developing countries led to proposals for a multi-country demonstration project on the subject, prepared jointly by IRC and several developing countries. In July 1982 the Netherlands Government agreed to provide funds (Dfl 2 056 000) for the project for a period of 24 months, which was later extended until the end of December 1985. As co-ordinating agency, IRC finalized agreements with two countries in Africa (Malawi and Zambia) and two in Asia (Indonesia and Sri Lanka). Project activities started in Indonesia and Sri Lanka in early 1983, in Zambia in late 1983, and in Malawi at the beginning of 1985.

The Public Standpost Water Supplies (PSWS) project aims to encourage the development of appropriate methods for the planning, implementation and management of community water supply systems which include a number of public standposts (communal water points). The project is designed to benefit ultimately the poorer sections of the communities in rural and urban fringe areas of developing countries.

Four linked areas of activity make up the project:

- demonstration projects in four countries;
- preparation of manuals and guidelines on aspects of public standpost water supply systems;
- ongoing evaluation and 'lesson learning';
- transfer and application of knowledge generated both in-country and internationally.

As funding for the project is due to come to an end in December 1985, it was decided jointly by IRC, the Netherlands Ministry of Foreign Affairs, Directorate-General for International Co-operation (DGIS) and the participating countries to undertake an interim evaluation. The international meeting on standpost water supplies, organized by IRC in Thailand in November 1984 also recommended that evaluation be conducted in 1985, and that it be based as far as possible on self-evaluation by project participants.

The purpose of the evaluation was to document the successes and identify problems in order to suggest improvements and to guide possible future development. Evaluation was to be carried out at both the country and international level of the project. The team approached the evaluation with the following questions in mind:

- has the project enabled nationals to develop better information and understanding?
- have these understandings been shared and taken up on a larger scale?
- has the project promoted more integrated, community-based approaches?
- has it encouraged better co-operation both horizontally (between ministries) and vertically (between levels)?
- has it contributed to the personal development of those taking part?
- has the project stimulated the flow of information among the participating and other interested countries?
- has it led to follow-up projects and activities in related fields?

The detailed objectives of the evaluation are set out in Appendix III and background papers on evaluation methodology and criteria in Appendices VII and VIII.

It was proposed that the evaluation teams for each country should comprise participants in the national projects, (including visitors from the other participating country in the region), an independent consultant from a non-participating developing country as team leader, and DGIS appointed advisers, where available. The evaluation teams and the periods of evaluation were as follows (a full list of team members is given in Appendix I):

Sri Lanka, 1 - 12 July 1985:
three Indonesian participants,
two Sri Lankan participants,
Team Leader

Indonesia, 15 - 26 July 1985:
two Sri Lankan participants,
eight Indonesian participants,
DGIS member,
Team Leader

Zambia, 5 - 16 August 1985:
one Malawian participant,
three Zambian participants,
DGIS member,
Team Leader

Malawi, 17 - 22 August 1985:
one Malawian participant,
Team Leader

Inter-Country aspects, 29 July - 2 August 1985:
Team Leader,
IRC and DGIS inputs

In Indonesia, Sri Lanka and Zambia, the evaluation was based on:

- discussions at national level with representatives of the responsible ministries/departments, project management committees, project staff, and external agencies;
- visits to the demonstration schemes (observation and discussions);
- review of project documents and materials.

As the implementation of the project in Malawi has started only recently, it was felt appropriate to postpone the full evaluation for the present time and instead to carry out an informal review by the Team Leader and the Project Officer only.

At the end of the visit to each country, the team made their preliminary findings and suggestions known to the project management committees. For each country, a project evaluation report was prepared jointly by the project team members and those visiting each country. These reports are presented in Part B.

All members of the evaluation team, visitors and hosts, including the DGIS appointed members worked very hard and with excellent team spirit. Because of this, even though the time available was limited, it was possible to complete the evaluation exercise. All members of the team express their thanks to the officials of the participating countries and all collaborating agencies, including DGIS, the Royal Netherlands Embassies, and IRC.

2 THE PROJECT AT COUNTRY LEVEL

2.1 Planning and project management

The project approach of promoting community participation at every stage, use of broad but integrated approaches and development of project activities by nationals, has been very well accepted and adopted by all the participating countries. In all four countries, project coordinating institutions (PCIs) and project participating institutions (PPIs) have been designated, project management committees (PMCs) have been formed, and project staff including a project manager (PM) have been appointed. However, the numbers and types of organizations involved, the composition of the PMC, and the qualifications and background of the project staff differ from one country to the other.

2.2 Project management committee (PMC)

The PMC in each country has an extremely important role in planning and management of the project. The relationship with the project staff, in particular the project manager is also very important. In some countries the PMC has met quite frequently, almost monthly, and in others less frequently, once or twice a year.

The PMC in each country comprises senior representatives of the various ministries, such as Water, Health, Community Development and also institutions and universities.

In some countries the role of the PMC seemed to be mainly to discuss and monitor the project rather than also to facilitate actual contributions from member agencies/institutions, such as training, studies and preparation of materials, as was planned originally.

2.3 Project staff

The number and background of the project staff varies from one country to another. None of the project managers is full-time, but there is one full-time project officer in Sri Lanka and one in Malawi. The project staff in Sri Lanka are located some distance from the demonstration schemes but work in the same office and have easy access to decision makers, namely the chairman and the vice-chairman of the PMC. In Zambia, the PM, who is a member of staff of the Ministry of Health, is based in the Health Demonstration Zone, which is two hours' drive from Lusaka, and the two other project officers are based in their respective departments (Water Affairs and Social Development). Thus in this case, the PM does not have easy access to the chairman of the PMC, although he has the advantage of being closer to the demonstration schemes.

Field staff of the participating ministries are actively involved in support of the project at the local demonstration schemes.

2.4 Involvement of provincial and local government

In Indonesia, provincial and local governments are involved very actively in the planning and implementation of project activities. The degree of co-operation varies in the other countries. However, the provincial and local governments are not represented on any of the project management committees.

2.5 Progress in project implementation

Progress in overall project implementation has varied considerably from one country to another, and at demonstration scheme level, from one scheme to another. However, in general, progress in all countries has been slower than anticipated in their workplans. While it is difficult to generalize, the main reasons for slow progress would seem to be:

- More time was required to assimilate the project approaches and to integrate them within the national water supply programmes;

- Even after the decision had been taken to participate, more time was required to confirm which Ministry/Department would take responsibility for co-ordination, and to appoint the PMC and the project staff. In Malawi, the authorities decided that for planning and implementation, a full-time project officer was required and this required a lengthy process for the creation of a permanent post and selection.

- The process of selection of demonstration schemes also took longer than anticipated. It was necessary to discuss and to coordinate with provincial/local authorities and find funding for construction.

- In particular, community-based approaches are, by their very nature, time consuming and community organization, education, promotion and motivation each had to go through lengthy processes to be effective.

- Designing of each scheme and approval by the respective communities and the authorities also took a considerable period of time.

- The workload placed on nationals by the project is large compared with the project size and funding resources.

- After the initial interest, some countries were less able to develop the project further because of the heavy work demands in the early 1980s when the IDWSSD began.

- As funds for material and equipment, such as pipes, taps and cement, has not been included in country project budgets, it took some time to obtain funds either from the government, external sources, or in some cases, from the communities.

At the time of the evaluation, only one scheme in each of Indonesia, Sri Lanka and Zambia had been completed and was operational. Other schemes were either under construction or in the process of preparation. The team was told that in all three countries construction of the remaining schemes would be completed as soon as possible, perhaps by the end of 1985.

On the other hand, in terms of the main project objective, the development of ideas and understanding of improved approaches to standpost systems, considerable progress has been made in most of the countries.

2.6. Financial aspects

At the inception of the project in July 1982, DGIS agreed to provide IRC with a total amount of Dfl. 2 056 000, (equivalent to US$ 755 500 at that time) of which US$ 84 000 was allocated to each participating country by IRC. As of the end of August 1985, although 64.4% of the overall budget and 87.8% of the funds allocated for international activities had been used, only 38.6% of the funds allocated to the participating countries had been called for by the participating countries as follows:

Indonesia	US$ 42 000	50.0%
Malawi	US$ 27 000	32.1%
Sri Lanka	US$ 37 000	44.0%
Zambia	US$ 23 650	28.2%
Total	US$129 650	38.6%

These figures relate to transfers, including modest working advances, and do not include contributions direct from the participating agencies or from sources outside the project. Although they do not correspond therefore with expenditure on the country-project activities, they do give some indication of the relative uptake of funds.

Project funds were transferred against agreed summary declarations to IRC from authorized officials in the co-ordinating institutions. Expenditure on the project is subject to standard government accounting and auditing procedures in the respective countries.

In all countries, to varying degrees, the government has also allocated a national budget for the project, sometimes in kind. This is a vital part of project resources.

The funds allocated for the countries are mainly for the "software" side. Often, these are more difficult to use than funds for "hardware" because of the demand on manpower and time.

While in some countries the procedure to manage funds is quite simple so that funds are released quite quickly, in other countries, procedures are complicated and time-consuming and lead to delay in project execution.

Funds allocated for items such as inter-country collaboration, special subject studies, publications, support from IRC, and travel costs, have been spent as planned, and will be depleted by the end of the present project period, 31 December 1985.

2.7 Community participation and hygiene education

In Indonesia, Sri Lanka and Zambia, the importance of community participation and hygiene education has been well recognized and considerable efforts have been made to motivate the community to take part in the project from the planning stage. These aspects are also planned to receive special emphasis within the project in Malawi.

In Indonesia, national workshops and seminars and local meetings have been organized and frequent discussions have been held with community leaders and villagers. Similar efforts were made in Zambia by the project staff and also staff of the participating institutions. In Sri Lanka, a well qualified health education specialist has been seconded full-time to the project and guidelines consisting of ten stages and 23 steps with illustrations of how each step should be implemented have been proposed. Health education officers from the Ministry of Health and trainee sociologists with the local government staff are working hard to promote project activities. The use of school staff has been very successful.

It has been repeatedly emphasized by the participants that the water supply schemes are not government property, but belong to the communities involved and therefore, bottom-up planning and sharing of responsibilities are important. Thus, all communities have come to understand the project approaches and have been prepared, often through appropriate committees, not only to provide labour for construction, but also to allocate funds for materials, to make inputs to planning, to contribute to operation and maintenance, and to participate in hygiene education. However, the team observed that in some cases clear agreements have not always been made between the communities and the respective local authorities or that such agreements have not always been kept.

There was very active hygiene education in the three countries where the project is under way. Through meetings of villagers, school children and other methods, the importance of safe drinking water and sanitary latrines, methods and techniques, and management have been discussed fully. Materials, such as posters, leaflets and manuals, have been prepared by the project and distributed. In Sri Lanka, the team had an opportunity to view a video film of activities from planning to implementation of the PSWS project in a demonstration scheme. When it is completed, this will be excellent education material both within and outside the country.

In all three countries, women were actively involved in the demonstration schemes in planning, construction and hygiene education. It is hoped that their interest will be strengthened in future and they will be involved in operation and maintenance and financial management.

2.8 Technical aspects

In Indonesia, all four demonstration schemes have been selected in the vicinity of the Cirebon area, which is in West Java Province. Of the four, only one in Gumulung Tonggoh has been completed and is operational, the others are either in the planning/preparation stage or the feasibility study stage.

In Sri Lanka, water is generally abundant but of poor quality, as evidenced by the high incidence of water-related diseases. Three of the four demonstration schemes selected were visited. The scheme at Padaviya in Anuradapura District in the north, at which activities have been interrupted for security reasons, was not visited. The schemes at Wijebahukanda and Seelatana are in the planning stage and only the scheme at Haldummulla has been completed and is operational. Latrine construction demonstration schemes have been included in the schemes at Haldumullah and Seelatana.

In Zambia, three villages, namely Mwachisompola, Chibombo and Chongwe, have been selected for demonstration schemes. They are all located within 40 to 70 km from Lusaka. According to the workplan, in the three areas, six sub-units of piped water schemes are to be constructed. To date, two have been completed and are operational.

Most of the demonstration schemes are either extension of existing piped water supplies to neighbouring villages or rehabilitation of non-functioning systems. Therefore, most of them are not very complicated technically. According to the project staff and community leaders, all the remaining schemes will be completed as soon as possible, possibly before the end of 1985.

All participating countries recognize that operation and maintenance are difficult problems. They have considerable experience that many water supply schemes constructed in the past, particularly in rural areas, have failed to function within a short period. For these reasons, in all particpating countries, serious consideration has been given to the methods and techniques of operation and maintenance and financial management to be used within the project. In addition, a move has been made towards clearer definition of the division of responsibility for these matters.

In general, water quality control aspects have not been dealt with. Those schemes already in operation have concentrated on completion of construction and community involvement. For instance, in Haldumulla village in Sri Lanka, the chlorination process has been interrupted on several occasions because of use of unsuitable equipment and poor training of the caretaker. In Gumulong Tonggoh in Indonesia, the team was informed that chemical analyses have been carried out, but not microbiological testing. In general, microbiological examination of water is more important because water related infections are the main cause of diseases and of high infant mortality in developing countries.

2.9 Information generation and reporting

In all three countries, ideas for improved approaches have been developed, tried out, and adapted. In Indonesia and Sri Lanka, these experiences have been written up and form the basis of a number of draft guidelines on subjects varying from project management to community participation and hygiene education. A full list of national project output is given in Appendix IV.

Although regular progress reports have not been prepared by all participating countries, information regarding project progress, financial status, and constraints is available through occasional reports to the PMC, minutes of meetings, papers prepared for project meetings, and information provided to the IRC project manager during visits and in correspondence.

In some countries, the project activities have been widely publicized in the news media and many people, particularly government officials, teachers, health staff in the provinces/districts where the demonstration schemes are located, are well aware of the project. However, this is not the case in those countries where the project is moving more slowly.

3 INTERNATIONAL ASPECTS

3.1 Multi-country approach

An important aspect of the project is the multi-country approach through which the promotion of international collaboration, exchange of information and the co-ordination, administration and financial management of the project would be improved. After discussions with several countries, two countries in Asia (Indonesia and Sri Lanka) and in Africa (Malawi and Zambia) expressed interest in taking part in the project.

3.2 International meetings

In 1984, two international meetings were held in the context of the project:

- Regional seminar on PSWS as infrastructure in housing for low-income communities, Cirebon, West Java, Indonesia, 6-10 March 1984;

- International meeting on standpost water supplies, Thailand, 11-18 November 1984.

The regional seminar held in Cirebon West Java was hosted and organized by the Institute of Human Settlements, Bandung in the context of the Indonesian national project activities. It was sponsored jointly by UNESCO, FIT of Canada and IRC. Of the 60 participants, 19 were from countries other than Indonesia, including Korea, Malaysia, Papua New Guinea, Philippines, Sri Lanka and Thailand as well as Canada and the Netherlands. The seminar discussed issues such as water supply problems, in particular standpost systems, and community participation. Included in the recommendations was that experiences and findings in PSWS in Indonesia and Sri Lanka should be made available to interested countries.

The international meeting held in Thailand in November 1984 was sponsored by IRC and in total 25 participants were brought together to exchange experience. They came from seven countries: the project-participating countries of Indonesia, Malawi, Sri Lanka and Zambia, together with Nepal, Pakistan and the host country Thailand.

It is quite clear that the meeting stimulated the PSWS project staff through meeting with counterparts and discussing concepts, progress, constraints and plans. In particular, the field visits and opportunity to see successful village development funds in operation made a considerable impression.

3.3 Exchange visits

The national project staff have had opportunities to visit other countries participating in the project; Zambians and Malawians have been to Thailand and Sri Lanka, and Sri Lankans to Indonesia and Thailand. Some of the national staff, either directly or indirectly involved in the project have also taken part in the evaluation excercise in other countries. Through such exchange visits, the national project staff benefited a great deal.

3.4 Information exchange

Information on the project has been shared fairly well between the countries and the project staff are reasonably well aware of the situations in other countries. Information has been shared both at project meetings and occasional exchange of project output. The IRC project manager also passed on news of activities in the various countries during visits and by way of a yearly progress report.

Senior nationals from Indonesia and Sri Lanka have also prepared papers on the project for presentation at international conferences. Other papers have been prepared by project staff and other nationals for use in project meetings.

3.5 Role of IRC

The study on public standpost water supply (PSWS) systems, carried out by IRC in 1977 for the World Bank, revealed that the major problems are related to the organizational infrastructure, administration and financing, the organization of operation and maintenance, motivation of the users and the public character of the standposts. Two IRC technical papers on the subject were prepared for wide disemination.

During 1981/82, a project proposal for an integrated development and demonstration project on Public Standpost Water Supplies (PSWS) was formulated by IRC in conjunction with a number of interested developing countries. During this period, preparations for project management, including visits to the participating countries by IRC staff, were made. Draft proposals for the PSWS project were prepared and discussed jointly by IRC and the responsible authorities in the participating countries. In July 1982, DGIS agreed to finance the project and IRC was designated as the executing agency with a largely supportive and co-ordinating role. Agreements were finalized in early 1983 between IRC and Indonesia, Malawi, Sri Lanka and Zambia as the participating countries.

In January 1983, a full-time project manager was appointed, supported by a part-time project assistant. One of the most important functions of the IRC project manager is making periodic visits to the participating countries to guide project management committees, project managers and project staff and to maintain contacts with collaborating agencies, such as WHO, UNDP, UNICEF and Royal Netherlands Embassies. Each country has been visited on average twice a year for a period of one to two weeks. His visits have contributed guidance to project approaches, methods and technical aspects, allowed follow-up of project progress, and stimulated project staff.

The IRC project manager has produced regular project progress reports to the funder, travel reports after each trip, and he has communicated frequently with responsible officials and project staff at the country level and collaborating agencies at all levels.

In-house IRC resources were utilised in support of the project including professional inputs by staff in several subject areas and more generally, documentalist, information, administrative and financial support. The project assistant provided administrative support and back-stopping at IRC during the project managers visits.

During the period under review, a considerable number of consultants' inputs were made both for preparation of project output and in provision of in-country support to the project (for detailed information see Appendix VI).

Since 1977, IRC has produced a number of publications on PSWS in the form of technical papers, occasional papers, a brochure and reports of meetings. These are listed in Appendix V. They are made available not only to participating countries but also to agencies, institutions and individuals from other countries interested in the subject area. The project has also featured in several editions of the IRC Newsletter and in an IRC paper for the mid-Decade publication 'Developing World Water'.

In November 1984, with local collaboration, IRC organized an international meeting on standpost supplies in Thailand for project staff and others. They also organized the exchange visits of project staff already referred to.

For the evaluation of the project, discussion notes and also some guidelines were prepared by IRC for adaptation and use by the evaluation teams. These two papers proved very useful for project staff and members of the evaluation teams. However, because of time constraints, it has not been possible to implement the evaluation approach proposed in full.

4 FURTHER DEVELOPMENT OF THE PROJECT

Since the project activities are still going on in all countries in varying degrees, it is too early to state whether the PSWS project approach could be applied on a larger scale in other projects, in particular in projects financed by external donors, including the Netherlands Government.

