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PIPED SUPPLIES FOR SMALL COMMUNITIES
PROJECT, ZAMBIA

NATIONAL WORKSHOP ON PIPED SUPPLIES
FOR SMALL COMMUNITIES IN ZAMBIA

23-28 JANUARY, 1989

SIAVONGA, ZAMBIA

REPORT OF THE WORKSHOP

- Organised by: - Department of Water Affairs
Ministry of Water, Lands and Natural
Resources
- Department of Social Development
Ministry of Labour, Social Development and
Culture
- Ministry of Health
- Sponsored by: - International Reference Centre
for Community Water Supply and Sanitation
The Hague, The Netherlands

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The Organisers of the Workshop on Piped Supplies for Small Communities (PSSC) in Zambia are greatly indebted and extremely grateful to:-

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- (ii) UNDP for funding the Zimbabwean participant and the German Agency for Technical Co-operation (GTZ) for supporting the participation of the Decade Adviser.
- (iii) The Ministry of Water, Lands and Natural Resources -especially the Department of Water Affairs for hosting the workshop.
- (iv) The Project Participating Institutions and Non-Governmental Organisations for their logistical support and participation.
- (v) The participants and observers for the great enthusiasm, commitment and sharing among themselves their rich and valuable knowledge and experience which, if applied in their respective Ministries, Departments, Organisations or Countries will go a long way in improving information and data collection and analysis for community water supply and appropriate sanitation.
- (vi) The Hon. Minister of Water, Lands and Natural Resources for officiating at the workshop opening.
- (vii) The Hon. Minister of State for Health for officially closing the workshop.
- (viii) The Permanent Secretary for Ministry of Water, Lands and Natural Resources for chairing the session for the first day and all the moral support and encouragement given to the organisation and conduct of the Workshop.
- (ix) The First Secretary (Development) of the Royal Netherlands Embassy who participated in the opening session and made a statement of donor support for the objectives of the PSSC Project in particular and the development of the water sector in general.
- (x) The Resident Representative of WHO, Dr. W.S. Boayue, for participating in the opening Session.
- (xi) The Administrative, Secretarial and support staff who played a crucial role which greatly contributed to the success of the workshop.

1. INTRODUCTION

- 1.1 The National Workshop on Piped Supplies for Small Communities (PSSC) in Zambia was organised and managed by the PSSC Project Management Committee and the Project Staff, and was sponsored by the International Reference Centre for Community Water Supply and Sanitation (IRC). The main aim of the Workshop was to discuss improved strategies and methods for the planning, implementation and management of piped water supplies and appropriate sanitation for small communities in rural and urban fringe areas.
- 1.2 The National Workshop was aimed at informing and sharing ideas with various individuals, groups, Government, agencies, non-Governmental organisations and donor agencies on the subject of piped water supplies and appropriate sanitation.
- 1.3 The Workshop was attended by participants from Southern, Western, Central, Lusaka, Northern and North-Western Provinces of Zambia. In addition, the workshop was attended by participants from Malawi, Zimbabwe and IRC. The full list of participants is annexed to this report (Annex I).

2. OBJECTIVES AND PROCEDURE OF THE WORKSHOP

2.1 General Objectives

- i) To provide a forum for the exchange of information and ideas on piped water supplies, appropriate sanitation and hygiene in small communities in Zambia.
- ii) To discuss the Piped Supplies for Small Communities Project in relation to the knowledge, skills, and experience gained from the Public Standpost Water Supplies Project and other piped water supply projects and to map out strategies for applying the experiences to be gained from the Piped Supplies for Small Communities (PSSC) Project.

2.2 Specific Objectives

- i) To evaluate work done so far since January, 1988 in the Piped Supplies for Small Communities Project, and review the findings of the Public Standpost Water Supplies Project at the three demonstration sites.
- ii) To explain in detail the aims, activities, and community-based approaches used in the projects to individuals, Government officials, donor and non-governmental organisations (NGOs), and to discuss adaptations for wide scale use in some piped water schemes/ projects elsewhere in the country.
- iii) To agree on, and to share technical and professional responsibilities in order to accelerate execution of the PSSC Project.
- iv) To discuss available guidelines and how to develop more for the PSSC project and their eventual wider use.
- v) To emphasise and further develop methods for community participation at all stages of small piped water supplies with particular involvement of women.
- vi) To present information on the potential local demonstration schemes for the PSSC Project especially the socio-economic considerations and the results from the technical feasibility studies carried out by the Provincial Water Engineers.

2.3 Procedure of Work

- 2.3.1 The final programme of the workshop is presented in Annex II. It was agreed that all presentations would be given in plenary session, and each presentation would be followed by brief discussions. However the main discussion took place in four working groups each focussing on several interrelated topics including community organisation and financial management, health and hygiene education, community participation and the role of women and children, technical aspects and appropriate technology. The group reports were discussed in plenary session. Similarly draft workshop recommendations were discussed in plenary session.
- 2.3.2 All participants took part in a field visit to a rural piped water supplies scheme constructed almost 30 years ago. During the field trip members of each working group focussed their observations on those aspects which were assigned to the working group. In this manner it was hoped to provide a more balanced and in-depth set of observations of the relevant aspects of piped water supplies for small communities.

2.4 The Report of the Workshop

- 2.4.1 For each session of the Workshop, including group discussions, a chairman and two rapporteur were appointed to guide and record the proceedings.
- 2.4.2 The Report of the Workshop consists of summaries of each presentation and discussion, if any, as summarised by the rapporteur and the chairman of each session. Where necessary the presentations have been reproduced in full in annexes at the end of the report. The proceedings are in chronological order in the sequence in which the presentations were made.
- 2.4.3 The Report also includes a summary of the evaluation of the Workshop. Participants were given an evaluation form on which they recorded their opinions of the Workshop with respect to organisation, the technical content, and the potential usefulness of the Workshop. The evaluation should serve as a basis for improvements in the organisation of future workshops under the PSSC programme and other related activities in the water supply and sanitation sector. A summary of the evaluation is presented in Annex IX.