However as already stated, the most important aspects of the approach, that is active community participation through bottom-up planning and education, and the feasibility of public standpost water supply systems in appropriate circumstances are fully endorsed by the participating governments and the communities. Therefore as 1990, the target year of the IDWSSD, is approaching, it is recommended that the project approaches be applied in the national water supply programmes, where applicable. However for this, plans must be carefully formulated and implemented. The project could help promote a change from an old concept that piped water supply is a government responsibility and that water supply is the task of engineers under government financing and control, to a new concept of community participation, and inter-sectoral and multi-disciplinary co-operation. The project has started to show that in certain circumstances, piped water supply systems may be suitable in rural communities, if they are planned, operated and maintained properly through active community involvement and education.

As far as the current project is concerned, project activities included in the workplan in each country must be accelerated so that they can be completed as soon as possible. For this, while the funds allocated for the country projects have not yet been exhausted, a careful review must be undertaken to ascertain whether additional funds are needed, or whether adjustments should be made in funding allocation. As funds for inter-country activities and international support will be exhausted by the end of 1985, an additional allocation for these purposes should be considered seriously.

However, in preference to extending or supplementing the present project, consideration could be given to a new project. This would both consolidate and apply on a wider basis, what has been developed already.

Importantly, the four countries now participating are enthusiastic to build on project activities. Further, other countries have also expressed interest in joining, namely Thailand, Nepal, and Zimbabwe. A number of these countries are interested in applying community-based approaches not only to public standpost water supplies but also to individual house or yard connections, and non-piped supplies. This suggests that the present project may need to be redesigned to allow more flexible choice of the water supply and sanitation systems used. At the same time, the opportunity could be taken to increase the emphasis on local organization (including operation and maintenance and financial management) and to widen the geographical areas in which demonstration schemes are located in each country.

In all countries visited during the evaluation, it was felt that the sanitation component of the current project could be strengthened. Therefore, sanitation, in particular the provision or improvement of latrines, must be included in any new project. It is accepted that most people want a water supply, preferably a piped system. However, many people, mostly poorly educated and living in rural areas, do not apreciate the importance of sanitation to the same degree. Thus if sanitation is not built-in to water projects, it would be developed very slowly in many developing countries, if at all.

For these reasons, it is strongly recommended that the activities developed during the current project be strengthened and extended in a second project to run from 1986 to 1988. The new project should be renamed to reflect its broader scope. Consideration could be given to a title such as "Community-Based Water Supply and Sanitation". Certainly, there would be a need for considerable additional funding for the new project envisaged. If it is not feasible to finance such a project from DGIS alone, other donors, multi-lateral or bilateral, including non-governmental organizations should be sought.

5 OVERALL FINDINGS AND CONCLUSIONS

5.1 Project approach

(1) The project approach fitted in well with the national plans for water supply for each of the participating countries. The objectives of the PSWS project were very well accepted in general, and in particular an approach based on community participation and the method of implementation by national staff as far as possible were very much appreciated. Furthermore, all countries agreed that the project well matched the spirit of the IDWSSD and the goal of Health for All by the year 2000 through primary health care.

(2) It is too early to state whether the objectives of the PSWS project have been fully achieved or not, because the project activities are still being developed in all countries in varying degree. Nevertheless, it is strongly felt that the nationals are moving in the right direction toward the development of public standpost water supply systems with active participation of the communities. These are realistic and positive changes from the old concept of the provision of public standpost water supply by the government to a new bottom-up approach. Furthermore, the teams were advised by senior policy makers that all countries participating in the project intend to introduce this approach on a wider and larger scale in future national plans as soon as feasible.

(3) Within the project, all countries have been able to apply a broader than usual approach and increase the importance of the non-technical components in the project. Co-ordination between ministries at project management committee and demonstration scheme levels, the cross transfer of project staff and formation of project teams have all helped this process.

(4) One of the important characteristics of the project is that most activities are carried out through and by the nationals. This helps ensure that the project results and lessons learned are long-lasting and have been developed within an appropriate context. Some national staff have produced a number of papers and guidelines in project-related subject areas, such as project management, community participation and hygiene education. In many cases, the project has helped the personal development of national staff taking part.

5.2 Management

(5) In all participating countries, an inter-ministerial project management committee was formed to discuss important issues, such as the approval of workplans, selection of demonstration schemes, allocation of funds, appointment of project staff, and project reports. This has had important benefits in bringing ministries together at a senior level and in opening the way for co-operation between staff of different agencies at demonstration scheme level.

(6) A certain degree of involvement of provincial and local governments in the project was found, but in general it was weaker than it could be.

(7) Composition of the project teams varies from one country to another. One country has a water engineer as project manager and another a health inspector. With the exception of one officer in both Malawi and Sri Lanka, project staff are engaged in other projects; in some cases, these are their main work. Elsewhere no full-time officer has been assigned to the project either because there were no funds for the post or because no properly trained personnel were available. However, all countries agreed with the principle set for the project that nationals should take responsibility for implementation.

(8) Of the total amount of Dfl. 2 056 000 (equivalent to US$ 755 500 in July 1982) provided by the funder DGIS, US$ 84 000 was allocated to each of the four participating countries. The rest of the funds was earmarked for international activities and support executed through IRC and will be depleted by the end of the current project period, 31 December 1985. As of August 1985, although 64.4% of the overall budget and 87.8% of the funds allocated for international activities had been used, only 38.6% of the funds allocated to the participating countries had been called forward.

(9) Some countries expressed the view that the project funds could be larger, and perhaps not limited to the software side. Nevertheless, as the project is a demonstration scheme, the use to which funds could be put was not too rigidly defined and thus could be spent with considerable flexibility by the participating countries. However, although the funds were transferred by IRC to the co-ordinating institutions quite promptly, administrative difficulties within each country and the demanding nature of project activities, has meant that actual spending has been rather slow.

5.3 Progress

(10) As far as progress in project implementation is concerned, although the situation differed from one country to another and at local demonstration scheme level, varying from one scheme to another, in general progress was slower than anticipated. The reasons for the slow progress vary, the most important being more time required in the initial stages of the project to form the workplan, to appoint PMC members, the project manager and project staff, and thereafter the processes of community education and participation which, by their nature, require time to plan and implement. However, in terms of the main project objectives, the development of ideas and understandings, there has been considerable progress in most of the countries.

(11) According to the project agreement between IRC and the participating countries, the duration of project implementation was 24 months (later extended to 36 months). The project is scheduled to be completed at the end of December 1985. As mentioned above, in three countries the projects have been established and are now progressing well. In the fourth country (Malawi) the project has just commenced. At the end of 1985, the project in all countries will reach its most crucial period. It is felt to be extremely difficult to complete and secure the benefits from a project such as this within the planned duration of 36 months. Senior nationals, PMC members and all members of the evaluation teams strongly believed it would be very unwise to terminate the project at this crucial stage without follow-up.

5.4 Demonstration schemes

(12) In all countries, local demonstration schemes are being developed. Most of them are either extensions of existing piped water supply to the neighbouring villages or rehabilitation of non-functioning water supply systems. At the time of the evaluation only one scheme in each of Indonesia, Sri Lanka and Zambia was complete and operational. However, all three countries were committed to complete the physical construction of the remaining schemes as soon as possible, possibly by the end of 1985. Nevertheless support and monitoring to ongoing management (including operation and maintenance and financial management) will be essential to support, record and learn from the operation of the schemes.

(13) In the three countries which began the project in 1983 (Indonesia, Sri Lanka and Zambia), the importance of community participation and hygiene education was well recognized and practised, and for this, a great deal of effort has been made. Accordingly, the level of community participation and community ethusiasm were very high in all the villages visited by the teams. Furthermore, the teams were impressed that many communities expressed their readiness to contribute anything required, often through appropriate committees. This included not only labour but funds for construction, inputs to planning, operation and maintenance and participation in hygiene education. However, it should be pointed out that if the approaches are not followed through, this enthusiasm might be reduced.

(14) In most cases, water quality control was not dealt with satisfactorily. In one demonstration scheme, the team was told that chemical analysis of the source is carried out but not bacteriological analysis, which is usually more important.

(15) To varying degrees, collection of baseline data in the demonstration schemes could be improved substantially. Similarly, more attention could be given to special subject studies, as planned.

(16) In two countries (Sri Lanka and Zambia), the project included a sanitation component, that is the construction of latrines. One country provided a subsidy to build latrines, and the other promoted the use of locally available material, which is more realistic, where it is possible.

5.5 International aspects

(17) One of the important characteristics of the project, the multi-country approach, appears to be working very well. The participating countries exchange information, experience, and materials for health education and community participation. Further, this approach has stimulated the participating countries to develop and implement their workplans. The inter-regional approach, two countries each in Asia and Africa, seems well founded.

(18) The two international meetings (regional seminar on PSWS, Indonesia in March 1984, organized by Indonesian project staff, and the International Meeting on PSWS, Thailand in November 1984 organised by IRC with collaborating Thai institutions), provided an excellent opportunity to exchange experience and knowledge and to stimulate the project staff as well as the other participants. The same applies to the exchange visits of the project staff and the general exchange of information.

(19) Because of the time constraints, the team was only able to make direct contact with some of the UN agencies (such as, UNDP, UNICEF, and WHO), other international and bilateral agencies and Royal Netherlands Embassies in each country. Nevertheless, it was found that their collaboration with the project is excellent and effective.

(20) IRC's contribution to the project has been one of the most important factors for generating the project concept and its implementation. Their information support has been very useful. The visits by the IRC project manager to the participating countries were extremely important. Through his visits, a number of unsettled problems were solved. Quite often, the project staff and PMC members were encouraged by his visits and technical problems also settled.

(21) IRC provided a number of consultancy services for the project including preparation of written products on PSWS related subjects as well as the provision of consultants for in-country support. These services were very useful for the project development.

(22) As a whole, the approach of the project evaluation, consisting of self-evaluation by nationals, exchange of project staff between the participating countries and an independent evaluator as the Team Leader, together with participation of the funder (DGIS), was found to be both very effective and educational for the participants. Through analysis and identification of needs within the project the evaluation itself helped stimulate new planning and activities within the project.

6 RECOMMENDATIONS

6.1 Institutional aspects

(1) All parties to the project should ensure that close cooperation with other agencies/organisations and amongst the participating countries is maintained and further strengthened.

(2) Project management committees (PMCs) should participate more actively in planning, implementation and evaluation of project activities and in supervision of project staff. If necessary, they should meet more frequently and visit the demonstration schemes.

(3) PMC members should made better use of their respective institutions for special studies, training of personnel and students and preparation of manuals/materials for the project.

(4) Involvement of provincial/local government must be strenthened from the planning stage onwards. One way would be for responsible officials in the respective provincial/local governments to be included in PMC meetings.

(5) Because in some countries the in-country release of funds received is slow and difficult, project management committees, project managers and IRC should endeavour to streamline procedures in this respect.

(6) Country project managers (PMs) and project staff should be enabled to allocate more time and effort to the project activities and should preferably be full-time with adequate support.

(7) IRC should encourage PMCs and PMs to provide more formal and regularised reports of the project progress. Country progress reports should be distributed to the other participating countries.

6.2 Demonstration Schemes

(8) Progress in the construction of PSWS demonstration schemes should be accelerated, so that all schemes can enter the operational phase as soon as possible. IRC's support should be further intensified in coming months to help identify and solve difficulties.

(9) While community participation in general should continue to be emphasized, more specifically local organization, either for water supply and sanitation alone or combined with overall village development activities, should be strengthened.

(10) Through the communities, operation and maintenance, training of caretakers, and local management (including financial aspects), should be strengthened.

(11) The division of responsibility should be clearly understood by the parties concerned. Commitments made by authorities, agencies and projects should be fulfilled as planned.

(12) Water quality control at the local demonstration schemes should be considerably improved as soon as possible.

(13) Hygiene education materials, manuals, guidelines and photos should be further developed and exchange between the participating countries and with IRC promoted.

6.3 Future Use/Development

(14) To assist the participating countries to develop the project and apply it to the larger scale, establishment of a permanent unit with full-time staff to promote community-based approaches to water supply and sanitation should be considered.

(15) Participating countries should consider integrating successful aspects of the project methods into existing national approaches. General procedures for a more community-based approach should be prepared, tasks of various agencies specified and necessary training programmes established.

(16) Early studies should be initiated into the cost-effectiveness of the more community-based approaches used and calculations made on the human and other resources needed to promote and sustain it if applied on a large scale.

(17) As a priority and to assist wider use, each participating country should produce an interim overall report presenting lessons learnt from the project so far. IRC could assist by identifying key issues and providing consultant support.

(18) In order to safeguard what has already been achieved it is recommended that the current project should not end as originally scheduled in December 1985 without new activities being developed from it. It should be extended for a further period or better, developed into a new project.

(19) To achieve significant results, the duration of any new project would need to be of three years duration (1986 to 1988). It should aim to:

- Strengthen what has been achieved so far in the current project, monitor and report further on it.
- Complete existing demonstration schemes, provide supporting inputs to the community based management of constructed schemes and give special attention to those activities mentioned above which need strengthening.
- Promote the transfer of the project methodology to larger scale programmes in the participating countries.
- Apply and adapt the project approaches to different areas, and other types of water supply systems. Sanitation should be more extensively included as a particularly important component.

(20) If the above recommendations are accepted, it is suggested that the new project be entitled "Community-based Water Supply and Sanitation".

(21) A new project should enable several other interested developing countries to join the present participating countries and take part in the development and implementation of the project. The addition of one or more countries from each of Asia and Africa would help transfer the experience gained to date, draw in new experiences and open up the possibility of regional meetings and support.

(22) IRC's supporting and co-ordinating role should be continued in any new activities. This can be strengthened by the addition of one or more Project Support Officers (preferably from the developing countries), based at IRC and working alongside the IRC Project Manager.

(23) Since the hardware side was not specifically included in the present budget allocation, some countries have had difficulty in obtaining the necessary construction materials for local demonstration schemes. In future closer prior collaboration with other agencies for the provision of such material should be developed, or it should be included for in the project budget.

(24) Exchange visits and participation in international meetings should be continued as a useful way of sharing information and helping the development of the project. Such activities should be planned well in advance by all parties.

(25) In order to share project experiences amongst the participating countries and with other countries, project staff and senior nationals should be encouraged to prepare papers on practical aspects of the project for publication and presentation at meetings.

(26) Ongoing evaluations of the project should be made from time to time by PMCs and the project staff. The next formal evaluation could be undertaken during 1986 or early 1987 by national experts in the country in collaboration with project staff, using the experience gained from the present evaluation. The results of the ongoing and formal evaluations in each country could be presented at future international meetings in project-related fields.

(27) The self-evaluation approach to the evaluation of projects merits further development and wider use in future. IRC should consider producing a working paper based on the joint experiences of planning and implementing the current evaluation.

PART B

COUNTRY REPORTS

7 INDONESIA

7.1 Introduction

In the current Government strategy on water supply in Indonesia, a clear distinction is made between the supply of clean water for urban areas and that for rural areas. Following the pattern inherited from the colonial period before World War II, the two main agencies dealing with the provision of water supply are presently the Ministry of Public Works for the urban areas and the Ministry of Health for the rural areas.

Recently, a new strategy for the current Repelita IV (Fourth Five Year National Development Plan, 1984 - 1989) was adopted in which the Ministry of Public Works became responsible for piped rural water supply which formerly was taken care of by the Ministry of Health. Co-operation and synchronization of water supply projects between the two Ministries mentioned have always been close, and in fact a third agency, the Ministry of Internal Affairs is also linked to the co-operation. The tripartite connection is clearly reflected in the National Board for the International Drinking Water Supply and Sanitation Decade (IDWSSD), as well as in the executing levels of water supply projects; nationally, provincially and at village level.

Differentiation of interest and approach, also overlapping in method of implementation of the overall strategy on water supply however exists. Task division is, therefore, made hierarchically (for example, the Ministry of Health is the responsible agency for controlling water quality and public health training.)

Regarding the targets on water supply set in the National Development Plan, the emphasis of water supply distribution systems is to reach 70% urban coverage with 60 litres/capita/day (lcd) with minimum 30 lcd. It includes the installation of water supply distribution systems in 2000 small towns or capitals of districts, popularly known as the IKK water supply. IKK water supply was started in early 1982 and was considered to be an ambitious national project. It launched standardized water supply package plans, in which in the distribution network and the construction of public standposts form part. The IKK water supply project has attracted great interest in the international community, including IRC, which expressed its interest in co-operating in action research on public standpost water supplies (PSWS). One of the objectives of the cooperation is to evaluate the perceptions of the beneficiaries of such projects in general, and a community based approach to water supply planning in particular.

The project in which IRC collaborates is confined to Cirebon District West Java and has the following objectives:

- to develop a model of standard procedures for establishing participatory projects which provides for bottom up planning;

- to develop a method of integrated planning of community water standposts covering all vertical stages of the project from the initial stage to operation and maintenance stage and aspects of water supply such as health education and sanitation.

In reviewing these objectives in terms of the aspirations of the IDWSSD objectives, it is clear that the IRC supported PSWS project is used to evolve processes and procedures which would facilitate bottom up integrated planning. In this light, it is felt that the Government of Indonesia seems to lay heavy emphasis on the much felt need of bottom-up planning which has been accepted as one of the Government's policy planning processes in the context of rural development, particularly water and sanitation.

Since this seems a broad based concept and a dynamic element in national efforts directed to achieve safe water supply to 75% of the urban and 60% of the rural population by the year 1990, more attention is invested in the concepts mentioned above on the evaluation of the demonstration projects supported by IRC.

Taking into consideration the national objectives and the significance of the IDWSSD targets and the nature and functions of the evaluation team of the PSWS project, the following evaluation objectives were formulated:

- to analyse the strategy used in the project and to determine to what extent it has been effective in the implementation of the PSWS programme;

- to determine the nature and type of inputs at both national and local level.

7.2 Methodology

The following methodology was developed in consultation with the project staff.

(a) discussion sessions at national level:

discussion with the members of the steering committee:
Ministry of Public Works
Ministry of Health
Ministry of Home Affairs

discussion with bilateral agencies;

discussion with the members of the PSWS project team in Indonesia and the team members who visited Sri Lanka;

discussion with the Director of the Institute of Human Settlements and other officers at IHS Bandung;

(b) discussion and observation at local level:

- discussion with Bupati (Regency Head) and Mayor and Executive Secretary of Cirebon;
- discussion with officers at Kecamatan (District) level;
- discussion with the village chiefs, community leaders and other members.

(c) Observation of demonstation schemes:

- observation of the completed water supply of Gumulung Tonggoh.
- observation of water-use behaviour of the community and conditions of standposts.
- discussion with the members of the community of other schemes at Jagasiri, Playangan and Karya Mulia

7.3 Findings

7.3.1 Administration and Management

The primary responsibility for the provision of water supply and sanitation facilities lies with the provincial governments. In addition three ministries of the central government are heavily involved in the water supply and sanitation sector:

- Ministry of Public Works (DEP PU) is responsible for development in urban and semi-urban areas.
- Ministry of Health (DEPKES) is responsible for the development of rural water supply and sanitation facilities not covered by the urban systems.
- Ministry of Home Affairs (DEP DALAM NEGERI) is reponsible for the operation of water supply schemes and drainage and sewage systems as well as promotion of community participation, by virtue of its responsibility over the local governments and the local government enterprises.

All plans which require the use of funds from external resources must be approved by the Ministry of Finance and the National Development Planning Agency (BAPPENAS). The Ministry of Finance establishes terms to the existing agencies covering the provisions under which funds have been provided.