3. 1ST DAY: MONDAY 23RD JANUARY 1989

3.1. Opening Session

3.1.1 The opening plenary session was chaired by Mr. N. Mukutu, Permanent Secretary for the Ministry of Water, Lands and Natural Resources. During the opening session, the Chairman welcomed the Guest of Honour, invited guests and participants to the Workshop.

3.1.2 After the welcoming remarks, the Permanent Secretary called upon the Guest of Honour, the Hon. Paul Malukutla, MCC, MP, Minister of Water, Lands and Natural Resources to officially open the Workshop. For the Hon. Minister's Opening Speech see Annex III.

3.1.3 The opening session was also attended by the following dignitaries:

- Dr. W.S. Boayue, the World Health Organisation Programme Co-ordinator and Representative in Zambia.

- Mr. G.J. Tempelman First Secretary for Development, Royal Netherlands Embassy.

3.1.4 The Guest of Honour's opening remarks were followed by a vote of thanks by the PMC Vice-Chairman. This was followed by a statement by a Representative of the Royal Netherlands Embassy (See Annex IV) and a statement by IRC official on PSSC-Global Project (see Annex V). This was followed by closing remarks by the Chairman and luncheon in honour of the invited guests.

3.2 Afternoon Plenary Session

Following the official opening of the Workshop by the Hon. Minister of Water, Lands and Natural Resources in the morning, the afternoon session was devoted to presentation of papers. The Permanent Secretary for the Ministry of Water, Lands and Natural Resources chaired the session and Messrs D.S. Phiri, Provincial Health Inspector, Central Province and P. Chola, Provincial Water Engineer, Northern Province, served as rapporteur. Three papers were presented as follows:

- a) Public Standpost Water Supply and Piped Supplies for Small Communities Projects in Zambia - by the Project Manager, Mr. M.K. Chimuka

- b) Rural Piped Water Supplies in Zambia - by the Deputy Director of Water Affairs in Zambia, Mr. L.L. Mbumwae

- c) Water Policy in Zambia - By the Secretary, Water Development Board of Zambia, Ms. M.S. Lungu.

3.3 Public Standpost Water Supplies (PSWS) and Piped Supplies for Small Communities (PSSC) Projects

The paper by Mr. M.K. Chimuka, Project Manager of both the PSWS and PSSC Projects is summarised as follows:

3.3.1 PSWS Project

The first phase of the PSWS Project started in 1983 after the International Reference Centre for Community Water Supply and Sanitation (IRC) reached an agreement with the Government of the Republic of Zambia for the project to be undertaken. However, the project did not take off until mid 1984 after the following administrative constraints were cleared:

- Delayed identification and selection of Project Manager;
- Delayed identification of Project Participating Institutions (PPI).

3.3.2 Project Objectives

- to set up local demonstration schemes (LDS) in each Project site chosen with emphasis on community involvement and participation;
- to prepare manuals and guidelines on Public Standpost Water Supply Schemes;
- to continuously evaluate the Project and lesson learning;
- to adopt appropriate methods of excreta disposal;
- to apply the knowledge gained in the Project in other parts of the country.

3.3.3 Project Institutional Framework

The Project Coordinating Institution (PCI) was the Department of Water Affairs, while the Project Participating Institutions (PPIs) consisted of:

- Ministry of Health (Environmental Health Division);
- National Action Committee for the International Drinking Water Supply and Sanitation Decade;
- Department of Social Development;
- World Bank Water Supply Project;

- Civil Engineering Department, University of Zambia (UNZA);
- Technology Development Advisory Unit, UNZA;
- Community Health Department, School of Medicine, (UNZA);
- Chainama College of Health Sciences.

The Project Management Committee (PMC), chaired by the Project Coordinating Institution, and consisting of representatives from each of the above institutions, was established to supervise and guide the project. The PMC met quarterly, and at times more often if necessary.

3.3.4 Project Implementation

The Project was implemented in Lusaka and Central Provinces in sites within easy reach of the City of Lusaka to allow close supervision and monitoring by the PCI and the PMC. Project site selection was approved by the PMC, and the following demonstration sites were selected:

- (i) Chibombo area (Kabwe District, Central Province): Chiuni, Kaongo and Mwamulimba Villages;
- (ii) Mwachisompola area (Kabwe District, Central Province): Mulimba Compound and Mwachisompola Rural Health Centre;
- (iii) Chongwe area (Lusaka Province): Sokoshi, Libuko and Kabubo Villages.

The health problems identified together with the local community in the selected sites were bilharzia and diarrhoea. At public meetings local leadership was identified that included women, and village water committees were formed.

The village water committees were responsible for:

- raising funds;
- selection of standposts;
- hygiene education of the community;
- selection of a caretaker to do simple maintenance jobs and a treasurer to look after funds. Every household was required to pay K2 for the services which was put in a revolving fund account.

3.3.5 Sanitation

On the problem of excreta disposal the use of pit latrines was assessed and the VIP latrine was preferred on account of absence of smell nuisance. Use of local materials was encouraged. The VIP latrine proved particularly popular at Chibombo Primary School, Mwachisompola Hospital and the surrounding compound.

3.3.6 Project Successes

- promotion of intersectoral cooperation;
- introduction of VIP latrines;
- Project demand increased;
- caretakers keen to run the standposts;
- revolving fund scheme was promoted and it attracted interest of many people;
- standard of hygiene improved.

3.3.7 Project Constraints

- insufficient engineering inputs;
- lack of support from district councils;
- initially project staff were part time;
- non-availability of construction materials when needed;
- illiteracy discouraged other people to participate;
- lack of support from some PPIs.

3.3.8 PSSC Project

Because of the good results gained from PSWS which was only a pilot scheme in Zambia there was need to extend the approach to other parts of the country on a wider scale through the Piped Supplies for Small Communities (PSSC) Project which will include house and yard/plot water connections as well as neighbourhood taps. This should give maximum chances of flexibility and enhanced sustainability. The aims of the PSSC Project built upon the experiences of the PSWS Project and focus on further development, sharing and application of appropriate methods.

3.3.9 Progress on Implementation of PSSC Project

- PPI membership has been strengthened inclusion of the following organisations.
 - (i) Ministry of Decentralisation
 - (ii) A member of Non-Governmental Organisations (NGO)
 - (iii) A Research Secretary from the University of Zambia
 - (iv) Representative of the Women's League.

- Master plan has been set;
- Site selection has been done to include at least one rural site in five provinces (Central, Lusaka, Western, Southern, and Northern) and one peri-urban site in central Province.

3.3.10 Discussion

- Q1. Is the water rate of K2 sufficient to maintain the system, and who determined it?
- A. No; the local district council determined the rate.
- Q2. Are the standpost connections made from new or old water supply schemes?
- A. Connections can be done to new or old schemes provided they satisfy technical requirements.

3.4. Piped Water Supplies in Zambia

- 3.4.1 The Deputy Director of Water Affairs Mr. L.L. Mbumwae stated that the Department is one of at least four Government departments responsible for providing water supply services to urban and rural populations. Presently the Department is responsible for water supplies in 41 small urban townships, four border posts and two rural townships. The Department is also responsible for all major donor-funded rural water supply programmes. The district councils have responsibility, under the Decentralisation Act, for all rural and township water supplies. However often the Department carries this responsibility as technical advisers for the district councils.
- 3.4.2 It was pointed out that the Department has been responsible for a major thrust of the IDWSSD programme in Zambia. Since 1978 many water supply schemes have been implemented with donor assistance. Donor support to the water and sanitation sector has accounted for over 90 per cent of capital development in the sector over the last five years. At present 18 water supply schemes have been rehabilitated and expanded; there are 10 schemes where rehabilitation and expansion is under progress; there are 14 schemes for which tenders are ready for implementation; and there are 9 schemes for which feasibility studies have been completed.
- 3.4.3 With regard to operation and maintenance, schemes are operated and maintained by officers-in-charge of districts and supervised by respective Provincial Water Engineers, and supported by DWA headquarter through the Chief Water Engineer (Water Supplies).

- 3.4.4 The main constraints affecting the operational efficiency of the sector are organisational and administrative, financial, and manpower. Organisational constraints are brought about by the rigid rules and regulations of the Government system. Financial constraints are the result of inadequate funds both for recurrent and capital budget; this has serious effects on the standard of service and on the operation and maintenance of schemes. As regards manpower, it was pointed out that there is a shortage adequately trained and experienced manpower, more especially at professional and technical levels.
- 3.4.5 In conclusion the Deputy Director stated that the Government is seriously looking into ways of how best to organise the water supply and sanitation sector to improve operational efficiency; to attract and retain qualified manpower; to seek further sources of funds to expand water supply services throughout the country.

Discussion

- 3.4.6 The Deputy Director was asked about plans for the training of manpower, and he explained that in-service training and formal training is being provided either as part of donor-funded water supply programmes, or through the regular manpower training schemes of Government, at University of Zambia, and at technical institutions in the country.
- 3.4.7 On aspects of revenue collection he explained that there were problems with accounting for funds from outlying schemes, difficult enforcement of tariffs, and the non-uniformity of tariffs even in townships in the same region. These problems will be alleviated when there will be one national organisation for the whole sector to coordinate all sector activities.
- 3.4.8 An observation was made concerning the lack of health education and community involvement on various programmes implemented by DWA. The Deputy Director pointed out that there were other Government ministries responsible for these aspects. The problem was mainly lack of coordination; DWA is willing to cooperate to ensure integrated approaches.

3.5 Water Policy in Zambia

- 3.5.1 In this paper Miss M.M.S. Lungu outlined the water policy and functions of the Water Development Board of Zambia and quoted some legal enactments which protect and guide the Board in its activities. By law it is an offence to use public water or interfere with water flow in a public stream without a Water Right Permit from the Board. Three types of water rights were

stated and the procedure which an applicant has to follow in order to secure a water right was stipulated.

3.5.2 It was pointed out that under the present Water Act there exists serious omissions and weaknesses such that it is impossible to prevent the incidence of recurrence of water pollution by industries that produce toxic effluents. In conclusion she called for the enactment of a comprehensive water act which will prevent the indiscriminate establishment of industries without licence to discharge effluents in the streams; and the creation of a pollution monitoring agency whose functions will be to police effluent discharge and other industries operating without licence to discharge toxic effluent in public water.

3.5.3 Discussion

When asked what organisation is responsible for pollution control in Zambia, Miss Lungu said there was no organisation which is a pollution control inspectorate. However, the Ministry of Agriculture and Water Development drafted an amended Act in 1981 so that the problem of pollution could be arrested.

The draft recommended an establishment of an Advisory Committee on Water Quality and Pollution Control.

The Deputy Director of Water Affairs made a contribution that in the proposed reorganisation of the Water and Sanitation Sector a new water policy will be taken care of by the enactment of a new Water Act which will cover ground water and pollution adequately.

The Chairman said if two inspectorates will be established, one for water and the other for atmospheric pollution respectively then the inspectorate of water pollution will be under the Ministry of Water, Lands and Natural Resources.