The Ministry of Public Works is the principal government agency responsible for the implementation of the urban and semi-urban water supply and sanitation sub-sector programmes.

CIPTA KARYA - Directorate General for Human Settlements of the Ministry of Public Works (DEP PU), which is responsible for planning, evaluation, design and supervision of construction of all urban and semi-urban water supply, executes water supply projects through the provincial public works office (Dinas Per CIPTA KARYA).

Central level organization for the implementation of the PSWS project. The central level administration of the PSWS project is confined to three ministries, namely the Ministry of Public Works, the ministry of Health and the Ministry of Home Affairs. The Ministry of Finance controls funds, while the National Development Planning Agency provides support for overall planning and programming. Since the Ministry of Public Works assumes the major responsibility, the PSWS project comes within the framework of collaboration between IRC and the Government of Indonesia, which is represented by the Ministry of Public Works. The Ministry of Public Works executes the PSWS project through CIPTA KARYA which is one of the three Directorates General of the Ministry.

Project management committee (PMC). A national level project management committee (PMC) consisting of members from the Ministry of Public Works, Ministry of Health and the Ministry of Home Affairs has been established to provide support and ensure the co-ordination of approaches, strategies, objectives and programmes among ministries involved, and to provide policy guidelines for planning and implementation of the project. The Director General of Cipta Karya chairs all committee meetings. The project manager is the secretary of the PMC.

Project co-ordinating institution (PCI). The Institute of Human Settlements at Bandung functions as the Project Coordinating Institution and assumes the responsibility of the project implementation and co-ordinates various participating institutions involved.

Project manager and project staff. A senior member of the Institute of Human Settlements functions as PM. He is assisted by three other teams consisting of members from Ministry of Public Works, Ministry of Health and Local Authorities to give the technical guidance, training, health education and research and development.

The Institute of Human Settlements has, in addition to its normal routine functions, 13 projects on Housing and 12 projects on Sanitation. It is found that by being a senior member of the Institute, the Project Manager is expected to play a dynamic role and is responsible to the Director of the institute for the management of these projects, in addition to his responsibilites in the PSWS project. It is found that he has limited time in view of other commitments to attend to the management of the PSWS project.

Functions of project staff and project manager. PM provides administrative direction and technical guidance while another staff member who is attached to the IHS assists staffs of Health Ministry in

health education, community participation and other related activities. Project staff manage all affairs of the project through the local staff with community participation. At Kecamatan (District) level, (which could also be considered to be the nucleus unit for local level management from the point of view of availability of staff and responsibility for general welfare in addition to the water supply), the local officers, mainly the health educator for sanitation and a midwife carry on the project in addition to their normal specific functions.

In planning and implementation of project activities, it has to be remembered that the community is made fully responsible through health education to realize the concept of community participation. The function of the project staff is that of a concept such as 'help them in order to be able to help themselves'. As mentioned in objectives, this is a process applied to encourage bottom-up planning and learning from experience for further strengthening.

Although bottom-up planning appears to be simple it has to be thought in much more critical terms. Implementation of services direct from the bureaucratic organization is an exercise which has been practiced over the years. Much more learning and research are required to facilitate processes visible enough for generalization purposes. Although schemes are small, these is a wealth of knowledge behind these and factors behind the knowledge are required to be analysed from the point of view of research to build up feasible processes for bottom-up planning.

7.3.2 Project Approach

Criteria of selection. Criteria for selection of PSWS demonstration projects were based on four major factors, namely geographical, socio-economic and cultural, mode of water supply with consideration of integrated approaches and distance. Regencies (administrative divisions within a Province) in the Eastern part of West Java Province were selected based on the above criteria.

Methodology of approach. A national workshop was held to discuss the preliminaries and the objectives of the IRC collaborated project in the light of the country's objectives and national priorities in water supply and sanitation. Based on the above criteria the municipality of Cirebon, Regency of Cirebon and Regency of Majalengka were selected. These Regencies were requested to select districts and villages for the project.

Consultations with village chiefs and selected communities were held. To facilitate Regency level support,a consultation meeting was held and all district and village level officials and community leaders were briefed. Local teams were then established to take care of the project.

The consultations and meetings conducted at various levels seem to have clarified the roles of official personnel attached to various Ministries. This integrated approach has also clarified and strengthened the team approach. However it would have been very effective if a committee were established at Regency level, including community representatives, to monitor progress and provide further guidance to communities.

7.3.3 Demonstration Schemes

Information of the four demonstration shcemes is given in Table I on the following page.

Gumulung Tonggoh scheme. This demonstration scheme is being successfully implemented with community participation. Water supply has been commissioned for use for drinking, washing, and bathing purposes. Local health staff together with the chief and the community leaders were found actively involved in the project. The roles of the village chief and leaders are constructive in every respect. The community was involved in planning and construction of the project. They were given material support together with skilled labour to construct the scheme.

In terms of the objectives formulated for the PSWS project,it is seen that the project staff has successfully invested their efforts in getting the community to plan within their resources and abilities and to construct the scheme. What was more important were the processes, methods and techniques that have been put into effect both by the community and the project staff. For the community to bring about their own behavioural change requires careful planning with a very high degree of attention on the part of the catalyst, that is the project staff. The product of this reawakening is considered to be the effect of methods and techniques that are invested at different levels, at expense of different techniques, mostly by trial and error in practical terms. This has been done very successfully and it is indeed encouraging to note that community interests are being sustained.

As far as bottom-up planning is concerned, this project has achieved success up to some level of operation and maintenance. In terms of objectives, it is found that the PSWS team has planned to analyse the factors that make up the process scientifically for the purpose of generalization and to support the concept of technical co-operation among developing countries (TCDC). It would be appreciated if protocols were developed for research without further delay so that this wealth of information can be explored systematically and the process discovered.

Jagasari schemes. This scheme is in the planning stage. Socio-economic surveys by local personel and the community have been completed. Community meetings and consultations are in progress. The location for the standposts has been decided by the community. The community share and the support from the Government have been clarified. The materials have been obtained and are ready at the source. The community, including village chiefs and leaders, are

TABLE I: Information on Demonstration Schemes

	District	Name of Village (Kampong)	Nature of area	Socio-economic position	No. of facilities	Population	No. of stand-posts	Type of System	Authority	Present stage	Remarks
1.	Astanajakura	Gumulung Tonggoh	hilly	Rural agricultural community	184	482	4	Gravity		Completed and is being used	Bathing and washing facilities were provided along with drinking water. Community constructed with material and skilled labour support. Rp 100 per family for O and M.
2.	Cikijing	Jagasari	hilly	Rural mixed community	73	361	3 1 for mosque	Gravity		In planning stage - Health education and community participation being done	Planning stage Materials found at site for construction Expected to complete by December, 1985 Rp 100 per family for O and M.
3.	Cirebon Selatan	Karya Mulia	flat	Urban/mixed community	80	320	4	Extention from PDAM supply	PDAM	In planning stage	Project taken up in June 1985 and is in planning stage.
4.	Babaken	Playangan	flat	Urban mixed (majority fishing) community		2900	under consid-eration	under consid-eration		In planning	Technological feasi-bility has to be decided. Different technical options are under study.

keenly interested in carrying out the project activities.

It is understood that the same methodology as applied in Gumulung Tonggoh is under consideration with modification in this scheme.

It is highly opportune and feasible to build applied research into this project so that the objectives can be realized.

Playangan and Karya Mulia schemes. These two schemes are still in the planning stage. Playangan scheme has technical complications and studies are underway to find the best possible alternative for the scheme. The community chiefs have been involved to some extent. The Kampung Melati scheme has just begun its work at the request of the local authority and is still in technical planning stage (started in June 1985).

Since these two schemes are based in a coastal belt and efforts are being made to explore processes, methods and techniques to suit coastal area communities particularly fishing communities, it is necessary to have plans for both technological and socio-economic research.

7.3.4 Health Education

Health education has been the major responsibility of the health team working at local level. In order to strengthen health education activities at community level, the following methodology was planned.

i) National level workshops and seminars were held to pool the experience in public standpost water supply.
ii) At Kabupaten level dissemination of health messages was integrated into discussions. This orientation at Kabupaten level is to make non-health staff fully aware of the significance of health benefits of the project.
iii) Consultations with community chiefs and members, and with all officers related to the project, were conducted and health education activities planned.
iv) Local personnel were selected from demonstration areas and trained on a curriculum developed by Health Ministry officials.
v) Local personnel together with local health staff sanitarians, midwives, and traditional midwives carried out health education activities and promoted community participation.
vi) Local personnel were trained to carry out socio-economic and health surveys and to present the findings to community groups to facilitate community decisions. Community leaders were involved.

Voluntary associations are orientated to undertake health education. A series of group discussion sessions were conducted by the project staff in order to promote community participation and desirable behavioural changes.

It is desirable that health education inputs are compiled and made available for study. In a project where heavy emphasis is laid on bottom-up planning and related research, compilation of health education inputs would yield appreciable results.

7.3.5 Community participation

Success of community participation depends not only on the community itself, but on the efforts made by the community to achieve it, since the community requires the knowledge and know how to make decisions by themselves.

This process was observed and the project staff were seen to have applied the 'do with' approach in that communities are facilitated to plan and complement the project, taking decisions with others. Communities do not reawaken simply because the concept of reawakening is there. They need strong motivation and dedicated persons, in order to make decisions by themselves.

At village level, project staff and village chiefs together with the voluntary associations organized the community and implemented the programme of health education. This has produced sucessful results and helped the community make decisions on their own. This was seen in planning the construction, locating the standposts and emotionally binding themselves for some desirable behaviour pattern as regards the use of water from the standposts.

Community participation does not end with the completion of an activity in the community. It is a long emotional and spiritual process which has to be built up through health education efforts. Communities by themselves cannot come up on their own without this strong element. Therefore some agency, whether Government or otherwise needs to plan carefully and make the community work. The project staff was seen to have very close contact with the community and made strenuous efforts to lead the community in this direction. This may be considered a trial and error approach, and therefore, it is important that efforts are made to document the results and discuss them with national experts. Community participation is an effective method to work with communities, when it is properly understood and planned. Failures are not with the people but with the facilitators who have failed. In this repect, Gumulung Tonggoh is an example of effective community participation.

7.3.6 Technical aspects

Criteria and design standards

- The optimum target is one public standpost is for 40 households (or about 200 people) with a maximum service radius of 100 m and minimum supply of water of 30 litres/capita/day including non domestic use and losses.

- Connection to the standpost from the main distributions pipe has to be connected through clamp-saddle or tee.

- Connection pipe diameter varies according to the consumption.

- The pipe used in this project should be approved by DJCK.

- Water meter should be used for measuring the flow to public standposts and it should be protected by a concrete and steel or wooden box.

- The type of standpost should be decided on by considering factors such as population to be served and local circumstances. Platformsmust be very small to discourage people taking baths.

- The number of taps installed at one standpost depends on:

  total number of people to be served and peak hour demand
  scheduling pattern of demand
  rate of flow through the tap.

- Storage or cistern tanks should be provided if the flow of the source is not sufficient for direct consumption.

- The height of water fall should be about 50cm-60cm.

- The taps used should be commonly used type of appropriate diameter.

- Every public standpost should be connected to a drainage system in order to prevent environmental hazards.

- Maximum day factor = 1.2 x average day factor.
  Maximum hour factor = 1.5 x average day factor.

- Design period for civil and pumping works considered as approximately 20 years.

- Population growth rate varies from 2.3% to 2.7% per annum

Data collection

The following data were collected in the preliminary survey to decide the location and type of the project. (see Tables 2 and 3)

- technical data, such as sources of water supply, geomorphology, quality of water, (only chemical analysis);

- demography data, such as population, age and level of education of the people;

- habits of the people in collecting water, how people treat water and their attitude towards improvement;

- economic aspects;

- health condition;

- existing type of water supply system and its management.

TABLE 3: Technical details of the demonstration projects

Details	1 Gumulung Tonggoh	2 Jagasiri	3 Playangan	4 Kesenden (Karya Mulia)
No. of houses	134	73		80
No. of people	482	377	2000	320
Population growth rate	2.7	2.3	2.3	2.5
Population in the year 2005	758	-	-	-
Intake type	spring	3 springs	deep well depth 120 m	from PDAM main
Rate of flow	065 1/s	0.6 1/s	5 1/s	-
Reservoir capacity	$6m^3$	$2m^3$		
No. of stand posts	4	4		4
Pipe details (transmission):				
4 inches				240 m
2 inches		total		132 m
1.25 inches	117 m	approximately		-
1.00 inches	60 m	800 m		-
0.75 inches	56 m			8 m
Tentative estimate (million rupiahs)	9.5	approx. 5.0		3.95
Per capita demand (litres)	30	30		30
Bathing places	1			
Tank capicity	$2m^3$			
No. of taps	4			
No. extra taps connected to standposts	4			

not decided

TABLE 2: Location of the demonstration projects and present condition:

No.	Name of the scheme	Location	Present Condition
1.	Gumulong Tonggoh	135 km away from Bandung 17 km from Cirebon; hilly area	Completed
2.	Jagasiri	14 km from Cikijing; hilly area	Ready for construction
3.	Playangan	20 km from Cirebon; fisheries village	Planning stage
4.	Kesenden (Karya Mulia)	3 km from Cirebon city;	Ready for construction

Construction

The only completed scheme is Gumulung Tonggoh. The scheme was consructed on a self-help basis with involvement of some paid skilled labour under the supervision of officers working at Kabupaten level with the support of the PSWS team.

The construction period was from 31 August to 28 September 1984 (28 days). The system of construction can be applied to other schemes.

Operation and maintenance:

Gumulung Tonggoh. At the first stage, the community of the above village appointed ten persons to take care of the physical items of the project. Later, they decided to form a co-operative to take care of the project. At present, people are charged Rupia 100 per home and collect an amount of 1340 Rupiah per month.

Jagasari. This scheme has not yet been constructed. This type of scheme is almost the same as Gumulung Tonggoh. The same rate structure can be applied for this scheme, also.

Kesenden (Karya Mulia). This scheme is expected to obtain water from the local water enterprise and the charge is approximately Rupiah 35 per 1000 litres. According to the statistics available, people in the area require 9.6 m^3 at the rate of 30 lcd. Approximately Rupiah 50 - 100 will be sufficient to maintain the scheme.

Playangan. According to information available the monthly income of the inhabitants of this village is about Rupiah 10,000-15,000. Before going for the construction of the piped water supply scheme, the operation and maintenance costs should be carefully looked into.Before deciding a fee for water, future improvements of the scheme should be considered, such as extension of the lines, erecting of new standposts, and the recovery of the project cost for all these schemes.

7.3.7 Observations and remarks

The objectives of any water supply system are to supply safe water in adequate quantity, conveniently located, and at reasonable cost to the consumer. The basic considerations for sound engineering decisions are the area and population to be served, the design period, the water demand, selection of the water source, and quality, and the nature and location of transmission and distribution facilities provided.

The selection of a water source and the nature and content of water distribution are two main factors in determining the cost of the project. The nearer the raw water source (of good quality and adequate in quanitity), the lower the cost and greater the reliability of supply generally. It is important on the whole to ensure the best design which could provide the community with a reliable, safe and adequate water supply at least cost, both capital as well as recurrent. Affordability and willingness to pay are other factors that determine the usability and social equity in service. Considering the above, observations and remarks can be given as follows:

Gumulung Tonggoh

- Chemical analysis of the source shows satisfactory results but bacteriological analysis was not done for total coliform and faecal coliform. It has to be done monthly.
- There is no arrangement for chlorination, but this should be provided.
- The source should be gauged at least once a month to predict characteristics and find a alternative, if required.
  Most of the standposts have been modified to function as meeting places. Since there is a direct connection from uncovered storage to the drinking water tap, there are possibilities of contaminated water getting into the drinking water tap. Arrangement can be made to have separate connection with ball valve from service main to bathing tanks to avoid this. The bathing tanks should be covered by providing vent pipes and sealed manhole covers.
- There is a possibility of providing house connections, if required.
- Spring areas should be fenced off to avoid environmental pollution.

Jagasari. This scheme is ready for construction. The following need to be considered before construction works starts:

since the proposed springs are situated at the foot of the hill, there are possibilities of environmental pollution and collection of sediment especially during rainy days. Therefore, spring boxes should be constructed with the support of settling tanks. (See IRC publications for further details on spring boxes).
- chemical and bacteriological analysis should be carried out and chlorination arrangements should be provided.

Kesenden (Karya Mulia). This scheme is ready for construction. Suitable drainage arrangements should be provided for standposts because the area is almost flat.

Playangan: The only source in the area is a deep well about 120 m deep giving 5 litres per second. According to the above figures and assuming approximately 16 hours of pumping per day, daily consumption is 288 000 litres. The present population of the village (2900 inhabitants) require 81 000 litres per day.

There are two possibilities of implementing a water supply system to this village:

- provision of deep wells and handpumps which need low operation and maintenance costs.
- construction of a standpost water supply scheme with engine driven (or with some other energy arrangement) deep well pump, (70 m total head, 10 000 litres per capita deep-well pump would be sufficient with main storage tank or cistern standposts after considering operation and maintenance aspects.)

7.4 Conclusions

(1) Evaluation team consisting of the team leader, two Sri Lankans and several Indonesians observed the PSWS project in Indonesia from 15 to 27 July, 1985. A representative of the funder also took part in the exercise.

(2) The evaluation team visited Bandung where the Institute of Human Settlements is located and visited the demonstration sites in the vicinity of Cirebon, West Java. The team also visited the Ministries concerned with the PSWS project in Jakarta. As far as planning and management are concerned, the Project Steering Committee, consisting of representatives of Ministries of Public Works, Health and Home Affairs, is responsible for overall decisions of planning compatibility with national policies. Apart from the Project Steering Committee, a project management committee takes charge of detail planning, programming, implementation and the evaluation of the project.

(3) There was no full-time staff for the project and those who are working for the project have various other responsibilities in their related fields, such as housing and sanitation.

(4) It is gratifying to note that from the conception of the project, bottom-up planning procedure has been emphasised and therefore, community participation in the project has been well organized. In particular, for this approach, efforts made by local government authorities at various levels are very much significant.

(5) The IRC contribution to the project has been an important factor in developing the project concept and its implementation. On the other hand, it is very significant that Cipta Karya and also the Institute of Human Settlements in Bandung in collaboration with other Ministries, such as Health, have a high level of expertise.

(6) Although because of lack of time, the team could not make close contact with UN Agencies, such as WHO, UNICEF, UNDP and other bilateral agencies, it was noted that their collaboration in the project has been very smooth and effective.

(7) The project has produced a number of guidelines which are being used for training of staff and implementation of the project in the demonstration schemes. However, most of them are written in the Indonesian language, but through translation, the team realized they are promising and warrant further consideration.

(8) Although the evaluation team was not able to review the project workplan in detail, progress has been slower than originally planned for various reasons, such as time consuming discussion among government agencies, and absence of full-time project staff.

(9) It is encouraging to note that Government officials, and community leaders met by the team supported the concepts,methods, and techniques of the PSWS project and furthermore, most of them would like to see similar projects extended on a broader scale as part of goals for the IDWSSD.

(10) As far as selection of the demonstration sites is concerned, the team realized that four areas in the vicinity of Cirebon were selected for convenience of planning, implementation and evaluation. It is quite clear however that they are not representative of the whole country or of the island of Java.

7.5 Recommendations

(1) Since the construction activities are only due to be completed by the end of 1985, it is strongly recommended that the project be extended for at least one year.

(2) If the extension of the project is accepted, the following aspects need to be included;

- extension of project demonstration sites to other areas on Java island and also to other islands;
- sanitation activities.

(3) Since the concept of this project has been accepted as a national policy, full-time project staff and preferably the establishment of sections at national level is desirable.

(4) Research activities mentioned in the project documents should be attended to as soon as possible. In this connection, it is emphasized that technical aspects of the project, such as the study of water

source quality control, and monitoring and operation and maintenance should be followed carefully as recommended in IRC and WHO publications.

(5) In the spirit of TCDC, technical cooperation among developing countries, the experience gained in Indonesia would be very useful in other countries. Therefore, it is recommended that papers on the demonstration scheme approach and operation and maintenance procedures should be completed and made available in English.

(6) Since this project has demonstrated that the concepts, methods and techniques used are sound and feasible to apply in other parts of the country, every effort should be made to disseminate the project concept, and to provide the necessary assistance requested for the provision of safe drinking water to cover the whole nation by government and non-governmental agencies in collaboration with external coolaborating agencies/organizations.

(7) Although sanitation activities are not included in project objectives, the evaluation team realized that since environmental sanitation in such areas requires urgent attention, it is more realistic to include sanitation in the project.

8. MALAWI

As mentioned elsewhere, although the project agreement was signed between the Malawi Government and IRC in February 1983, the project activities did not begin until April 1985. The main reason for the delay was that the Department of Lands, Valuation and Water (DLVW), which is responsible for water supply and thus is the project co-ordinating institution, decided to create a permanent post for the project staff who would work for the project full-time. Unfortunately it took quite a long time before finally Mr. F. Kwaule took up his position as PSWS project officer on 12 April 1985.

In the recent reorganization in the Government in early 1985, the water affairs section of DLVW became the Department of Water under the Ministry of Works and Supplies.

For these reasons IRC and the Malawi Government agreed to postpone project evaluation until later. Under the circumstances, the team leader was advised to stop over in Lilongwe, en route from Lusaka to discuss the project activities with the responsible officials.

The team leader stayed in Lilongwe from 19 to 22 August 1985 and met the following officials.

Department of Water, Ministry of Works and Supplies:

Mr. B.H. Mwakikunga	-	Water Engineer in Chief
Mr. M. Phiri	-	Chief Civil Engineer
Mr. F. Kwaule	-	PSWS Project Officer/ Water Coordination Officer
Mr. L.H. Robertson	-	Principal Water Engineer
Mr. J. Lewis	-	Chief, Central Water Laboratory

Ministry of Health:

Mr. Ngomba	-	Principal Secretary
Dr. M.C. Chirambo	-	Chief Medical Officer
Dr. M.W. Lungu	-	Deputy Chief Medical Officer
Mr. P.A. Chindamba	-	Chief Health Officer

Ministry of Community Services:

Mr. H.L. Chikhosi	-	Chief Community Development Officer
Mr. D.M. Manda	-	Principal Community Development Officer
Mrs. L.R. Kholoma	-	Community Development Officer

WHO:

Dr. S.H. Siwale	-	WHO Programme Coordinator/Representative

UNDP:

Mr. Zaude Gabre-Madhin	-	Resident Representative

Most of the discussions at the Department of Water covered the following subjects:

- The responsibility of Mr. Kwaule, Project Officer, who is paid by the Government, and the supporting staff of project assistants at the demonstration schemes/locations.

- Coordination with the Ministries of Health and Community Services.

- The workplan, which was prepared with the assistance of the IRC/PM during his last visit in July 1985, covering the activities up to the end of 1987.

- The progress of the Urban Communal Water Point (UCWP) project.

Although the PSWS project started very late, the team leader believes that the project should be developed quickly as now planned. The environment is favourable in that since late 1960 Malawi has a had a long history of community participation in water supply. More recently, the UCWP project, sponsored by UNDP/UNCDF/WHO, in which community participation was one of the most important elements, has progressed very successfully and at the end of funding support in June 1985, 600 communal water points in 48 small urban centres should be operational. Another reason is the strong will and ability of the Government in water supply programmes.

As far as hygiene education, community participation and sanitation are concerned, it is very much essential to organize closest collaboration with other ministries concerned, that is the Ministries of Health and Community Services.

While Mrs. Kholoma was unable to participate in the Zambian evaluation, it is fortunate that Mr. Kwaule could take part. The team leader is very pleased to mention that he made valuable contributions to the evaluation and the experience provided a good opportunity for him to learn about project development in a neighbouring country.

The team leader strongly supports that the project in Malawi should be extended for a further period as requested by Government up to the end of 1987.

9 SRI LANKA

9.1 Introduction

In 1980 Sri Lanka was one of the first countries which formulated an International Drinking Water Supply and Sanitation Decade (IDWSSD) Plan and presented it to the UN. The Government of Sri Lanka, having realized the significant impact of the Decade Plan to its development projects, has accorded it very high priority. The Decade Plan has passed the mobilization stage which was set for the period 1981 - 1984. It has now entered the second stage 1985 - 1990 with a good number of external collaborating agencies actively participating in supporting the Sri Lanka Government's endeavour to realize the goals of the Decade Plan. The plan envisages providing safe drinking water supplies and adequate sanitary disposal facilities to the urban population by 1990 and to the rural population by the year 1995.

The Government of Sri Lanka has more than doubled the budgetary allocations for the development of the sector from 2 to 5% in 1981-1983 and up to about 7% in 1983-1984. Strenuous efforts are being made to increase development of groundwater through deep and shallow wells with handpumps. It is hoped to reach the target set at 1990 and 1995 respectively with the increased budgetary allocation, with the high rate external assistance, and with the mobilization of NGO support.

The International Reference Centre for Community Water Supply and Sanitation (IRC) is one of the external collaborating agencies to the National Water Supply and Drainage (NWSDB) for contributions in the achievement of the objectives of the national Decade Plan.The contribution made by IRC was oriented towards activities other than only the physical construction of water supply systems and sanitary latrines.

According to the information available and also with reference to the discussion with the Project Management Committee (PMC) and project staff, funds made available by IRC were used mainly for health education, community participation, socio-economic feasibility studies and for developing strategies, methods and techniques for public standpost water supply systems and sanitation.

In the project proposals, the projects intended contribution is to improve the organisational and technological infrastructure and the strenthening of the operation and managerial capacity in the community water supply and sanitation sector at national and local level through the promotion of local demonstration projects.

Taking into consideration the objectives of IRC, NWSDB, the national inputs for the establishment of the demonstration projects and the time available, the evaluation team formulated their objectives in line with a comprehensive self-evaluation process.

The project is being undertaken by the NWSDB in the following areas:

- Padaviya, Anuradhapura District
- Haldumulla, Badulla District
- Wijebahukanda, Neliyo District
- Seelatena, Badulla District

The Evaluation team visited Haldummulla, Wijebahukanda and Seelatena. A visit to Padaviya was not possible due to security reasons.

9.2 Methodology

The following methodology was used in the evaluation of the PSWS and Sanitation Project of Sri Lanka. The methodology was modified taking into consideration the availability of time once the team had assembled due to the delayed arrival of the Indonesian team members.

a. discussions at national level with:

Project Management Committee (PMC)

PMC members individually

External agencies particularly WHO

Health Ministry officials

b. at field level through:

discussion with NWSDB and Health Ministry field staff working in project areas

discussion with Action Committee members, volunteers, leaders and other community members

observation of the completed Haldumulla water supply system

observation of completed standposts and water being used.

observation of latrines under construction.

c. review of project documents:

progress reports

socio-economic and feasibility studies

health education plan

charts and maps

health education materials

other relevant records maintained by project staff.

d. discussion with the project staff

The programme prepared by the national project staff had to be modified because of the delayed arrival of the Indonesian team members. The team leader, Dr. S.W. Yun, in consultation with the national project staff and the PMC, conducted the national level discussions meanwhile, creating more time opportunities for the delayed Indonesian team members.

During the series of discussions that followed incorporating Indonesian team members and national project staff, the following responsibilities were undertaken by the members. The team was obliged to divide the responsibilities in view of the time contraints.

Mr. Parwoto	- planning and managements aspects
Mr. Darpito	- health education and community participation aspects
Ms. Sri Endah	- technical aspects
Mr. H.I Karunadasa Mr. W.A.N. Weerasinghe	- preparation of field programme and supply of information to team members.
Dr. S.W. Yun	- facilitation and guidance.

9.3 Project management

Units for different levels of management have been established in order to carry out the activities planned under the project:

9.3.1 Project Management Committee (PMC)

The PMC consists of representatives from:

- The Ministry of Local Government Housing and Construction (LGH&C) - (four members)
- Ministry of Health - (two members)
- WHO - (one Sanitary Engineer)
- UNDP - (one member)

9.3.2 Project Co-ordinating Institution (PCI)

NWSDB also functions as the PCI for the co-ordination of various participating institutions.

9.3.3 Project management and co-ordination

The PMC is the key management unit which assists the project staff in the planning and implementing of the project at national level. Since the inception of the project in February 1983, 22 PMC meetings have been held to discuss the project in detail and to tackle problems that have arisen. Special PMC meetings were held to discuss problems that needed the attention of PMC members.

The project manager executes the decisions of the PMC. It appears that the roles of PCI are integrated into the activities of the PMC, since the Chairman of the PMC is also the Chairman of the PCI.

It is also observed that Action Committees which includes Gramodaya representatives are involved in planning and implementing project activities at local level. Management and coordination at local level were found to be properly established.

9.3.4 Project staff

At the national level, two key staff members (project manager and health education specialist) were functioning as project staff. It was also noticed that since the beginning of the project, the project manager has been changed and the present project Manager (Mr. Weerasignhe) is the third who has taken the position since January, 1985.

It was also found that the project manager is only able to serve the project for about 50% of his time because of other duties assigned to him. The health education specialist (Mr. Karunadasa) has served the project from its inception as a full-time staff member.

Two trainee sociologists are attached to each demonstration scheme as part of manpower development. A health education officer is attached to the Haldumulla scheme. Possibilities to generalize the methods and techniques developed in the project are very high.

9.3.5 Manpower development and support facilities

As an experimental project, the project provides experience for the development of rural water supply and sanitation projects, thereby creating opportunities for others to learn. Further, the project facilitates opportunities to experience a process of 'learning by doing'. A video film which was incorporated in the activities of Haldumulla project is being prepared. The team members had an opportunity to look at the film. Although it is not complete, the team found that it was very good health education material to be used both within and outside the country.

9.3.6 Financial management

Funds provided by IRC have been used strictly in accordance with the project agreement. All the funds spend for the project activities required the approval of the PMC. The Chairman of the PMC, who is also the Chairman of NWSDB, takes a very keen interest in the proper management of funds provided by IRC.

The restriction imposed by the project agreement to confine the funds to software activities has given rise to problems during the construction stage of the project.

9.3.7 Conclusions

With regards to the significance of the organisational set-up of project management it may be concluded that it is sufficient in the context of the Sri Lanka project. However, it is recommended that the involvement of other ministries, such as the Ministry of Education, the Ministry of Home Affairs and relevant sections of provincial and district governments could be considered in the interest of project development.

The effectiveness of this project management could be seen in quick handling of problems occurring in both horizontal and vertical levels of the project.

This effectiveness will be increased substantially if the funds provided by IRC also covered the hardware side of the project.

In many ways project management can be considered as efficient.

9.4 Planning

9.4.1 The approach and procedures

The approach at programme level is required to have the involvement of all institutions and all such institutions were involved in planning and implementing the project.

At the project level (demonstration scheme level), in order to obtain the support and participation of the community in planning of construction and operation and maintenance, the project has developed approaches and procedures containing ten stages. These are elaborated in 23 steps, starting from prerequisites to communtiy participation and ending with monitoring progress. All the steps developed have facilitated community participation either in making decisions concerning their environment and welfare or in the implementation of those decisions.

9.4.2 Institutional and manpower aspects

Although the institutional set up of the project management is limited to three parties this made it compact. This is the controversial part of the institutional set-up of the project management.

The advantage of this set-up is that it is very simple and it is possible to convene any emergency meeting at short notice to discuss problems. Inclusion of two further ministries as mentioned above will enhance the opportunities for further expansion.

At the project level, planning and implementing is carried out by making use of existing social institutions co-ordinated through the extablishment of the Action Committees. An Action Committee consisting of members of the Gramodaya Mandalaya (representatives of local community associations) takes care of the community needs and aspirations in consultation with technical expertise from NWSDB and determines the distribution network of pipelines, locations of standposts and selection of the technology used in implementation.

IRC support is mainly by way of finance and technical guidance of the IRC Project Manager. The NWSDB has provided funds by way of per diem payment, travelling and salaries of NWSDB staff working in the project at local level.

9.4.3 Conclusions

The significance of this approach and planning mechanism is that through this system the ongoing approach of the Government rural water supply programmes could be modified further from the role of provider to the facilitator.

This planning approach and procedure seems to be the most effective in integrating community needs and aspirations with the national perspective, thus making them very effective.

The efficiency of this planning mechanism seems to be meaningful in that the central government officers are given more experience in field level management.

9.5 Technical aspects

Of the three demonstration schemes visited, Wijebahukanda is in the planning stage, construction has been completed and water supply commissioned at Haldumulla, and Seelatena is in the planning stage for rehabilitation of the existing water supply. A sanitation programme for building individual toilets is in progress at Seelatena and has been completed at Haldumullah. Therefore, the assessment and evaluation of the technical aspects of the project was focussed on Haldummula water supply and sanitation programme.

Rehabilitation of the existing water supply at Seelatena is also reviewed.

9.5.1 Water supply

The design of Haldummulla water supply scheme is based on the national standard. Some of the design parameters used can be given as follows:

Design period. This project was designed to meet the requirements over a 20 year period.

Population forecast. On an average rate of annual increase of population was assumed to be 1.5%.

Level of service. The percentage of people to be served by standposts was assumed to be 70%.

Water demand. The calculated water demand in the year 2005 is 48 000 gallons, at a rate of 10 gallons per capita per day. The rate for house connections was assumed as 30 gallons per capital per day. The total number of families served in the year 2005 will be around 472 at Haldumullah.

Chorination. If chlorination is to be done 24-hour operation is necessary in order to get constant concentration of chlorine. The equipment available at the site is not adequate for this. Some changes are necessary to rectify this situation.

However the efforts to maintain a sufficient chlorination level is challenging both because of the absence of trained manpower, and the taste preferences of the community.

9.5.2 Sanitation

The health education programme has produced good results in latrine construction. It is encouraging to note that the project has produced the intended results.

A low cost sanitation model designed and developed in consultation with WHO was used in the construction of latrines on a self-help basis. The model consists of a syphon, an aperture block and a rectangular frame simple enough for construction by the villagers. It was evident that even senior class school children can make the syphons. The Health Ministry gives a subsidy of Rs 250 for the construction of each latrine. This was paid to beneficiaries after deducting the cost of cement and reinforcements issued by the Construction Engineer, NWSDB, Bandarawla.

The approach developed was encouraging and it is interesting to note that the technology is simple enough to build latrines with locally available material at a lower cost. The two types found were lateral pit water-sealed and direct convertible water-sealed, a type which villagers have been used to.

Almost 95% of sanitation coverage has been achieved through this project. In the latrine construction programme, it is preferable to introduce a type of latrine already in use. If new types are to be introduced, they have to be tried out on a pilot project basis rather than introduced immediately. The double-pit latrine should be considered in this context. Experience has revealed that some cultures have rejected new types of latrines which they are not accustomed to.

9.6 Community participation and health education

9.6.1 Background

At local level the Health Education Officer (HEO), Ministry of Health is taking an active role in planning health education activities in support of the construction of the water supply system and operation and maintenance. His contribution has promoted the integrated and multi-sectoral approach. He receives guidance and support from the health education specialist of the project at national level.

The contribution of the HEO is to be considered an asset in this project. The planning of health education and community participation programme which was reported to have been planned with the community is a product of multi-sectoral involvement in which the project staff played a supporting role to the community.

The HEO is essentially a field-worker who is normally well known to the community even though they have limited technical expertise, HEO's were found to have contributed considerably to achieving the objectives of the project.

Health Education and community participation is considered to be an integral component of any rural water supply and sanitation programme. This project has developed self-reliance and self-confidence in communities through health education. By reviewing the project document available to the evaluation team it may be stated that the project has evolved a process for community participation.

It cannot be considered merely an academic exercise since the process was the product of practical experience. The process envisaged in the guidelines already mentioned consists of ten stages with 23 steps with illustrations of how each step has to be implemented.

9.6.2 Participation of schools

This is another rich field which the project staff has used effectively. The interviews and discussions conducted with the staff of three schools located in Haldummulla revealed a high degree of co-operation by teachers and students in the project.

The schools have been made the nucleus in expanding health education to the community. Besides women other groups who fetch water are girls and boys of school age. They are a good target for health education since they are persons who normally visit the public tap for water. Effective education can result in better use and the protection of the public tap.

The school health education programme has made the teachers role very effective. The teachers are involved actively in disseminating health knowledge not only to students but also to other members of the community. If teachers could be involved in producing health education materials, such as leaflets, and booklets by themselves for the use of students as well as the community even more effective results could be expected. At present the project has provided health education material which was found to have been used by teachers for education. School health education committees are functioning for this purpose.

9.6.3 Community participation

Direct community contribution can be distinguished as donation of:

- labour, skilled and unskilled
- local materials,
- money

According to the programme, such donations have been planned and are being achieved in the project and contributions can be distinguished as follows:

- short-term for construction where mass community contribution can be made
- long term for operation and maintenance

The following groups have been found involved in all processes of the project;

- leaders of the community;
- women through their associations and on their own,
- teachers and students in the schools,
- grass-root level officers of various government departments.

The above groups have been involved in various activites. The leaders were found to have been used to organize the communitites for construction of the water supply system through 'shramadana;' (community endeavour) they were involved also in the planning process by the project staff. The womens groups have been used particularly for health education because they are the groups dealing with water related activities in the household. Their contributions to the project were manifold and the most important was in encouraging the proper use of water for domestic purposes. Teachers and students have played a very effective role both in donation of labour and extending the health message to the village community. The grassroot-level government officers have strengthened the position of the project staff, thus facilitating implementation of the project in every way possible. They were involved from the planning phase. It is felt that community contribution must have saved some money which can be used to expand project activities.

9.6.4 Voluntary workers and action committees

Voluntary workers were trained by the project and health staff and are available in all four demonstration schemes. They are school youths dedicated to contribute to their community. They are given 10 to 15 houses each and maintain record of what they do in the assigned houses. They have played a very effective role in assisting the project staff in organizing communities and to carry out health education work.

Action Committees, which consists of Gramodaya chairman, Gramodaya members and other key community members act as the focal point. They assisted the project staff in planning, implementing and organizing the water supply and sanitation programme in the community. They have shared in the decision-making efforts with the project staff and made a very effective contribution to project success. It is hoped that they will be involved in a similar way during the forthcoming operation and maintenance.