4. 2ND DAY, TUESDAY 24TH JANUARY 1989

4.1 General

4.1.1 The Morning Plenary Session was chaired by Mr. E.P. Katati from 8:30 to 10:00 hours, thereafter Dr. I.L. Nyumbu chaired the rest of the morning and afternoon sessions. Mr. P.K. Mwanamwenge and Ms M. Linyando served as rapporteur for the whole day. The following papers were presented in the course of the day:

- (a) "An Evaluation of the "Decade Approach" in the Implementation of Water and Sanitation Activities in Zambia", by Dr. I.L. Nyumbu, IDWSSD Adviser, DWA/GTZ Project, Department of water Affairs, Zambia.
- (b) "Sanitation and Hygiene Education in Piped Water Supplies", by Mr. S.A. Goma, Chief Health Inspector, Ministry of Health, Zambia.
- (c) "Appropriate Technology in Piped Water Supplies and Sanitation" by Dr. E.M. Pensulo, Manager, Technology Development Advisory Unit, University of Zambia.
- (d) "The Piped Supplies for Small Communities Project in Malawi", by Mr. F. Kwaule, Project Manager, Water Department, Ministry of Works, Malawi.
- (e) "Piped Water Supplies in Zimbabwe", by Miss E. Kaka, Ministry of Energy, Water and Natural Resources, Zimbabwe.
- (f) "Community Participation", by Mr. E.P. Katati, Commissioner, Department of Social Development, Zambia.
- (g) "Engineering Feasibility Studies for PSSC Project in Zambia", by Mr. D. Ng'ambi, PSSC Project Engineer, Department of water Affairs, Zambia.

4.1.2 In addition, three background papers were distributed and served as resource materials for plenary and group discussions. The papers were:

- (i) "Water by Tap: The Need for a Continuing Effort in Development, Demonstration and Information Sharing", by Mr. Michael Seager, International Reference Centre for Community Water Supply and Sanitation, The Hague, The Netherlands.
- (ii) "Women, Water and Sanitation; Practical Issues of Participation " by Ms. Mary Boesveld, International Reference Centre for Community Water Supply and Sanitation, The Hague, the Netherlands.

(iii) "Guidelines for Inter-sectoral Field Staff on Community Participation", Parts I and II, by Mr. K.L. Kamalata, Assistant Commissioner for Social Development, Department of Social Development, Zambia.

4.1.3 Subsequent sections below present synopses of each of the papers as well as summaries of the discussions.

4.2 An Evaluation of the "Decade Approach" in the Implementation of Water and Sanitation Activities in Zambia

4.2.1 Dr. I.L. Nyumbu reminded participants that the International Drinking Water Supply and Sanitation Decade (IDWSSD), covering a specific period, 1981-1990, was the first worldwide initiative and commitment to provide good water and adequate sanitation to mankind in order to improve health. To achieve the Decade objective large amount of resources coupled with new approaches were vital in international cooperation and national development strategies.

4.2.2 In Zambia the responsibilities, procedures and obligations for provision of water supply and sanitation are covered in the major policy statements and enactments which are used as guidelines; the major ones are as follows:

Water Act CAP 312
Decentralisation Act of 1980
Ministerial Statement of 1974
Primary Health Care Programme.

4.2.3 There is similarity in the seven elements of the Decade Approach and Zambia's national policy in the provision of potable water and sanitation and this is evident in the table on the next page.

4.2.4 Although the Decade approach runs parallel to the National Policy in statements there is divergence when it comes to implementation. While the coverage levels in the provision of potable water had increased from 45 percent in 1980 to about 58 percent in 1985, and sanitation coverage improved from 37 percent of total population in 1980 to 42 percent in 1985, service levels of these facilities had greatly deteriorated. This was due to among other reasons, inadequate trained and experienced manpower, lack of funds for operational and maintenance costs and also increase in the population.

4.2.5 Much emphasis has been placed on water while sanitation has not been noticeably recognised as a complement of water. All major donor funded water supply programmes in earlier years never included the

sanitation component. Also, most of the water and sanitation programmes have been centrally organised and implemented without effectively involving the community. This has led to the absence of self-reliant and self-sustaining community managed systems. Hence the water schemes have not been really affordable by the community, socially relevant, or maintainable by the users.

- 4.2.6 Thus the Decade Approach has not been effectively implemented in Zambia. There is therefore need to implement community participatory programmes while allocating adequate operational funds and time for community involvement, backing statements of intent, and resulting in tangible commitments.

Discussion

- 4.2.7 The presenter of the paper being an IDWSSD Advisor was asked what he had done in helping to correct the situation.

He replied that through the National Action Committee (NAC) for IDWSSD project proposals have been prepared and efforts made to interest donors to assist in the sanitation programmes. He went on to say that in order to sell the projects there was need for some Government agency to back up and push the projects. NAC, being an advisory committee with limited legal powers, implements projects through the various departments of Governments, many of which are not constituted to advance an integrated approach to water and sanitation activities.

Decade Approach Vis-A-Vis National Policy

NO	DECADE APPROACH	NATIONAL POLICY
1.	Complementarity of Water and Sanitation	Primary Health Care Programme
2.	Focus on underserved population	All schemes geared for benefit of the maximum number of people, allocate financial resources to the most needy people
3.	Self-reliant and self sustaining programme	Rural water supply projects should be constructed on basis "self reliance"
4.	Socially relevant and affordable systems	Emphasis should be on simple systems of water supply involving low building, operation and maintenance costs
5.	Involvement of communities at all stages of project	Policy of construction be made to include a longer element of involvement of the people
6.	Linking water supply and sanitation with other health improvements	Water and sanitation as elements of the Primary Health Care Programme
7.	Integrate water supply and sanitation with other Sectors	No explicit links, but water supply and sanitation are seen as components of other development Sectors

4.2.8 A question of general interest was "After the Decade what next?" The reply was that the programmes, projects and systems already established would continue to bring about greater improvements in the sector. There was also a positive momentum towards institutional reorganisation of the water and sanitation sector. If reorganisation is implemented it would set a firm basis for more effective development and management of water and sanitation activities in the country.

4.3 Sanitation and Hygiene Education for Piped Water Supplies Projects

4.3.1 Mr. Goma pointed out that the Ministry of Health adopted the Primary Health Care PHC Programme in 1979, with the objective of providing Health to All by the Year 2000. Among the components of PHC is an element of water supply and sanitation.

4.3.2 The mere provision of water supply and sanitation facilities is not enough to achieve significant improvements in the health status of the people. It needs the provision of other supporting social services and programmes like Health Education.