9.7 Conclusions

(1) The evaluation team, consisting of the team leader and three Indonesian members together with two Sri Lankan members observed the PSWS and Sanitation Project in Sri Lanka from 1 July to 12 July 1985. The evaluation exercise was not fully covered as scheduled because of the delayed arrival of Indonesian members. However most activities at various levels were covered as planned.

(2) Having considered the views of the project staff in regards to the prevailing conditions in the Padaviya area, the evaluation team abandoned the idea of visiting Padaviya demonstration scheme for security reasons.

(3) As far as planning and management of the project are concerned, the evaluation team realized the organizational set up at both central and local demonstration project levels are very well established and operated smoothly and efficiently.

(4) The importance of community participation and health education have been very well realized from the inception of the project. The team was very impressed to observe the active community participation in the demonstration areas visited by the team. The knowledge of community about water and sanitation is high.

(5) IRC's contribution to the project is one of the important factors for the successful completion of the project, although IRC's financial input is confined to support to community participation and health education and exchange of views between countries. The other significant factor is that the projects has been able to use national expertise, thereby generating a high level project activities.

(6) The UN agencies, particularly WHO, UNDP and UNICEF have provided substantial contributions to the successful implementation of the project. The UNICEF contribution has been mainly the provision of materials and WHO and UNDP have provided technical expertise.

(7) The project has produced guidelines on community participation and health education, while technical guidelines are being prepared. On the other hand, no special subject studies have been undertaken as yet.

(8) In view of the success of the project, NWSDB is making plans to generalize the methods and techniques of the project to a larger scale and to cover a wider area in another project, sponsored by USAID. The forthcoming project with USAID sponsorship is expected to cover rural community water supplies on a larger scale.

(9) One of the important reasons behind the success of the project is the active involvement of the PMC members who met frequently and made decisions effectively and promptly. Further, all staff assigned to the project at various levels has worked with a deep sense of dedication and enthusiasm. The IRC project manager has provided necessary guidance from time to time in support of the activities planned under the project, which has facilitated the efficient implementation of project activities.

9.8 Recommendations

(1) For the reasons mentioned earlier, it would be extremely difficult to complete the project by the end of this year, as scheduled.

(2) If extension of the project for at least one year, to the end of 1986, is accepted, it is desirable that the project be amended as follows:

- expansion of the demonstration project sites to other areas;
- activities included in the project but not completed should be attended to immediately.

(3) Guidelines in community participation, health education and technical aspects should be made available to the PSWS participating ocuntries as well as to other countries, insitutions and agencies interested in similar projects.

(4) Procedures for operation and maintenance must be studied as soon as possible so that smooth running can be expected in the demonstration schemes. For this closer contacts with agencies, such as the District Development Councils and Gramadaya Mandalaya, is essential.

(5) While the design and construction are satisfactory, procedures for operation, maintenance and development should be decided on as soon as possible.

(6) Training of local personnel at all levels should be continuously emphasised in particular training of operators, caretakers and other related staff at local level must be undertaken as soon as possible.

10 ZAMBIA

10.1 Introduction

Zambia is among the developing countries of the world whose basic needs include water supply and sanitation. The absence of clean water particularly in rural and peri-urban areas at reasonable distances from houses adversely affects people's health. According to the report of the Department of Water Affairs (DWA) in 1980, only 32% of the rural population had access to a proper water supply.

The Government of Zambia agreed to participate in the International Drinking Water Supply and Sanitation Decade (IDWSSD) and also to take part in its strategy for the achievement of a goal of Health for All by the year 2000 through the Primary Health Care approach.

Accordingly, through DWA, the government welcomed the introduction of a project on Public Standpost Water Supplies (PSWS) sponsored by IRC. The project agreement was signed by both parties in February 1983.

The main aim of this demonstration project is to develop a strategy to establish and manage public standpost water supplies with intensive community participation.

Following the signing of the agreement between the government of Zambia and IRC, DWA was charged as the project co-ordinating institution (PCI) and the following ministries/departments were identified as the project participating institutions (PPI):

- Department of Water Affairs
- Department of Social Development
- Ministry of Health
- Department of Civil Engineering, School of Engineering, University of Zambia
- Department of Community Health, School of Medicine, University of Zambia
- Technological Development and Advisory Unit (TDAU), University of Zambia
- National Action Committee (Decade Advisor)
- Chainama College of Health Sciences

10.2 Methodology

A similar method of the evaluation to that adopted in Sri Lanka and Indonesia was used in Zambia and the evaluation took place from 5 to 16 August 1985. The evaluation team consisted of the following members:

Mr. F. Kwaule	Project Officer - PSWS Department of Water, Malawi
Mr. M.K. Chimuka	Project Manager - PSWS Ministry of Health, Zambia
Mr. J. Malama	Assitant Project Manager, PSWS, DWA, Zambia
Mr. K.L. Kamalata	Project Support Officer PSWS and Principal Social Development Officer Department of Social Development
Dr. S.W. Yun	Team leader
Mr. J.J. van der Vliet	Water Engineer, Netherlands Volunteer Programme, Solwezi, Zambia

Although Mrs. L. Kholoma of the Ministry of Community Services Malawi was nominated to participate in the evaluation exercise, she was not able to do so.

The team agreed to undertake responsibilities divided as follows:

Dr. Yun and Mr. Chimuka - planning and management aspects.

Mr. Kwaule and Mr Kamalata - community participation and health education aspects.

Mr. van der Vliet and Mr. Malama - technical and engineering aspects.

10.3 Management and implementation

10.3.1 Management Aspects

The responsibility of project management was undertaken by the project management committee (PMC), which is chaired by the Director of Water Affairs and consists of representatives of various Ministries/Departments and project staff.

The PMC has met two to four times a year, since the inception of the project in February 1983. The functions of the PMC are:

- planning, implementation and evaluation of the project
- co-ordination of contributions of participating ministries and organizations.
- collaboration at national and local level.
- holding regular meetings to review progress made and overcome constraints encountered in the smooth running of the project.

10.3.2 Project staff

At national level, there are three key members who are functioning as project staff:

- project manager
- assistant project manager/technical officer;
- project supporting officer.

The project manager Mr. M.K. Chimuka, who is a District Health Inspector based in Mwachisompola Health Demonstration Zone, was appointed in July 1983. Ever since then, he has been spending approximately 50% of his time on project work. It is evident that the reason why he was selected as a project manager by the Ministry of Health was that he was the responsible officer for rural water supply and sanitation programmes within the Health Demonstration Zone. Furthermore, because of the experience he has, the Ministry of Health as well as the PMC made a wise choice.

The assistant project manager, Mr. J. Malama is a Water Engineering Assistant working at DWA headquarters, Lusaka who was apointed only six months ago and his practical experience in rural water supply is rather limited.

The project supporting officer, Mr. K.L. Kamalata, is a Principal Social Development Officer based in the Department of Social Development Headquarters, Lusaka. He is well qualified and experienced in community development programmes.

Although the three project staff are located in three different places, they seem to have been working in harmony. (Although at times it has been difficult to meet together becuase of other national assignments and the different locations).

On the other hand, the team was told that due to some administrative problems, the project manager was out of project activities for a period of six months immediately after he returned from the IRC-sponsored International Meeting on the PSWS project held in Thailand in November 1984. However, it is pleasing to note that at the time of visit of the evaluation team, the three members were found working actively and their efforts will be more accelerated for the project implementation from now onwards.

It is only regretted that during the time the project manager was out of project, the progress was very slow and any activities planned were considerably retarded.

10.3.3 Implementation of plan of work

Although the project agreement was signed by both parties in February 1983, the plan of work was formulated only in February 1984. The plan of work appears to be ambitious but realistic. According to the plan of work, the following three areas were selected for the local demonstration schemes:

- Chibombo
- Mwachisompola
- Chongwe

The team found that the progress was slow, but the project was moving steadily in the right direction.

The evaluation team studied the reasons for slow progress and made the following observations:

- formation of the project team was late and its function has been interrupted.
- project management committee members only met occasionally and some members were not exposed to field activities.
- co-ordination of project activities was minimal.
- the project transport purchased for project activities was only made available in April 1983 due to difficulties in clearing it from the Customs Department and then for six months, that is from December 1984, the vehicle was not available for project use.

The Project Manager had to report directly to the Chairman of the PMC who was usually a very busy man by virtue of being the Director of Water Affairs, (responsible for Water Affairs throughout the country). One point noted also was it appeared as though provincial and local government heads in the provinces concerned were not included in the PMC.

10.3.4 Financial aspects

The team found that the funds provided by IRC had been used quite smoothly. According to the project agreement, a sum of US$ 84 000 was allocated for the project. Unfortunately at the time the evaluation team visited, the updated details of the financial position were not available. However, it is quite certain that not more than one third of funds allocated had been used.

10.4 Community participation and community education

10.4.1 General

It is well known among development workers that community participation from the start of a project, through planning, design, implementation, and operation and maintenance, is an important component in the success of any community water supply project.

Involvement of the community does not only create a sense of responsibility and ownership but is also an important element in the development of managerial and technical skills within the community, essential for the operation and maintenance of the project throughout its life-time. Community participation in the Public Standpost Water Supplies Project in Zambia has featured prominently at all levels. In all places visited, the communities were activiley involved in all aspects of project planning, design, implementation, operation and maintenance and community education.

10.4.2 Planning

Communities participated fully in the planning of their projects at community meetings, and formal and informal discussions with project staff.

Agreements on site selection for the standposts and the right type of standpost designs were made during the meetings, including agreements on community inputs, responsibilities and involvement in the project.

Water committees were formed from existing village development committees, and caretakers were selected. The communities also pledged to make financial contributions towards the cost of materials for construction, and operation and maintenance activities. At Chibombo, the community agreed to contribute towards the running costs of the water supply.

A rehabilitation programme of an old engine house at Mwachisompola was planned to be undertaken by the community. Work will include rebuilding of the house, cleaning of tanks and reinstalling a diesel engine.

10.4.3 Implementation

At this stage, the communities took an active part in the digging trenches, helping to lay pipes, backfilling, construction of soakaway pits, and the erection of encasements for standposts.

The communities also made money-contributions towards the cost of the piping, cement, bricks and taps.

In the case of Mwachisompola village, the community has already bought bricks (K60), and cement (K63) for rehabilitating an old engine house.

10.4.4 Operation and maintenance

At all three demonstration centres, responsibility for operation and maintenance is with the communities.

Each centre has two caretakers who are trained to look after the operation and simple maintenance of the standposts.

At Mulimba (Bolingo), for example, a tap that had broken down and was in disuse for some time, was repaired by the trained caretakers and is now working satisfactorily.

Most of the water committees have established their own maintenance fund for continued operation of the system. Efforts have been made to educate the community on appropriate use of the standpost and on the need for cleanliness of the surroundings.

Responsibilities for keeping the standpost surroundings clean have been assigned to women leaders who in turn assign households to clean the water points in turns. Responsibilities for major breakdowns have been assigned to either central or local government plumbers.

The project manager visits the project sites regularly to monitor and inspect operations of the standposts.

10.4.5 Community education

Joint efforts by project staff, Department of Social Development staff, the Party and local leaders have ensured that the community is fully aware of the community based approaches and scope of the demonstration project.

Sanitation activities are being undertaken alongside water supply activities. Project staff have together with communities demonstrated the construction of the VIP type of latrine using as far as possible locally available and cheap building materials.Two types have so far been attempted, one using expensive but locally available materials and the other using cheaper and locally available materials. Many pits for latrines, some to be VIPs have already been dug in the villages to add on to the existing latrines.

Village surroundings in all the three centres look clean, an indicator of knowledge in hygiene by the community. The community has also been educated on proper handling of water during collection, transportation, storage and usage, to avoid contamination. The education is carried out at rural health centres, in the villages, at literacy classes, women's clubs and at the water points.

10.4.6 Level of women's involvement

Women have been actively involved in the demonstration project at all levels, in planning, design, construction, and operation and maintenance, including financial management. Their involvement has been made possible through existing institutions which the project uses, such as women's clubs, literacy classes, party and village meetings, including discussions at rural health centres. Through their involvement in committees as office bearers, the women have also taken part in important decision making concerning the planning and design of the project, including financial management. As fas as construction work is concerned, they have taken part side by side with their menfolk in digging of trenches, laying pipes and backfilling, including the preparation of soft drinks to motivate the working parties.

10.4.7 On going evaluation by the community itself

Self-evaluation appears to be inbuilt in the Zambian situation. Since the project started, committees and leader charged with the responsibility of implementing the project have from time to time met to review their successes and failures thereby correcting some of their short-comings during the execution of the project.

For example, the committees have from time to time urged project staff to play their part in order to have the projects completed on time.

10.4.8 Observations

Having visited the three demonstration schemes, it became apparent that the project has made big headway as far as community participation is concerned.

However, there are some areas which require further attention:

- It is essential that project staff with the help of collaborating institutions and IRC should hasten work in order to meet targets and to sustain community enthusiasm.

- There is need for more women to be involved in all project activities, such as planning, organization, implementation and operation and maintenance activities.

- Exchange visits between communities should be arranged to enable them to study successful schemes which could be replicated in new areas.

- There is need for more use of social development staff at the field level, to foster more community participation.

- Project funds should be used as soon as possible in purchasing necessary materials, such as pipes, in order to sustain community enthusiasm

- There is need to undertake socio-cultural studies/surveys of communities around project centres before, during and after construction of standposts.

- Simple guidelines and manuals on the operation and maintenance of public standposts should be prepared as quickly as possible. The manual should be translated into the seven official local languages of Zambia.

- There is need for direct local council involvement in project activities at all levels.

- Project staff should intensify visits to project sites in order to encourage communities to complete the construction of demonstration projects as soon as possible.

- There is need to intensify training for caretakers and other people involved in the project.

- If possible, water samples from each of the completed standposts should be sent for laboratory tests at regular intervals.

- As much as possible, the establishment of village funds should be encouraged further to cater for operation and maintenance activities.

- Field health staff should be consulted in all matters of sanitation and hygiene, for example the siting of latrines.

- Formation of water committees should be encouraged further.

- Community health education should be well organized in all project sites.

- As much as possible, attempts should be made to use locally found materials, especially in the sanitation sector. Materials should, however, be of a good standard and quality.

10.5 Technical and engineering aspects

During the field visits to the Projects sites at Mwachisompola, Chibombo and Chongwe, the following observations were made at the construction sides:

10.5.1 Mwachisompola

Mulimba village. One standpost has been erected with a double communual tap. This standpost has been located some 50m from the tap point of the existing water supply scheme at Mwachisompola Demonstration Zone Hospital.

Connection has been made with a ¾" pipe, tapped from a ¾" existing pipe line.

The standpost has been made of a sturdy design very much suitable for a communal tap. Provisions of drainage for the waste water has been provided by means of a soak-away, located next to the standpost, connected by a 4" asbestos pipe.

Supply of the water for both the existing distribution network and the new standpost is by means of a borehole with electrical pump. This supplies the network directly because the electrical motor is not powerful enough to pump the water to the reservoir tank.

Mwachisompola Rural Health Centre (RHC). No physical progress at this site has been made yet. However, an existing supply network is located at the RHC, which has been constructed about 10 years ago. At present, the pumphouse has no roof and the building is dilapidated. The pump seems to be in good working condition and all it requires is a diesel engine or an electric motor. The existing elevated tank and diesel engine has been taken by the Chibombo District Council for rehabilitation. The existing pipe network needs rehabilitating.

10.5.2 Chibombo:

Messengers compound. Construction of one concrete and brickwork standpost has been completed. However, the soakaway next to the standpost is still under construction. The standpost is supplied by means of a ½", 10m service pipe, which is connected to a ¾" house connection.

Chyuni village. No physical progress has been made yet, although 350 m of a future pipeline has been surveyed and pegged out.

Chibombo primary school/Kaongo Village. Two public standposts have been erected 200m from the existing Boma supply work, by means of a 2" pipe into a 1" pipe, reduced by ¾" pipe for the double standpost and ½" pipe branch line for the other standpost.

The superstructure of the double standpost at Kaongo village is completed and looks very sturdy, the last stones are being layed on the soakaway. However, one tap is out of order.

The standpost at the primary school, which is only meant for the pupils use, has been constructed. The superstructure is of poor design and looks very weak. Soakaway pit and the open drainage channel for the wastewater are badly finished and could cause a big health hazard.

10.5.3 Chongwe

Chikwela village. The trench for the pipeline to Chikwela village has been dug for the community under supervision from the staff of Chongwe District Rural Council. Proposed connection will be at the Secondary Boys School, 620 m from the village which in turn is supplied by the Boma distribution network.

10.5.4 Constraints

The following general constraints were encounted during the project visits:

- The impression was given that adequate pre-surveys were not being carried out, especially to determine if there is sufficient water at the existing water supply facilities. In the present demonstration project insufficient water may be available to make extentions feasible, even a community standpost.

- Constraints have/can occur due to the fact that the Assistant Project Manager is based at Headquarters of Department of Water Affairs in Lusaka. Therefore a set-up is required besides the existing integrated system of national, provincial and district levels. At present it is difficult for the Assistant Project Manager to get background information for preliminary surveys.

- Since, this project is a demonstration project, well qualified staff is a necessity to make the project a success. However especially from the technical point of view, experienced people are lacking. This concerns the maintenance crew at the existing water supply schemes from which the extensions are being made, as well as the technical staff within the project. Due to the lack of early involvement/appointment of an engineer in the project, local demonstration schemes need technical rectifications, which will be an extra burden on the time schedule and budget.

- Need was felt that more guidance should be given to the community, especially the children, through education of their parents, about the use of water. Very often, it appeared that the taps were just being left open by children "playing" at the fetching of water from the taps. This can result in a shortage of water for the whole community.

- Since some of the demonstration schemes are located near to Lusaka and in a Demonstration Zone, a realistic impression for a public standpost water supplies project in the more remote rural areas is difficult to obtain.

10.5.5 Proposals

In order to have the project functioning smoothly, detailed pre-surveys and surveys have to be carried out in order to set-up a workable plan of operation. This then gives the execution of the project, through community involvement, a good effective start. Therefore, it is necessary that the Department of Water Affairs at provincial levels and at district levels be involved as much as possible during all phases of the project, with the Technical Assistant as a co-ordinator next to the concerned provincial water engineers.

Agreements must be worked out between the project management committee, Department of Water Affairs, concerned Councils and all project participating institutions in order to get a clear indication of who is responsible for what, during the execution of the project, so that no misunderstandings can occur.

More use should be made of the University of Zambia (UNZA) and TDAU, two of the participating project institutions, in order to set-up appropriate designs for the demonstration projects. One matter, for example, that has to be looked into is the prevention of taps being left open by children. One solution to this might be a self-closing tap.

For future expansion of the project, especially in the real rural areas, at least one project demonstration site should be set-up in a more remote rural area, to be able to get proper feed-back for further extensions of the project. This same issue applies to semi-urban areas, for example the outskirts of Lusaka or Kabwe. Therefore it is recommended that the project be expanded with the two projects of the above mentioned type in order to get proper research information.

10.6 Summary of findings

(1) The evaluation team consiting of the team leader, a Malawian member and a Dutch member (based in Solwezi, Zambia) together with three Zambian members, observed the PSWS project in Zambia from 5 August to 16 August, 1985. The evaluation excercise was not undertaken exactly as the guideline suggested because of time constraints. However, most of the activities at various levels were covered, including field visits to three demonstration schemes.