4.3.3 The Health Education that is related to piped water supplies and sanitation should be that which is directed at changing attitudes and behaviour so as to break the chain of diseases that are usually associated with inadequate levels of hygiene and sanitation.

4.3.4 Environmental changes can only be achieved with the active participation and understanding of the users - thus voluntary involvement of the community in determining positive health practices is an important element for the success of Health Education.

4.3.5 Participatory Health Education has a number of advantages as follows:

- (i) It provides direct contacts with the users and this makes it possible to adapt the programme to local conditions, needs and means.
- (ii) It develops local organisation and skills that can be used for other development programmes as well.

For a special project such as the PSSC in Zambia, health education must be devised to serve the needs of the project, taking into account factors like funds, current Government policy with respect to water and sanitation, and the target group.

4.3.6 For PSSC Project in Zambia the entire community is the target group but women and children are specific ones for the following reasons:-

- women have a major responsibility for water sanitation and family health, as well as in teaching and caring for children;
- women and children have been identified as a risk group;
- children, particularly the school going children, can be agents of change for passing on information to their families.

4.3.7 In conclusion, the presenter stressed the need for programme planning in health education - planning which appreciates and takes into account the social, physical and technical environment of the project situation.

Discussion

4.3.8 An observation was made during the discussion that in Malawi, health education places emphasis on hygiene education which is directed at the improvement of habits of utilisation of water and sanitation facilities as water can be easily polluted through handling and usage.

4.4 PSSC Project in Malawi

4.4.1 In opening his presentation, Mr. F. Kwaule indicated how Malawi had participated in the International demonstration project on Public Standpost Water Supplies (PSWS) (1983-1987) supported by the International Reference Centre for Community Water Supply and Sanitation (IRC).

4.4.2 The major objective of the PSWS project was to stimulate the development of more appropriate and successful methods of planning, implementing and managing Public Standposts Supplies in rural and peri-urban areas. Some of the specific aims of the project were outlined as follows:

- setting up and developing demonstration schemes on the application of Public Standpost in Community Water Supply;
- conducting studies and preparing guidelines on organizational, economic and socio-cultural aspects of PSWS;
- contributing to the International exchange of information;

- promoting the application of the strategies, methods and techniques on a larger scale.
- 4.4.3 Before the PSWS Project was introduced there already existed the Urban Communal Water Point Project. The PSWS project was therefore integrated in this earlier project which was in the right direction as the experiences gained from the old project helped a lot to improve on the activities of the new one.
- 4.4.4 The PSSC Project was the second phase of the PSWS and will run for three years, 1988-1990. The objectives of this project are similar to those of the PSWS Project in many respects. However the elements of operation and maintenance, mixed service levels and sanitation options were to receive greater attention.
- 4.4.5 For effective project execution, it was found that adequate collaboration at all levels was important. The organization structure of the project was therefore tuned to suit this need. A number of committees with clearly outlined responsibilities and functions have been established. Notable among these were the Tap Committees at each water point and whose main duty is to look after the interest of the consumers. Needs were identified during monitoring and field supervision by Extension workers. Considerable attention was also given to developing strategies for strengthening operation and maintenance activities. Thus special training courses for Tap Committees (especially in Community Financial Management) and special campaigns for community motivation were organized and conducted by field workers. These efforts paid dividends in that financial management in all the project centres as well as management and operation of the Public Standposts improved greatly.
- 4.4.6 In spite of these achievements, the following tasks still need to be done:
- Quantification of all inputs (manpower and financial resources) that were necessary for developing and sustaining the participatory process in PSSC;
 - Examine whether the PSSC type of participatory process could be developed and sustained from presently subsidized water rates without seriously affecting the profit margin of existing schemes.
- 4.5 Appropriate Technology in Piped Water Supply and Sanitation
- 4.5.1 Dr. E.M Pensulo began the presentation by stating the importance of safe water supply and adequate sanitation, and he called for recognition of the

important linkages between water supply and sanitation systems, health and development of any community or nation.

- 4.5.2 It was stated that the water supply and sanitation systems commonly in use originate from and are generally appropriate for "first world" countries. Such technologies require high capital investment and are most suitable for large population centres where some economies of scale can be realised. For many small and isolated communities in developing countries, it is necessary to apply alternative technologies most suitable for the community. The appropriate technologies must be the ones which are practical, are economically viable, satisfy the needs of the user and are socially acceptable in the intended user community. It was stressed that simplicity in use, ease of manufacture, low cost etc, should not be equated with simplicity in design, hence alternative technologies are not necessarily primitive.
- 4.5.3 Dr. Pensulo then discussed the range of choices of appropriate technologies for water supply and sanitation. For water supply, technologies were presented for water source development, water treatment, delivery systems and water storage systems. For sanitation systems, technologies were presented for human waste disposal systems by different types of latrines, for water disposal, and for solid waste management. It was emphasized that users must be given a choice of what is available and the relative merits of each type of technology must be clearly explained. Thus diffusion of knowledge and use education are important aspects in the adoption of appropriate technology. It was pointed out that the success of a water supply and sanitation project based on appropriate technology greatly depends on "the users wanting, understanding and accepting the systems". It was also necessary for the various agencies involved in development and/or use of appropriate technologies to coordinate effectively their activities in the development and promotion of appropriate technologies for Zambia.

Discussion

- 4.5.4 The speaker was asked whether the University of Zambia, through the Technology Development Advisory Unit (TDAU), has plans for local development and manufacture of handpumps. It was stated, in reply, that TDAU has been engaged in the development of simple handpumps using low cost materials. However the adoption of these pumps has been hampered by lack of promotional activities since TDAU, being an academic unit, has no capacity for promotional activities.

- 4.5.5 The participants wanted to know who initiates technology research that TDAU is engaged in. It was stated that some of it is initiated by TDAU following market surveys, but a significant part of it is initiated by agencies outside TDAU, such as cooperatives, NGOs, and individuals (farmers, manufactures).
- 4.5.6 It was suggested that with respect to the PSSC Project, TDAU should focus on development of suitable water taps and standposts, and drainage systems.