(2) Although the project agreement was signed in early 1983, implementation of the workplan was considerably slower then planned, for various reasons mentioned earlier.

(3) The evaluation team realized that although the organizational set-up such as PMC and Project staff formation are quite adequate, there were several points to be commented on as mentioned earlier.

(4) The importance of community participation and hygiene education have been very well realized and in fact all the communities visited by the team well appreciated the project and tried their best to implement project activities. Furthermore, the team was impressed that many communities expressed their readiness to contribute anything required including some funds required for construction, operation and maintenance. However it must be pointed out that if the construction activities do not take place as scheduled, the enthusiasm of the community might be reduced.

(5) As far as construction of the standposts is concerned, due to various reasons pointed out earlier the progress has been quite slow until recently. However, according to project staff most of the construction work will be complete by the end of December, 1985.

(6) It is regretable that various activities included in the project planning such as special subject studies, training of local caretakers were not undertaken till now.

(7) The team realised that the participation of two Zambian project staff at the first international meeting on public standposts in Thailand and subsequent visit to Sri Lanka was very useful.

(8) Although IRC's contribution to the project has been very useful, if the project is terminated in December 1985 as stated in the Agreement document, the team believes that quite a large portion of the project activities would not be carried out as smoothly as anticipated. The PSWS Project Manager in IRC visited Zambia two to three times a year. During his visits he discussed various matters with the Chairman and members of the PMC and project staff and visited the demonstration schemes. Although his visits were very helpful, the team felt that the project requires his visits to be more often (once every three months).

(9) It is gratifying to state that the evaluation team confirmed that this project was designed appropriately to meet the needs in Zambia and therefore the central Government has already taken steps to introduce the ideas and methods learned in the project to other parts of the country.

(10) As far as collaboration with the UN Agencies in particular WHO and UNICEF and bilateral agencies is concerned, the team noted that the working relationships were satisfactory.

10.7 Recommendations

(1) As it would be very difficult to complete the project by the end of 1985, it is strongly recommended that the project should be extended for at least one more year.

(2) If the extension of the project is approved by the parties concerned more effort should be concentrated in the following areas:

- completion of construction as planned
- preparation of manuals in local languages
- undertaking the special subject studies including social and cultural studies

(3) It is very much desirable that a member of the PMC, preferably from the Department of Water Affairs (DWA), should be appointed as a Supervisor/Co-ordinator for the project. He should be highly qualified in technical, administrative and social aspects and available for the project staff members when needed. He also should visit demonstration schemes as often as possible to supervise the project activities and to co-ordinate with the provincial government and other organisations at various levels. In such a way the project manager should be able to concentrate his efforts on the demonstration schemes.

(4) In view of the fact that the funds provided by IRC are not sufficient to cover the whole cost of the hardware side and in most cases the cost of equipment such as diesel/electric motors for pumping is beyond the communities means, the PMC should be looking into this aspect seriously.

(5) Although the project prepared reports from time to time, it is recommended that progress reports covering administration and finance, community participation, construction and operation and maintenance, as well as other important matters, be prepared regularly at three monthly intervals and submitted to the Chairman of the PMC through the Supervisor, and to IRC.

(6) Although it is more desirable if the IRC project manager could visit Zambia more often, in case it is not feasible and as an alternative arrangement, a water engineer stationed in Zambia might be available to visit the project when it is neccessary.

(7) It is regretable that as Sri Lankan and Indonesian teams made evaluation visits to each other and a Malawian member came to Zambia, the evaluation of the Malawian project could not take at this time. Therefore it is recommended that as soon as project activities in Malawi should be ready for evaluation arrangements should be made for Zambian members to visit Malawi. The team strongly felt that through this kind of visit members in both countries could learn more about the project and exchange their views.

APPENDICES

APPENDIX I

LIST OF PARTICIPANTS IN THE EVALUATION

The participants in each component of the evaluation are listed below. In addition, inputs to the evaluation of inter-country aspects were made by the national evaluation teams, DGIS and IRC staff members.

Indonesian project:

- Indonesian participants:

Mr. Djauhari Sumintardja	Project Manager PSWS Indonesia/ Head, Sub-Directorate Housing and Sanitation, Institute of Human Settlements
Mr. A. Parwoto	Project Officer, PSWS Indonesia/ Research Officer Institute of Human Settlements
Ms. Sri Redzeki	Head, Training, Directorate of Water Supply, DJCK
Ms. Sri Endah N. Mr. Hening Darpito Mrs. Nurhasanah S.	Sanitary Engineer, Institute of Human Settlements
Mr. Syabhudi Mrs. Ratnaningsih	Engineer, Directorate of Water Supply, DJCK
Mr. Sri Widodo	PKM, Ministry of Health (DEPKES)

- Sri Lankan participants:

Mr. H.I. Karunadasa	Chief Community Participation Officer, PSWS Sri Lanka
Mr. A. Kumararathna	Senior Engineer, National Water Supply and Drainage Board

- DGIS participant:

Mr. M. Jansen	Lecturer, Institute of Housing Studies, Rotterdam, The Netherlands

- Evaluation Team Leader:

Dr. S.W. Yun	Visiting Fellow, Korea Institute of Population and Health, Seoul, Korea

Malawian project:

- Malawian participant:

Mr. F. Kwaule	Project Officer, PSWS Malawi, Water Department

- Evaluation Team Leader:

Dr. S.W. Yun	Visiting Fellow, Korea Institute of Population and Health, Seoul, Korea

APPENDIX VI
SUMMARY OF CONSULTANTS INPUTS TO THE PROJECT

Consultants for Product Preparation

Bibliography of PSWS:
- WEDEC Group (University of Loughborough, UK)
- Mr Henk Hortensius

Making the Links (Hygiene Education Guidelines)
- Ms. Marieke Boot (author)
- Ms. Moon Vaes (illustrator)

Financial Management Studies
- IWACO Consultants bv
- Mrs. Christine van Wijk
- Ms. Marieke Boot
- Mr. Henk Tjen-A-Kwoei

Case Study Sri Lanka:
- Ms. Bep Fritschi

Editorial inputs
- Mrs. Helen West

Consultants for In-Country Support

Mr. Bert van Woersem
(Sri Lanka, 1983)

Ms. Marieke Boot
(Indonesia, 1983)

Mr. Norman Scotney
(Zambia and Malawi, 1984)

Ms. Sue Cavanna
(Zambia and Malawi, 1984)

Khon Kaen University, Thailand
(International Meeting, Thailand 1984)

Asian Institute of Technology
(International Meeting, Thailand 1984)

Mrs. Christine van Wijk
(International Meeting, Thailand, 1984)

Dr. Suk Woo Yun
(Evaluation Team Leader, 1985)

Sri Lankan project:

- Sri Lankan participants:

Mr. W.A.N. Weerasinghe	Project Manager, PSWS Sri Lanka/ Senior Engineer, National Water Supply and Drainage Board
Mr. H.I. Karunadasa	Chief Community Participation Officer, PSWS Sri Lanka

- Indonesian participants:

Mr. A. Parwoto	Project Officer PSWS Indonesia Research Officer/Institute of Human Settlements
Ms. Sri Endah	
Mr. Hening Darpito	

- Evaluation Team Leader:

Dr. S.W. Yun	Visiting Fellow, Korea Institute of Population and Health, Seoul, Korea

Zambian project:

- Zambian participants:

Mr. M. Chimuka	Project Manager PSWS Zambia/ District Health Inspector, Ministry of Health
Mr. J. Malama	Project Officer/Assistant Project Manager,PSWS Zambia/Technical Officer, Department of Water Affairs
Mr. K.L. Kamalata	Project Support Officer, PSWS Zambia/Principal Officer, Ministry of Community Development

- Malawian participant:

Mr. F. Kwaule	Project Officer, PSWS Malawi, Water Department

- DGIS participant:

Mr. J.F. Van der Vliet	Project Officer, SNV (Dutch Volunteer Service), Zambia

- Evaluation Team Leader:

Dr. S.W. Yun	Visiting Fellow, Korea Institute of Population and Health, Seoul, Korea.

Inter-Country Aspects:

- Evaluation Team Leader:

Dr. S.W. Yun	Visiting Fellow, Korea Institute of Population and Health, Seoul, Korea

- IRC participant:

Mr. M. Seager	IRC Project Manager, PSWS Project

APPENDIX II
LIST OF PROJECT STAFF AND PROJECT CO-ORDINATING INSTITUTIONS

INDONESIA

Mr. Djauhari Sumintardja - Project Manager
Mr. A. Parwoto - Project Officer

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Mr. W.A.N. Weerasinghe - Project Manager (1985)
Mr. S.J.P. Wijegoonewardene - Project Manager (1984)
Mr. P.M.R. Pathiraja - Project Manager (1983/1984)
Mr. H.I. Karundasa - Chief Community Participation Officer

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Mr. J. Malama	-	Technical Assistant/ Assistant Project Manager
Mr. K.L. Kamalata	-	Project Officer

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IRC

Mr. Michael Seager	-	Project Manager
Ms. Yvonne Kerrebijn	-	Project Assistant
Mrs. Hanny van Eerden	-	Project Assistant (1984)
Ms. Ellen Konings	-	Project Assistant (1983)

The International Reference Centre for Community
Water Supply and Sanitation (IRC)

Mail: P.O. Box 93190
2509 AD, The Hague

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The Hague, The Netherlands

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APPENDIX III
OBJECTIVES OF THE INTERIM EVALUATION

The objectives of the interim evaluation were to:

- prepare an inventory of the progress of the project to date with respect to the technical and institutional aspects and the learning process.
- determine whether the methods developed are appropriate and whether they can and are being adopted.
- identify sucesses so that these may be exploited during the remaining project period.
- identify difficulties so that these may be remedied during the remaining project period.
- identify the interrelationships that exist between the project and governmental policy and programmes on drinking water supply and sanitation and provide recommendations for improving harmonisation of activities and two-way exchange of experiences.
- identify the possibilities to integrate project activities and methodologies in on-going and planned community water supply and sanitation programmes.
- obtain a good sight into the approach and methods as applied by IRC in cooperation with the respective national counterparts.
- assist in simplifying the dissemination of output by identifying key issues.
- encourage TCDC and further develop common links, understandings and the sharing of information between participating countries.
- yield information to supplement and compliment existing reporting, (i.e. to itself generate knowledge).
- help in preparing the groundwork for the preparation of final reports.
- train participating staff in evaluation techniques, particularly the criticial self-assessment of projects, analysis and the drawing of conclusions (i.e. to itself demonstrate evaluation).
- self-evaluate the evaluation methodology applied.
- recommend future follow-up activities for 1986 onwards and to help subsequent projects to build on the PSWS project and learn from it.
- assess and comment on the draft national proposals for follow-up projects.

APPENDIX IV
LIST OF PROJECT OUTPUT

From the Participating Countries

(1) 'Summary Report and Recommendations from a Workshop on Public Standpost Water Supplies, held in Jakarta from 22-24th March 1983,'
DPMB Bandung, Indonesia, 1983.

(2) 'Proceedings, Seminar on Potable Water Supply through Public Taps (Jakarta, March 1983)'
DPMB Bandung, Indonesia, 1983.

(3) Papers prepared for the March 1983 Seminar on Potable Water Supply through Public Taps in Jakarta including:
- The problem of sanitation in clean water supply by public tap;
- The service of potable water supply by public taps in the urban area;
- Management aspects of water supply by public taps;
- Socio-economic and cultural aspects of water supply by public taps;
- Health aspects of water supply and public taps.

(4) Laporan Observasi Dan Pengumpulan Data Penyediaan Air Bersih Untuk Umum (Technical Report) Di Desa Gumulung Tonggoh, Desa Jagasari' (in Bahasa Indonesia),
DBR/DPMB Bandung, Indonesia, 1984.

(5) 'General Guidelines for Demonstration Project of PSWS-IRC,'
Indonesian PSWS Teams
DBR/DPMB Bandung, Indonesia, March 1984.

(6) 'Steps in Community Education/Participation and General Outline of Training Programme for Trainers and Cadres of Water Supply'
PSWS Teams, Indonesia
DBR/DPMB Bandung, Indonesia, March 1984.

(7) Papers presented for the March 1984 Seminar on Public Standpost Water Supplies as Infrastructure for Low-income Communities in Cirebon, Indonesia, including:
- 'Community Motivation for Healthy Water Supply, and the need for Integrated Planning';
- 'Branched Network Design for Low Cost Water Supply for Low-income Communities';
- 'The Role of House Connections and Public Standposts in Rural Water Supply Schemes';
- 'Information and Communication: Methods of Disseminating Technologies to Communities.'

(8) 'Final Report, Regional Seminar on Public Standpost Water Supplies as Infrastructure in Housing for Low-income Communities (Cirebon, W. Java, 6-10th March '84)'
IHS Bandung, Indonesia, 1984.

(9) 'Buku Penuntun Kader Pembangunan Desa Bidang Air Bersih/Kran Unun (KPD.KU)', (Bahasa Indonesia)
(PSWS Project Guidance Manual for Kader/Community Motivators)
DBR/DPMB Bandung, Indonesia, 1984.

(10) 'Buku Penuntun Pelatih Kader Pembangunan Desa Bidang Air Bersih Kran Unum' (in Bahasa Indonesia)
(PSWS Project Guidance Manual for Trainers of Community Motivators/Kaders)
Proyek PSWS-IRC Jawa Barat
DBR/DPMB Bandung, Indonesia, 1984.

(11) 'Brief Report of the Joint Project PSWS of IRC and the Centre for Research & Development on Human Settlements'
IHS Bandung, Indonesia, June 1984.

(12) 'Proposed Collaboration between the Urban Communal Water Point and the Public Standpost Water Supply Projects'
Department of Lands, Valuation and Water,
Lilongwe, Malawi, March 1984.

(13) 'Summary of Experiences-Learned in a Community Participation Project on Public Standpost Water Supply and Sanitation: An Interim report'
National Water Supply and Drainage Board, Sri Lanka, January 1984.

(14) 'Major problems, Solutions Applied and Experiences learned in the Public Standpost Water Supplies Project Sri Lanka',
Paper for a Regional Seminar in Cirebon, Indonesia,
National Water Supply and Drainage Board, Sri Lanka, March 1984.

(15) 'Interim Report of Progress of Demonstration Project on Public Standpost Water Supply Systems and Sanitation'
Editor: H.I. Karunadasa
National Water Supply and Drainage Board, Sri Lanka, August 1984.

(16) 'Master Programme and Schedule of Inputs - PSWS Project'
Department of Water Affairs, Zambia, February 1984.

(17) 'The PSWS Project in Zambia'
M.K. Chimuka, PSWS Project Manager
Lusaka, Zambia, November 1984.

(18) 'Sanitation Manual'
PSWS Sri Lanka/WHO
Draft
National Water Supply and Drainage Board, June 1985.

(19) 'Manual for Community Education and Participation'
PSWS Sri Lanka
Draft
National Water Supply and Drainage Board, June 1985.

From the PSWS International Meeting in Thailand (November 1984)

(1) 'Final Meeting Report'
Khon Kaen University, Thailand (Meeting Rapporteurs)
Draft
May 1985.

(2) Working Group Reports:

A. 'Community-based management of standpost systems, particularly operation and maintenance and financial management'
B. 'Combining participatory hygiene education, piped water supply and sanitation'
C. 'Planning service levels; appropriate design, materials and parts; construction and evaluation for community standpost systems'

(3) 'PSWS Meeting Field Trip Guide;
Khon Kaen University, Thailand,
November 1984.

(4) 'The IRC Public Standpost Water Supply Co-operation Project in Indonesia - An Overview',
Djauhari Sumintardja,
Institute of Human Settlements, Bandung, Indonesia, November 1984.

(5) 'General Guideline for Demonstration Project for IRC, Indonesia'
PSWS Team, Directorat Air Bersih, Directorat Jenderal Cipta Karya, Jakarta, Indonesia, November 1984.

(6) 'Water Provision for the People by the People: A case of Gumulung Tonggoh - Indonesia',
PSWS Indonesia Team, Bandung, November 1984.

(7) 'Health Education Component of Public Standpost Water Supply Project, Indonesia'
PSWS Team
Jakarta, Indonesia, November 1984

(8) 'Health Inputs to Community Water Supply Projects in Malawi',
P.S. Chindamba, Ministry of Health, Lilongwe, Malawi, November 1984.

(9) 'Women and Water', L.P. Kholoma, Ministry of Community Services Malawi, Lilongwe, November 1984.

APPENDIX V
LIST OF IRC PUBLICATIONS ON PUBLIC STANDPOST WATER SUPPLIES

(1) 'Public Standposts for Developing Countries'
Proceedings of an International Expert Meeting held in Achimota (Accra), Ghana
IRC Bulletin Series No. 11, August 1977

(2) 'Public Standpost Water Supplies'
IRC Technical Paper 13, November 1979 (in English and Spanish versions)

(3) 'Public Standpost Water Supplies, a Design Manual'
IRC Technical Paper 14, December 1979 (in English and Spanish versions)

(4) 'Public Standpost Water Supplies Project - A Summary'
IRC, April 1983

(5) 'Public Standpost Water Supplies Project - A Short Introduction'
IRC, November 1983

(6) 'Summary Progress Report for the Participating Countries'
IRC, December 1983

(7) 'Summary Progress Report for the Participating Countries'
IRC, January 1985

(8) 'Tools for Continuity: Draft Guidelines on Community-based Financial Management of Community Water Supply and Sanitation Systems'
Preliminary Draft, IRC, March 1984

(9) 'Making the Links: Guidelines on Hygiene Education in Community Water Supply and Sanitation (with particular emphasis on Public Standpost Water Supplies)'
IRC Occasional Paper, July 1984

(10) 'The Environment of Simple Water Supplies: A Selected and Annotated Bibliography in support of Public Standpost Water Supplies'
IRC Occasional Paper, July 1984

(11) 'Public Standpost Water Supplies/The IRC PSWS Project'
Brochure, IRC, November 1984

(12) 'Report from the International Meeting on Standpost Water Supplies, Thailand, November 1984'
Draft
Khon Kaen University, Thailand, May 1985, Vols I and II

(13) 'Discussion Notes on the Evaluation of the Project'
IRC, January 1985

(14) 'Some Guidelines for the Interim Evaluation of the Project'
IRC, May 1985

APPENDIX VI
SUMMARY OF CONSULTANTS INPUTS TO THE PROJECT

Consultants for Product Preparation

Bibliography of PSWS:
- WEDEC Group (University of Loughborough, UK)
- Mr Henk Hortensius

Making the Links (Hygiene Education Guidelines)
- Ms. Marieke Boot (author)
- Ms. Moon Vaes (illustrator)

Financial Management Studies
- IWACO Consultants bv
- Mrs. Christine van Wijk
- Ms. Marieke Boot
- Mr. Henk Tjen-A-Kwoei

Case Study Sri Lanka:
- Ms. Bep Fritschi

Editorial inputs
- Mrs. Helen West

Consultants for In-Country Support

Mr. Bert van Woersem
(Sri Lanka, 1983)

Ms. Marieke Boot
(Indonesia, 1983)

Mr. Norman Scotney
(Zambia and Malawi, 1984)

Ms. Sue Cavanna
(Zambia and Malawi, 1984)

Khon Kaen University, Thailand
(International Meeting, Thailand 1984)

Asian Institute of Technology
(International Meeting, Thailand 1984)

Mrs. Christine van Wijk
(International Meeting, Thailand, 1984)

Dr. Suk Woo Yun
(Evaluation Team Leader, 1985)

ANNEXE A
DISCUSSION NOTES ON THE EVALUATION

ANNEXE A
DISCUSSION NOTES ON THE EVALUATION

CONTENTS

1. INTRODUCTION

These notes are based largely on informal discussions with national project staff and the group discussions on Evaluation at the November 1984 PSWS International Meeting in Thailand. They aim to reflect the views of the project participants themselves towards evaluation planning and can be seen as the first stage in self-evaluation.