4.6 Piped Water Supplies in Zimbabwe

- 4.6.1 Miss E. Khaka informed the workshop that in Zimbabwe the majority of water supplies for the rural masses are through water points in the form of hand dug wells or boreholes. These systems of water supply are known as "primary water supplies." There are very few piped water supplies in the rural areas.
- 4.6.2 Zimbabwe launched the International Drinking Water Supply and Sanitation Decade with the purpose of reducing the burden and time taken by women and children in carrying water as well as reducing water and poor sanitation related diseases. More primary water supplies were to be established in rural areas while piped water supplies were recommended to be installed in service centres, growth points and some resettlement areas - under the formulated National Master Plan. Also community participation would be encouraged. Under the National Master Plan a total amount of Z\$ 1,377 million will be spent on 576 new piped water supplies, 3,600 communal primary water supplies and the construction of 1,400,000 VIP latrines by the year 2005.
- 4.6.3 The Piped Water Supplies Policy is very comprehensive. It recommends among other things that the existing practice of providing free water from communal stand pipes should be discontinued, and the Government operated piped water supplies be handed over to the local authority within two years of construction.

Discussion

- 4.6.4 A question was raised on the financing of the preventive maintenance programme for piped water supplies. It was explained that currently the revenue collected does not meet the cost of operation and maintenance. However Government is investigating ways of raising revenue to cover costs of development of basic services including water. One general levy-land development levy - is proposed to cover costs of all basic services in the community. It is proposed also that piped water supplies be constructed only at a time when an efficient revenue collection system has

been introduced and the potential revenue would cover at least 60 percent of recurrent cost of piped supplies.

- 4.6.5 Concerning the popularity and wide scale use of the VIP latrine in the villages, it was explained that there is wide scale use, and the VIP latrine (the Blair toilet) is now regarded as the standard rural sanitation unit. The VIP latrine is constructed with different construction materials, hence it has been widely adopted in rural areas. As regards pollution of groundwater from the Blair toilet, it was explained that bacterial pollution is not significant where the minimum distance of 300m is maintained between a well and the toilet unless the aquifer is fissured.
- 4.6.6 As regards coordination and integration of water supply and sanitation activities, it was explained that this has improved since the re-activation of the National Action Committee. Currently the National Action Committee reviews all sector projects before they are implemented.

4.7 Community Participation

- 4.7.1 Mr.E.P. Katati began the presentation by defining Community Participation. He stated that Community Participation has been defined as the involvement of people in decision making and in other matters that affect their development, welfare and interests.
- 4.7.2 It has been found that only when people are involved in issues that affect them can meaningful and sustained development take place. When people are actively involved in development projects they tend to be more responsible and view those projects as their own. Through continuous involvement they also acquire managerial, technical and even professional skills that are important in the implementation and maintenance of a project throughout its life-time. Active community involvement also encourages the mobilization and utilization of resources from within the community itself as well as developing initiative among the people.
- 4.7.3 Community Participation in all development projects and particularly in the Piped Supplies for Small Communities can be meaningful and effective if people are involved all the way through - from the first to the last stage. These stages or levels of community participation are as follows:
- Problem identification, where the community itself should identify, understand and appreciate the problem; for example water and sanitation. In other words, the problems should reflect a felt need;

- Problem solving, or decision making on required course of action - the community should decide on what measures to take in order to solve the problem;
- Planning Stage:- Planning of and for the project focussing on what resources the community has;
- Organizational Stage:- Actual mobilization and organization of the resources required by the project;
- Implementation Stage:- When the project itself is being executed. As progress goes on, monitoring and continuous evaluation should be carried out. Training is essential here;
- Operation and Maintenance:- On completion of the project, the community should be able to operate and maintain the project largely on their own. In all these stages, the Extension worker's role should be that of facilitator, adviser and co-ordinator, assisting and guiding the community only where necessary and appropriate.

4.7.4 With technical and material assistance from the Department of Social Development and many Donors, a number of water supply and sanitation schemes such as wells, dams, weirs and pit latrines have been constructed by rural communities on a self-help basis as the table below indicates.

Statistics on Water Supply and Sanitation Projects

(1983 - 1987)

Period	No. of Projects started	No. of Projects completed	No. of Projects carried forward
1983	212	154	58
1984	125	25	100
1985	112	38	74
1986	96	17	79
1987	85	19	66
Total	630	253	377

Source: Department of Social Development Reports.

From 1984 onwards, there were fewer completed projects as against the uncompleted carry-overs and this was mainly due to insufficient financial allocations from the Government to communities through the Department.

It was observed that other than the problem of insufficient funding of self-help projects stated in the paper, one other reason could be that of inadequate staff at village/community level to cover wide areas as the Department of Social Development was no longer training Social Development Assistants who are very essential workers in the Community Participatory process. The Department of Social Development was considering the re-introduction of training courses for these extension workers.

4.7.5 In conclusion Mr. Katati discussed the important role that women play in the management of water supply and sanitation. He stated that it is a fact that women form the largest membership of most self help development groups. Through these groups as well as through the numerous Women's Clubs, women are able to participate effectively alongside the menfolks to carry out water and sanitation projects.

4.8 Engineering Feasibility Studies of PSSC Project in Zambia

4.8.1 The Zambian PSSC Project Engineer, Mr. D. Ng'ambi presented a report on engineering feasibility studies for implementing the PSSC project in Zambia. He explained that feasibility studies were carried out in five provinces by Provincial Water Engineers. He outlined the criteria the Project Management Committee would use in selecting the project demonstration sites. The criteria include:

- (i) the population should not be less than 5,000;
- (ii) the site should be within a single day's drive distance from Lusaka for easy supervision;
- (iii) there should be an existing piped water supply to link to;
- (iv) the site should be a low income urban fringe area, or rural growth centre;
- (v) the cost of the project should be limited;
- (vi) there should be an adequate source of water supply;
- (vii) the community should either have had experience in carrying out self-help projects, or be willing to take part in the project.

4.8.2 Discussion

The participants observed that the reports were merely technical and did not include socio-economic and health aspects. Since the PSSC project is a participatory project involving the integration of water, sanitation and health, the reports did not have sufficient information to evaluate the proposed sites on the basis of criteria already mentioned. The project team was advised to look into this matter.

4.9 Water by the Tap: The Need for a Continuing Effort in Development, Demonstration and Information Sharing

- 4.9.1 The background paper by Mr. M. Seager presents and discusses a number of important issues concerning small piped water supplies. If such supplies are to be used appropriately and successfully, it is proposed that these key issues must be carefully considered, and applied through fully integrated approaches. A number of the issues, such as cost recovery, maintenance, and community based methodology require continuing investigation through development, demonstration and information sharing activities. The on-going PSSC (Piped Supplies for Small Communities) Programme attempts to meet this need.
- 4.9.2 An introduction to the paper describes the potential use and benefits of piped water supplies. Emphasis is placed on choosing piped schemes only when they are both appropriate and fully sustainable. Common problems of the application of piped schemes, such as use without complementary hygiene education and sanitation inputs for example, are presented.
- 4.9.3 Some initiatives in recent years to investigate some of these problems and seek solutions are summarised. The activities were set within the framework of the Public standpost Water Supplies Project, carried out simultaneously in four countries, including Zambia.
- 4.9.4 A case is made for investigating a more flexible approach to service levels within piped systems. This would follow an appropriate choice and mix, and progressive development of service levels. It is suggested that piped schemes should therefore consider a mix of neighbourhood or community taps, yard and house connections, as well as, occasionally, some "public" standposts.
- 4.9.5 Finally a review of key issues to be addressed in the current information-focussed Piped Supplies for Small Communities Programme in Zambia and elsewhere is presented. These include:
- . Promoting flexibility towards service levels;
 - . Developing improved methods of approach;

- . Emphasising long service life and reliability;
- . Institutional strengthening;
- . Helping the flow of information.

4.10 Women, Water and Sanitation: Practical Issues of Participation

- 4.10.1 The background paper by Ms. M. Boesveld discusses some important reasons why, and outlines some practical measures how women should be involved in water supply and sanitation projects. It points out that women should not be considered as mere end-users of water supply and sanitation facilities, but should be involved as planners and decision-makers, operators, and educators who could have a positive influence in the use and maintenance of systems.
- 4.10.2 The paper discusses three reasons why women should be involved in water supply and sanitation projects. The first is that women, in most rural communities, have the primary responsibility for the collection and use of water. Consequently women's special needs, opinions, perceptions, beliefs and attitudes towards water quantity and quality should be carefully considered in the planning and implementation of water projects. The second reason is that women invariably play a major role in the maintenance of community water supplies, traditional or otherwise. Women are therefore motivated to keep the water supply system functioning. Thus they need assistance with training to perform management, maintenance and repair tasks. The third reason for involving women is that they have the important role for the health of the family and hygiene in the household. Thus hygienic practices taught to, and adopted by the women will be passed on to their children and contribute to overall health improvement in the family and in the community.
- 4.10.3 Finally the paper discusses practical steps on how to involve women at all stages of a project; for example:
- (i) at the pre-planning stage appropriately designed surveys should be carried out to bring out necessary information concerning special roles, tasks and knowledge on women's involvement in the specific project area;
 - (ii) at the planning stage participation can be enhanced through meetings and promotional campaigns targeted specially to women;
 - (iii) at the implementation stage women should be involved in the choice of technology, service levels, siting of facilities, financing mechanisms, and also in construction of facilities;

- (iv) at maintenance stage women's involvement should be enhanced through training to impart knowledge and skills of operation, maintenance and financial management;
- (v) women should be involved in evaluating existing projects and to propose specific activities to enhance effective participation of women in existing and future water supply and sanitation projects.

4.11 Guidelines for Inter-sectoral Field Staff on Community Participation

4.11.1 Part I of the guidelines on community participation, prepared by Mr. K.L. Kamalata, are presented in a conversational style. Key issues of community participation are presented as responses to a set of questions. The presentation gives practical answers to what is community participation, how and when the community should be involved. A case is made that successful community participation can not be achieved unless the community is involved throughout all stages of a project. Furthermore sustainability of water and sanitation schemes is enhanced if the community feel a sense of ownership or have a stake in the project. The guidelines also emphasise the need for educational campaigns (through meetings, seminars, workshops) in motivating and mobilising the community to participate fully in planning, implementation and management of water supply and sanitation schemes.

4.11.2 Part II of the guidelines discusses further two important issues which are essential to the success of community participation; these are community organisation and community education. It is suggested that the community worker should strive to get the support of community leaders, such as chiefs and village headmen, politicians, church elders, and leaders of women's clubs. It is also pointed that organisation of the community will be relatively easier if existing community organisational structures are utilised, and strengthened where necessary. The importance of community education is discussed at length and it is pointed out all participants in a project, at whatever stage of the project, must have the right knowledge of what is planned to be achieved, the division of responsibilities, and potential benefits of their involvement. Thus an effective education programme is a prerequisite to successful community participation.

4.12 Formation of Working Groups

- 4.12.1 The plenary sessions, during which various technical and non-technical presentations were made, did not provide sufficient time for in-depth discussion of several issues associated with piped water supplies. Therefore at the end of the plenary sessions the participants were divided into four discussion groups. Every effort was made to provide a balance with respect to discipline (water, sanitation, health, management) and experience of the participants within each group.
- 4.12.2 Each discussion group was given utmost two topics to focus on and some guidelines were handed out as a basis for discussion. The details of the discussion guidelines are given in Annex VI. Chairmen of each working group were proposed but each group was free to choose any chairman, and also to choose a rapporteur. The working groups were formed prior to the all-day field visit on the fourth day with a view that, even during the field visit, each group would focus on a specific topic. This provided for all-round assessment of different aspects of the piped supply scheme being visited.