2. WHAT TYPE OF EVALUATIONS?

Evaluations of PSWS would seek to document the successes achieved and identify problem areas. Improvements could then be suggested for the rest of the project and for similar projects in the future. In line with the principles of 'Evaluation for Better Planning,' the PSWS evaluations should include :

- a short feed-back loop to the project
- evaluation by nationals, including both men and women
- feed-forward for better future planning

Three possible Phases of evaluation have been identified in relation to the project:

I. Ongoing (continuing monitoring and feedback)
II. Interim (during the final year of the project)
III. Long-Term (one or two years after project completion)

Three broad Levels of evaluation have been noted:

A. Community Level (local demonstration schemes)
B. National Project Level
C. International Multi-Country Project Level

3. RESPONSIBILITIES

(i) Execution
Responsibility for carrying out evaluation could be divided as follows:

Ongoing Evaluations (I) (1983-1985)

National Project Teams in each country:

- Country Project Manager
- Community and District representatives
- Project Management Committee members
- Staff of the Project Participating Institutions
- Local research institution or University

Interim Evaluation (II) (mid-1985)

International Evaluation Teams made up of:

- Independent Team Leader
- Project representatives from participating countries
- DGIS participants
- IRC Project Manager

Long-Term Evaluations (III) (1986/1987)

National Evaluation Teams:

Made up as appropriate at the time, but preferably including previous project staff.

(ii) Funding

Funding for the Interim Evaluation (II) and the Long-Term Evaluations (III) is being sought. The Project Funder, DGIS * is being requested to consider supporting this important aspect.

Funding for the Ongoing Evaluations (I) is deemed included in the country-budgets already allocated under the project or covered by contributions from the National budgets.

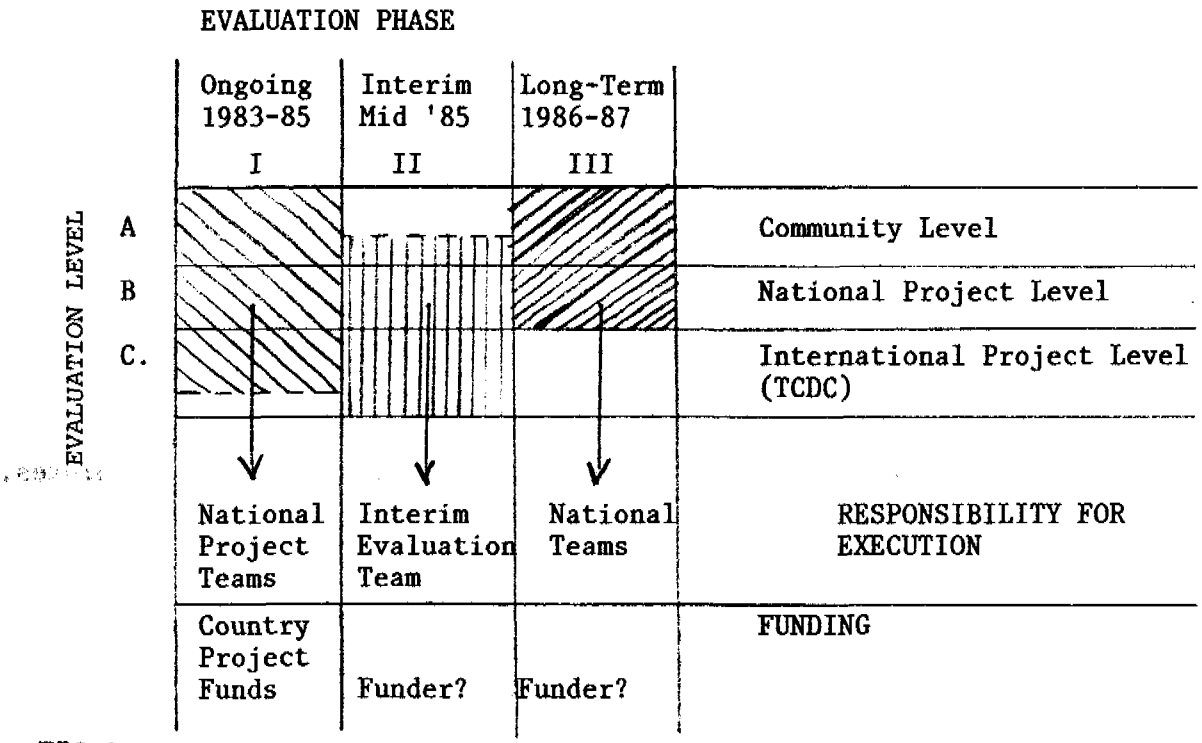


FIG.1

PROPOSED RESPONSIBILITY FOR CARRYING OUT AND FUNDING PSWS EVALUATIONS.

* DGIS: Directorate General of Development Co-operation, Ministry of Foreign Affairs, Netherlands Government.

4. PROPOSALS FOR THE INTERIM EVALUATION

4.1 Objectives

The objectives of the Interim Evaluation would include:

- To prepare an inventory of the progress of the project to date with respect to the technical and institutional aspects and the learning process.
- to determine whether the methods developed are appropriate and whether they can and are being adopted.
- to identify successes so that these may be exploited during the remaining project period.
- to identify difficulties so that these may be remedied during the remaining project period.
- to identify the interrelationships that exist between the project and governmental policy and programmes on drinking water supply and sanitation and provide recommendations for improving harmonisation of activities and two-way exchange of experiences.
- to identify the possibilities to integrate project activities and methodologies in on-going and planned community water supply and sanitation programmes.
- to obtain a good insight into the approach and methods as applied by IRC in cooperation with the respective national counterparts.
- by identifying key issues, to assist in simplifying the dissemination of output.
- to encourage TCDC and further develop common links, understandings and the sharing of information between participating countries.
- to yield information to supplement and compliment existing reporting, (i.e. to itself generate knowledge).
- to help in preparing the groundwork for the preparation of final reports.
- to train participating staff in evaluation techniques, particularly the critical self-assessment of projects, analysis and the drawing of conclusions. (i.e. to itself demonstrate evaluation).
- to self-evaluate the evaluation methodology applied.
- to recommend future follow-up activities 1986+ and to help subsequent projects to build on the PSWS project and learn from it.
- to assess and comment on the draft national proposals for follow-up projects.

4.2 Framework

The evaluation should work from the basic concepts of the project and begin by reviewing the initial objectives as set out in the project documents. In particular it should assess whether integrated and community-based approaches have indeed been developed for the better planning, implementing and managing of public standpost water supplies. The evaluation should especially try to find out if the lessons learnt from this project have had or will have repercussions on national policy.

A frank, critical approach should be encouraged, with as much as possible project participants themselves carrying out the planning and execution of the evaluation programme.

Detailed methodology and the evaluation system to be used should be worked out by the evaluation team itself, based on Evaluation for Better Planning concepts. In addressing the broad question "is the PSWS Project Working?" the following questions may perhaps be fundamental:

- Has it enabled nationals to themselves develop better information and understandings?
- Have these understandings been shared and taken up on a larger scale?
- Has the Project stimulated the flow of information amongst the participating and other interested countries
- Has it led to follow-up projects and activities in related fields?

4.3 The Evaluation Team

It is proposed that the core evaluation team should be based as far as possible on national project participants.

Project staff will have a closer knowledge of the project and the people and institutions it serves than outsiders. The evaluation would also be a training exercise for them and they will also be more likely to put its findings into practice if fully involved. Using national staff in the evaluation gives the shortest possible feedback loop for the evaluation findings.

A suggested team composition, preferably including both men and women would be:

Core Teams: (5 or 6 persons)
(All Developing Country Nationals)

- Team Leader (Independent consultant from a non-participating developing country)
- Project Representatives:
  - Evaluation Zambia (and future evaluation Malawi):
    - 2 No. Malawian Participants
    - 2 No. Zambian Participants
  - Evaluation Indonesia and Sri Lanka:
    - 2 No. Indonesian Participants
    - 2 No. Sri Lankan Participants
- DGIS Resident Adviser

Support to Core Team:

- Other nationals from the participating countries
- DGIS Adviser
- IRC Project Manager
- Other sources of information and advise.

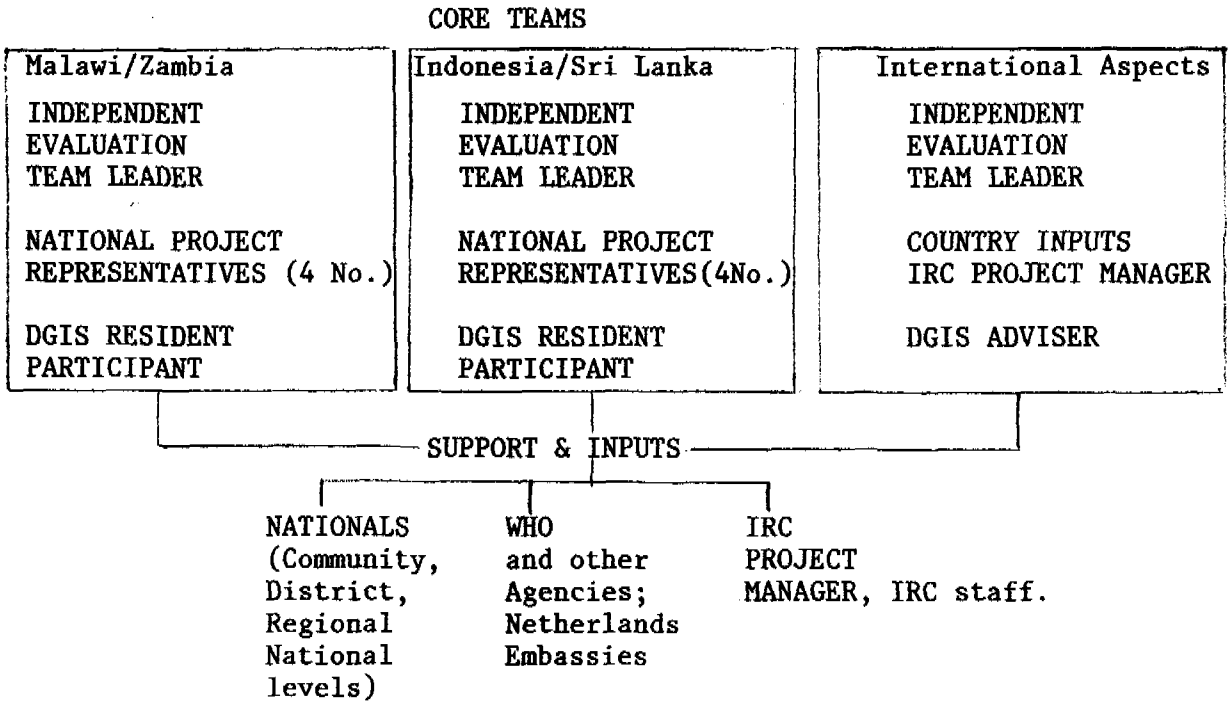
The country Project Representatives should be selected for their interest and willingness both to contribute to the evaluation and help implement the findings. The representatives' ability to learn (and benefit from learning) about evaluation and the experience of other participating countries are equally important factors. Additional national staff can be seconded to support the evaluation team in each country as necessary.

The Team Leader should ideally be a developing country national and a natural leader. The person selected should have:

- experience of evaluation
- an understanding of the objectives of an integrated demonstration project
- good analysis and reporting skills.

FIG. 2

PROPOSED EVALUATION TEAMS



4.4 Timing and Programme

The Interim Evaluation should take place during mid 1985. An 8 to 9 week field evaluation period is proposed, during which the Core Teams will spend up to two weeks in each of the participating countries.

Including preparation, review and reporting time, the evaluation would span 23 weeks. Assuming a mid-March start, the evaluation report would thus be available in early September.

It is proposed that the field evaluation is preceded by a 12 to 13 week preparation period (stage 1) during which the evaluation methodology will be finalised by the Team Leader. The views and ideas of all evaluation participants will be sought and incorporated during this stage and in-country preparations made for the evaluation visits.

The evaluation of the projects in Sri Lanka and Indonesia will then follow, (stages 2 and 3). A two-week period in each country is thought to be a minimum requirement.

FIG. 3 PROPOSED INTERIM EVALUATION: STAGES AND TIME-INPUTS

		WEEKS (TOTALS)		INPUTS (WEEKS)						
STAGE	ACTIVITY	Activity Period (weeks)	Total input (man weeks)	Team Leader	Indonesian Representative	Malawian Representative	Sri Lankan Representative	Zambian Representative	DGIS Resident Participants	IRC Project Manager
1	PREPARATION	12½	12	2½	1	1	1	1	½	1
2	EVALUATION SRI LANKA	2	9	2	1½	–	2	–	–	–
3	EVALUATION INDONESIA	2	10½	2	2	–	1½	–	1½	–
4	EVALUATION INTERNATIONAL ASPECTS	2	9	2	½	½	½	½	1	2
5	EVALUATION ZAMBIA	2	10½	2	–	1½	–	2	1½	–
6	REVIEW, MALAWI	½	1½	½	–	½	–	–	–	–
7	REPORTING	2	7½	2	½	½	½	½	½	1
		23 weeks	60 man weeks	13	5½	4	5½	4	5	4

Stage 4 is the evaluation of the international aspects of the project and stages 5 and 6 cover the evaluation of the project in Zambia and informal short review of activities in Malawi. This would be followed by final discussions and report writing (stage 8).

During each stage of the evaluation the lessons and experiences of earlier stages will be applied to refine the approach.

4.5 Division of Responsibilities

The independent Team Leader will have overall responsibility to the funder and IRC for the planning, execution and reporting of the evaluation.

The eight country project representatives will form two teams, headed by the team leader, for the evaluation of each regional pair of participating countries. They will also contribute to the planning and international evaluation stages and have responsibilities for interim reporting to the team leader. Each country representative also has special responsibility for detailed planning of the evaluation in his or her own country and ensuring that the team gains maximum insights during its short stay.

Additional national staff may join the evaluation team in each country to provide special inputs. During the country visits, widest consultation will be encouraged with nationals at country, regional, district and community levels. Inputs and advice from WHO and other agencies and projects will be sought. In Indonesia and Zambia, the teams may be augmented by a DGIS participant.

The IRC Project Manager and a DGIS Adviser contribute to the planning and report-writing stages. With the Team leader, they carry out the evaluation of international activities, using inputs from country participants.

APPENDIX

Support References

Amongst others the following primary references are suggested as background for the design of the Interim Evaluation and other evaluations:

"Evaluation for Better Planning", Modules for Workshops on Evaluation, UNICEF, WHO, IRC, RTI Final Draft, Dec. 1984.

"Minimum Evaluation Procedure (MEP) for Water Supply and Sanitation Projects"
WHO.

"Evaluation for Village Water Supply Planning", Technical Paper No. 15, IRC.

ANNEXE B

SOME GUIDELINES FOR THE INTERIM EVALUATION OF THE PROJECT

ANNEXE B

SOME GUIEDELINES FOR INTERIM EVALUATION OF THE PROJECT

CONTENTS

LIST OF APPENDICES

INTRODUCTION

About this paper:

This paper provides pointer ideas for the interim evaluation of the PSWS Project. It has been written to help brief and orientate the members of the evaluation teams on the main subject-matter aspects of the evaluation and to stimulate further thinking. It may be used as a general resource document and also as an aide-memoire. It may freely be adapted both before and during the evaluation to better meet the needs.

Basic elements of an evaluation

In general an evaluation may be divided into four broad fields of study:

1. A study of basic concepts of the project and the initial objectives as set out in the project documents.
2. A study of the relevance of of the project with regard to:
   - long-range objectives within the water supply and sanitation sector.
   - the policy and priorities of countries and international agencies.

   This is a study of the significance of the project.
3. A study of the extent to which the project is or will be successful in achieving its objectives. This is a study of the effectiveness of the project.
4. A study of the productivity of the project compared to the inputs in the project (manpower, time and money). This is a study of the efficiency of the project.

These four basic elements have been used as guiding principles in the set-up of this paper.
If required, more information on the main elements of an evaluation are included in Annexe 3.

Set-up of this paper:

Section one deals with the basis of the interim evaluation and may be used as guidance on the principles of the evaluation design.

Section two presents a break-down of the general evaluation objectives into two main points and indentifies the major issues of interest. The four broad fields of study as discussed in the introduction are incorporated.

Section three provides a lot of "concept-questions" in support of the general evaluation process. This section is intended only to be used as a pre-evaluation reference list. It has been included to give the evaluation teams an initial overview of questions that may need attention. In later stages of the evaluations it may be used as a checklist to identify questions not yet covered.

Abbreviations and a short list of relevant support-documents are included amongst the annexes.

1. BASIS OF THE EVALUATION

1.1. Objectives of the evaluation

The objectives of this interim evaluation are:
to study the objectives and progress of the PSWS Project and comment on its effectiveness and efficiency in order to submit recommendations for the rest of the project and for related projects in the future.

1.2. Levels of evaluation

Two broad levels may be distinguished:
A. National Project level
B. International Multi-Country Project level

The present evaluation will focus on both Multi-Country and National Project levels.

1.3. Key questions for the evaluation

In line with the objectives of the evaluation the following questions may be fundamental:

* Has the project enabled nationals to themselves develop better information and understandings?
* Have these understandings been shared and taken up on a larger scale?
* Has the project promoted more integrated, community-based approaches?
* Has it encouraged better co-operation both horizontally (between ministries) and vertically (between levels)?
* Has it contributed to the personal development of those taking part?
* Has the Project stimulated the flow of information amongst the participating and other interested countries?
* Has it led to follow-up projects and activities in related fields?

1.4. Suggested scope of recommendations

Recommendations should include the following four major issues:
- possible input and inprovements to be made in the present project;
- suggestions for further disseminating information and experiences gained from the project;
- suggestions to further encourage national agencies to apply the generated knowledge and experience from the project;
- identification and development of future follow-up activities and subsequent projects. (Special attention will be given to the draft proposals for follow-up activities as developed by the project staff).
- recommendations on the potential use of project output and findings in larger-scale programmes and/or as part of future policy. Factors to be considered in scaling-up the approaches developed should be identified and suggestions made for investigating the likely cost-benefit of such approaches in the larger scale.

1.5. Special considerations

The project should be viewed in the context of and as a contribution to the International Drinking Water Supply and Sanitation Decade (1981-1990) and the Primary Health Care and Health for All 2000 Programmes. Its intention to utilize the U.N.-supported TCDC concept (Technical Co-operation amongst Developing Countries) should also be borne in mind.

Given that roles and positions of women have often been neglected in development processes and projects, the evaluation teams may wish to pay special attention to the degree of integration of women in the project activities and to the interests of women in relation to project objectives, results and recommendations.

1.6. Evaluation of the "self evaluation" approach

As the core evaluation teams will be based as far as possible on national project participants, a short review will be included of this "self-evaluation" approach, to identify the main experiences, advantages and constraints. The earlier "Discussion Notes" (Ref 1.) may be used to identify the intentions behind the design of the evaluation so that these can be better assessed.

2 MAIN PARTS OF THE EVALUATION

The interim evaluation should include balanced evaluation of both of the following aspects:

2.1. At National Project Level

- review of the significance of the project in the respective countries in relation to:
  * problem perception
  * project objectives
  * target population(s)

  as set out in the project documents
  * plans, priorities and development policy of the individual countries;
- assessment of the progress of the project to date in the individual countries with regard to technical and institutional aspects and the learning and information sharing processes;
- review of the effectiveness of the project in the individual countries;
- review of the efficiency of the project in the individual countries;
- assessment of the wider impact (spin off) of the project to date in the individual countries;
- possible adjustments from ongoing activities;
- identification of possible follow-up activities;
- identification of possibilities to integrate project activities and methodologies in on-going and planned community water supply and sanitation programmes.

2.2 At international multi-country project level

- review of the significance of the project in relation to:
  * general problem perception
  * general project objectives
  * target countries
  * IRC policy and objectives (as coordinating body)
  * International Water Supply and Sanitation Decade and Health For All Programme
- review of the keynotes of the project, viz:
  (a) multi-country basis
  (b) implementation through and by nationals
  (c) balanced importance of software and hardware components
  (d) integrated approach
  (e) community based
  (f) designed for wider application
- review of the approach and methods as applied by IRC in cooperation with the respective national counterparts;
- assessment of project activities, output (achievements and constraints) and impact (spin off) at the international level;
- possible adjustments and recommendations for the rest of the project;
- identification of follow-up activities;
- suggestions for accelerating wider impact.

3. SUGGESTIONS FOR SOME SPECIFIC POINTS TO BE STUDIED

More specifically the interim evaluation teams might wish to consider some of the following aspects:

3.1 At National Project level

a. Project objectives and progess:

- Were the original objectives realistic? Did or do they need reformulation?
- Have a workplan and time schedule (programme) been developed? and were they reviewed and developed with time?
- Were the proposed project activities appropriate to reach the objectives?
- What progress has been made in relation to objectives and the original time schedule? Were adaptations necessary? What are the achievements and constraints?

b. Project management:*

- Selection and functioning of the Project Coordinating Institution (PCI);
- Composition of the Project Management Committee (PMC). Which ministries and organisations are represented? At what level?
- Functioning of the Project Management Committee with regard to:
  * planning, implementation and evaluation of the project;
  * coordination of contributions from participating ministries and organisations;
  * collaboration at national and local level;
- Collaboration between PCI, PMC and Project Managers.
- Tasks and responsibilities of the Project Manager. What factors are facilitating and/or hampering the work of the Project Manager?
- Tasks and responsibilities project staff. Which factors are facilitating and/or hampering their work?
- Stronger and weaker points of the chosen organisation and management structure;
- Appropriateness in fostering integration into the national programme for community water supply and sanitation.

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* It is recommended that the evaluation avoid evaluating individual persons but rather give attention to aspects such as: organisation, structure, functions, constraints, etc.

c. Project approach:

- Has the project developed an integrated approach to piped water supply and sanitation?
- In which way and how are related component subjects* integrated? At what levels? Between which levels?
- Which component subjects have been identified/given priority as most relevant to national and local needs?
- What are the strategies, methods and techniques developed in support of the integrated approach? Do they do justice to local circumstances? To what extent are they community based?
- What are the experiences gained so far? Were or are adaptations necessary?
- Did the integrated approach have impact on the effectiveness and costs of the completed water supply systems?
- What are the achievements and constraints compared to earlier approaches to water supply and sanitation?
- Does the integrated approach as developed by the project have impact on other water supply and sanitation programmes? To what extent is this approach being adopted? At what level(s)?
- Does the approach developed effect working relations/division of responsibilities between various ministries and organisations? At what levels?
- What were the possibilities, achievements and constraints in including sanitation activities in the water supply projects?

d. Local Demonstration Schemes (refer to Annexe 4 for further detailed suggestions)

- What strategies, methods and techniques have been applied in the planning, implementation and management of the local demonstration schemes?
- What are the main observations, findings and experiences? Were adaptations necessary? Were improvements possible?
- Do the developed strategies, methods and techniques allow for wider application, both in rural and urban fringe areas? What are the implications for government agencies and organisations at the various levels?

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* Community participation; community hygiene education; social aspects; financial management and administration; operation and maintenance; sanitation; training and manpower development; organisation and legislation; planning, economics and evaluation; tech. aspects design and construction; materials, parts and equipment.

. Questions related to:
  1) selection of the local demonstration schemes
  2) community participation
  3) community hygiene education
  4) socio-economic aspects
  5) financial management and administration
  6) operation and maintenance
  7) sanitation
  8) technical aspects

e. Special Subject Studies:
. Have special subject studies been undertaken and/or workshops organised?

. What where the main subjects?

. Which ministries and organisations were involved?

. What are the main findings and results?

. In what way and to what extent are these outcomes integrated in the general project approach?

. Are new/further special subject studies required?

f. Project staff, transport and support:
. What was the manpower availability for projects execution? Did it change over time?

. How much time was the project staff able to spend on the project?

. To what degree have adequate provisions been made for:
  * transport
  * office accomodation
  * administration
  * secretarial support

g. Manpower development and training:
. How do individual project staff members evaluate what they have gained from the project? To what extent and in what way will it influence their futures?

. To what extent did the project contribute to manpower development through:
  * the development of integrated approach
  * special subject studies
  * workshops and seminars
  * personal development through working on the project.

. Were training programmes developed, adapted and/or executed? Which ministries and organisations were involved? How many people were trained? At what level(s)?

h. Written project output:
. What is the project output in terms of workplans, programmes, case studies; guidelines; training materials; manuals; reports; audio-visual aids?

. Have these documents been distributed on a wider scale?

. Are these documents being used? To what extent?

. Were they in local languages?

i. Monitoring and evaluation:
. Did ongoing monitoring and evaluation form part of the project activities?

. What are the main experiences gained?

. Is there regular reporting to the Project Management Committee, Project Co-Ordinating Institution and IRC?

. Were progress reports prepared?

. To what extent and how have they been used?

. Were verbal briefings and presentations used?

j. Financial Aspects:
. Are project budgets prepared, reviewed and updated at regular intervals?

. What are the mechanisms for expenditure requests, authorisation, book-keeping and auditing?

. Has the system of working advance, declaration and transfer of project funds from IRC worked satisfactorily?

. Have financial and other contributions to the project from other sources (Government budgets, NGO's etc.) been adequate?

3.2 At international multi-country project level:
(a) Fulfillment of Project Objectives:
. Has the project enabled nationals to themselves develop better informationad and understandings?

. Have these understandings been shared and taken up on the larger scale?

. Has the project promoted more integrated, community-based approaches?

. Has it encouraged better co-operation both horizontally (inter-ministerial) and vertically (between levels)?

. Has it contributed to the personal development of those taking part?

. Has the Project stimulated the flow of information amongst the participating and other interested countries?

. Has it led to follow-up projects and activities in related fields?

(b) General support and co-ordination:

. What kind of supportive and coordinating activities have been developed in:
    * information and technology support;
    * co-ordination between the country programmes;
    * organisation of regional and international meetings and seminars;
    * organisation of bilateral working visits;
    * engagement of consultants on specific topics;
    * preparation of manuals, guidelines and other publications;
    * correspondence and other communication;
    * administration of the project as a whole.

. What are the main achievements and what were the main constraints?

. What suggestions may be given for further support and coordination both for the present project and for subsequent projects?

(c) Coordination and support visits:

. Timing and frequency of the visits

. Content of the visits

. Working relations with ministries and international and donor agencies

. Follow-up activities from the visits

. Degree of guidance to the respective national project management committees, project managers and others on the management of the in-country projects.

(d) Support consultancies and studies:

. Have support consultancies and studies been carried out? Are other consultancies being developed?

. In which countries? On which subjects?

. What are the experiences gained so far?

. Is there a need for future consultancies and studies?

(e) Support documents and papers:

. Have support documents been published? On which subjects? Which other documents will be published in the near future?

. Have support and planning papers been prepared? What were the subjects and what were the aims?

. What are the experiences gained with the support documents and papers? To what extent are they being distributed and used?

. Is there an identified need for any new publication? On what subject?

(f) Other support activities:

. Have regional and/or international meetings been organised?

. Which countries and how many people participated?

. What has been the output in terms of written documents and follow-up activities?

. What were the main observations and experiences? What were the main recommendations?

. Have bilateral exchange visits been organised?

. How do participants evaluate these exchange visits? What are the main benefits and main constraints?

. Is correspondence kept up with participating countries and others and are requests attended to?

. What are the experiences to date with the self-evaluation principle?

. Is there a need to further develop these kind of activities? To what extent and in what way? What are the anticipated benefits?

(g) Knowledge Aquisition, Dissemination and Application.

. Has the knowledge-base in the subject areas been developed?

. Have contacts been developed with various organisations and projects in the participating countries and other interested countries?

. Have cooperative activities been developed between the participating countries and other interested countries?

. Has the project objective to work with and through national agencies influenced the dissemination and application of generated knowledge? In what way and to what extent?

. Have contacts been developed with International Agencies?

(h) Management Aspects

. How have the international multi-country aspects of the project been co-ordinated?

. What are the mechanisms for the management of project resources (finance, manpower, knowledge), including financial monitoring?

. What sort of supporting inputs within IRC (administrative, secretarial, financial, reference and information) are available to the Project Manager?

. How has reporting been organised (a) within IRC, (b) to the project funder (DGIS)? Have verbal briefings and presentations been used?

APPENDIX I
LIST OF ABBRIVIATIONS

DGIS	Directorate General of Development Co-operation, Netherlands Government.
HFA 2000	Health for All by 2000 Programme
IRC	Internatiional Reference Centre for Community Water Supply and Sanitation
NGO	Non-Governmental Organisation
PCI	Project Co-Ordinating Institution
PHC	Primary Health Care
PM	Project Manager
PMC	Project Management Committee
PPI	Project Participating Institution
PSWS	Public Standpost Water Supplies
TCDC	Technical Co-Operation amongst Developing Countries

APPENDIX II
RESOURCE DOCUMENTS

1. PSWS Evaluation-Discussion Notes
   IRC PSWS/1985 03 25 Rev. A

2. Public Standpost Water Supplies brochure, IRC, 1984

3. Public Standpost Water Supply Systems:
   Proposal for an integrated development and demonstration programme
   IRC, July 1980

4. Public Standpost Water Supplies
   Edited by A. Pacey
   Technical paper no. 13, IRC, 1980

5. Agreements between the project countries and IRC, 1982/83

6. Minimum evaluation procedure (MEP) for water supply and sanitation projects. WHO, ETS/83.1; CDD/OPR/83.1, February 1983

7. Evaluation for Village Water Supply Planning Prepared by S. Cairncross, J. Carruthers, D. Curtis, R. Feachem, D. Bradley and G. Baldwin
   Technical paper no. 15, IRC, 1984 (second edition)

8. Glossary of Evaluation Terms
   Prepared by Earl D. Sohm, Joint Inspection Unit
   WHO, November 1978

APPENDIX III

SHORT NOTE ON KEY-EVALUATION TERMS AND CONCEPTS*

Four commonly used evaluation terms, showing the basic characteristics of evaluation are:

1. Objectives
2. Relevance or Significance
3. Effectiveness
4. Efficiency

This note provides definitions of these terms together with specific examples of their meaning.

1. Objectives are the purposes and aims of an activity, representing the desired state which the activity is expected to achieve.

   Objectives are usually conceived of in terms of levels: achievement of the immediate objectives of an activity should contribute to the fulfillment of broader, long-range (general) objectives.

   Example:
   The general objective of PSWS Project is to develop appropriate strategies, methods and techniques for the planning, implementation and management of community water supply systems which:
   * include a considerable number of public standpost (communal water points)
   * are designed to serve the poorer sections of the population in rural and urban fringe areas of developing countries.

   The immediate objectives of the PSWS Project are:

   a. to set up and to develop demonstration project on the application of public standposts in community water supply schemes in a number of selected countries.

   b. to conduct a series of studies and to prepare guidelines on particular organisational, economic, technological and socio-cultural aspects of public standpost water supply systems in the developing countries.

   c. to evaluate the respective projects and studies, regularly as an integral part of the development of the programme.

   d. to promote international collaboration, transfer of knowledge and experience and exchange of information on various aspects of public standpost water supply systems, in line with the Technical Co-operation amongst Developing Countries (TCDC) concept.

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* Largely based on: Glossary of Evaluation Terms Prepared by Earl D. Sohm WHO, Geneva, 1978.

2. Relevance (or significance) relates to the rationale for having a project or activity, in terms of their response to essential human needs and development policies and priorities.

   An activity may be both effective and efficient in that it was successful in achieving its objectives and well-managed (see definitions below), but still not be relevant because it makes little or no contribution to meeting priority needs.

   Example
   A project designed for community water supply may lose its relevance if the Government revises its developmental priorities to concentrate only on high technology urban water supply.

3. Effectiveness is a measure of the extent to wich an activity achieves its objectives.

   A project is considered effective (successful) when it has achieved its immediate objectives and the results of these achievements are utilized to achieve the broader or general objectives.

   Example
   Did the PSWS project meet its objective to set up and develop demonstration projects on the application of public standposts in community water supply schemes? Did it contribute to the general objective to develop appropriate strategies, methods and techniques for the planning implementation and management of community water supply systems?

4. Efficiency relates to a comparison between the results obtained from an activity and the efforts expended in terms of human, financial and other resources, and time.

   The assessment of efficiency is aimed at improving implementation and adds to the review of progress by taking account of the results.

   Efficiency in a sense is synonymous with cost-effectiveness in as much as it implies consideration of alternative approaches to the achievements of the objectives.

   Examples
   - A project costing $ 1 million is more efficient than a comparable one costing $ 2 million.
   - In the long run a project working with and through nationals may be more efficient in developing and applying appropriate strategies than one using outside experts.

Summary
Using these terms evaluation may be defined as follows:

"Evaluation is a learning and action-oriented management tool and process for determining as systematically and objectively as possible the relevance, effectiveness and efficiency of activities for future planning, programming and decision-making."

In other words Evaluation should not be concerned with justifying past activities or merely identifying their inadequacies, but rather with serving as a decision-oriented participative learning process to assist in the positive improvement of present and future activities.

APPENDIX IV

ASPECTS FOR SELECTIVE CONSIDERATION IN STUDYING LOCAL DEMONSTRATION SCHEMES (AS PART OF NATIONAL PROJECT ACTIVITIES).

a) General

- What strategies, methods and techniques have been applied in the planning, implementation and management of the local demonstration schemes?

- What are the main observations, findings and experiences? Were adaptations necessary? Were improvements possible?

- Do the developed strategies, methods and techniques allow for wider application, both in rural and urban fringe areas? What are the implications for government agencies and organisations at the various levels?

b) Selection of local demonstration schemes

- What were the criteria for selecting demonstration schemes?

- What were the constraints in selecting demonstration schemes?

- What were the basic characteristics of the selected demonstration sites with respect to
  * population
  * the water supply and sanitation situation

- Do experiences gained with the selection of schemes allow for formal selection criteria for this type of project?

c) Community participation:

- What strategy has been used for community approaches and community participation?

- To what extent and in which phases was the community involved in decision making with respect to:
  * selection of source(s)
  * selection of technology
  * level of service
  * siting of standposts
  * design and construction
  * timing
  * organisation of operation and maintenance
  * costs and contributions
  * training and manpower development
  * division of responsibilities between community and governmental/non-governmental agencies and organisations?

- To what extent and how did the various socio-economic groups within the community participate? Men and Women? Children? Social outsiders? Local organisations?

- Who was responsible for the community participation component? How did it relate to other components?

- What are the main observations, findings and experiences? Were adaptations necessary? Were/are improvements possible? Is the method suitable for wider application?

d) Community Hygiene Education:

- Was hygiene education included in the project activities?
- What were the main hygiene education objectives?
- How was it organised and by whom?
- Who were the main target groups; What were the main approaches; what were the main messages? Was it community based? Was it based on dialogue?
- How do people and hygiene educators evaluate the programme?
- What are the main experiences and lessons learned? What are positive elements that could be strengthened? What are the main constraints and how could these be overcome? How can the incorporation of a hygiene education component be made easier in future programmes?

e) Socio-economic aspects:

- What was the need for water supply and sanitation facilities?
- Acceptability of the system to the users?
- Who benefits from the new facilities?
  * accessability of facilities
  * equitable distribution of facilities
  * domestic use of water facilities
  * productive use of water facilities (cattle, gardening small-scale industries)
- What are the health risks and health benefits of the new water supply and sanitation facilities?
- Affordability of new facilities?
- Have baseline studies and evaluations been carried out? By whom? To what extent and how have the outcomes been used?
- Did the project generate local initiatives?

f) Financial management and administration:

- Do people pay for the construction and/or use of the facilities? How much?
- Do contributions cover recurrent costs? Initial capital costs?
- What system has been developed for resource generation? Who is in charge and who is responsible?
- Is there a problem of non-use of the system; of use by outsiders; of non-contribution? To what extent do these problems influence the working of the system?
- What control mechanisms have been developed? Do they work and are they accepted?

- Is there a division of responsibility between the community and the government agencies and organisations?

- What are the main observations and experiences? Is the system developed appropriate for wider application?

g) Operation and maintenance:

- Has an organisational structure for operation and maintenance been developed?

- What tasks are carried out at the local level and what tasks at higher levels?

- Who is responsible for the operating the system? Who for preventive maintenance? Who for maintenance and repair?

- Are people trained? Do they get supervision? Are they renumerated?

- Is there an adequate system for stock control and distribution of spare parts?

- What are the financial arrangements for all operation and maintenance activities? (see also f)

- What are the main observations and experiences? Are improvements possible? Does the system developed allow for wider application? What are the implications for government support?

h) Sanitation

- Has a sanitation component been included?

- Who took the inititative?

- What approaches and activities have been developed?

- Are water supply, sanitation and hygiene education activities linked? How and to what extent?

- What are the main observations and experiences? Are improvements possible? How may the sanitation component be further developed? What are the implications in terms of manpower and money involved?

i) Technical aspects:

- Was there a need for a water resources study in the planning phase?

- Is the level of service and choice of technology adequate if compared to need, health aspects, manpwer requirements, cost-effectiveness, and operation and maintenance aspects?

- Do the facilities function?

- Was construction by tender, direct labor, self-help or a combination? What were the administrative and supervisory arrangements?

- Is there a system for water quantity and water quality control at regular intervals?

- Have design criteria been developed and tested with regard to:
  * maximum number of users per tap?
  * maximum walking distance?
  * average consumption per person, per day?
  * design period?
  * ratio between house-connections and public standposts?
  * efficient drainage of waste water?
  * leakage prevention?
  * allowance for future upgrading of the system?

- What are main observations and experiences? Are improvements possible? Does it allow for wider application?