5. 3RD DAY, WEDNESDAY, 25TH JANUARY 1989

5.1 Group Discussions

5.1.1 On the third day the session broke into groups for discussion of issues related to piped water supplies. Both the guidelines for group discussions, presented earlier, and the paper presentations during plenary sessions formed the basis for group discussions.

5.2 Preparation of Group Reports

5.2.1 Each discussion group was requested to prepare a report of their discussion, outlining observations and recommendations on the specific issues assigned to the group. The group reports were due for presentation at plenary session on the final day.

6. 4TH DAY, THURSDAY, 26TH JANUARY 1989

6.1 Field Visit

- 6.1.1 An all-day visit was undertaken to a nearby rural water supply scheme - the Lusitu Settlement Piped Water Supply Scheme. A briefing on the water supply scheme was provided by the Provincial Water Engineer (Mr. P.K. Mwanamwenge), Southern Province. Participants were also given guidelines (see Annex VII) on the field visit.
- 6.1.2 Briefly, the Lusitu Piped Water Supply Scheme was constructed in 1960 by the Department of Water Affairs. The inhabitants are a farming community that originally lived along the Zambezi River in the area presently inundated by the lake formed behind the hydropower dam at Kariba. Part of the compensation for the resettled people was free water supply. To date the inhabitants still enjoy free water supply services.
- 6.1.3 The water abstraction is by pumping from the Zambezi River using diesel engine pumps. Water is pumped straight into service without any form of treatment except chlorination at storage reservoirs in the distribution system. Extensions to the scheme have been carried out once since the scheme was completed almost 30 years ago. Today (1989) the total length of pipeline is 32 Km, and there are 19 storage tanks with a total capacity of 844,000 litres.
- 6.1.4 The observations the participants made during the field visit were incorporated in the group discussions and also engendered some of the recommendations made by the Working Groups. In general it was observed that the community served by the Lusitu Water Supply Scheme felt no sense of ownership of the scheme, and did not feel responsible for its maintenance. This attitude is not surprising since the scheme had been given to the community more or less as compensation for their removal from their tradition lands presently inundated by Lake Kariba. The state of repair of standposts, aprons, soakaways, and valves was very poor as a result of lack of community responsibility and lack of operational funds from Government. It was also observed that most of the villages lacked proper sanitation facilities (latrines, bathing shelters). The Community Health Worker in the area complained of lack of cooperation from the villagers in improving their sanitation facilities.

7. 5TH DAY, FRIDAY, 27TH JANUARY 1989

7.1 Group Reports

7.1.1 Reports from individual discussion groups were presented in plenary session on Friday morning. The session was chaired by Dr. E.M. Pensulo, Manager of Technology Development Advisory Unit at the University of Zambia; Mr. Z. Phiri, lecturer in the Civil Engineering Department at the University of Zambia was the rapporteur.

7.1.2 The group reports were discussed in plenary. The workshop then adjourned towards mid day to allow the Secretariat and the rapporteur to work out draft recommendations for the entire workshop.

7.2 Observations/Recommendations

7.2.1 The plenary session reconvened in the afternoon to discuss draft workshop observations and recommendations. The session agreed on a format for presenting the recommendations. It was agreed that a clear distinction be made between those recommendations that are specific and those that are general.

7.2.2 Subsequent sections of this report present the observations and recommendations arising from the workshop, grouped by subject matter.

7.3 Community Organisation

Observations

7.3.1 The success of the process of organising a community for a community-participatory project very much depends upon the existence of a clearly identified and appreciated felt need.

7.3.2 In order to mobilise the community effectively and minimize potential conflicts of interest, it is important that existing organisational structures and hierarchies of authority are clearly identified, understood, consulted and involved from the onset of the project.

7.4 Community-based Financial Management

Observations

7.4.1 Financial obligations and responsibilities are more likely to be accepted in the operational phase of a project if they have already been clearly defined,

discussed and agreed upon at the planning stage of the project.

- 7.4.2 In developing mechanisms for assessing and collecting charges for water use, it is important to match the charges with the ability and willingness of the community to pay for such services. Ideally the charge for water should at least cover the community-level operation and maintenance costs, and if possible a larger portion of the capital costs.

Recommendations

- 7.4.3 In order that communities will have their own revenues to sustain the operation of their piped water schemes, adequate mechanisms for financial management should be established and implemented at community level.
- 7.4.4 Revenue collected by the community should be managed by the community; however the community should be assisted to develop effective book-keeping systems-including receipt books, ledgers, possibly arrangements for auditing, and account signatory arrangements.
- 7.4.5 Communities should be assisted to receive training in the necessary skills required to put into place an effective community-based financial management system.

7.5 Technical Improvements for Community-based Management, and User Convenience

General Observations

- 7.5.1 Piped water supplies are not appropriate in all circumstances. In appropriate circumstances and where they can be sustained by the user community, piped water supplies provide greater user convenience, and a low risk of water contamination between the source and the point of use.
- 7.5.2 Greater flexibility must be exercised in planning piped water supplies so as to allow for progressive development of service levels from single public standposts, through group/neighbourhood taps to in-house connections.
- 7.5.3 User convenience and capacity to sustain the chosen service level should always receive adequate consideration. Since women and children form the majority of users of water facilities, the technological choices and designs must be fully cognizant of the special needs of this user group.

Recommendations

- 7.5.4 Standard designs for VIP latrines and standposts should be developed and promoted for wide scale use throughout the sector.
- 7.5.5 A manual on the construction of VIP latrines and standposts should be prepared and translated in local languages, and be made widely available to communities.
- 7.5.6 The PSSC project should collaborate with other agencies in developing effective methods for rehabilitation of old, partially successful, or failed piped water supply schemes.

7.6 Widening the Role of Women and Children in order to Maximise the Benefits of Water Supply and Sanitation

General Observations

- 7.6.1 Recognising the important responsibility that women and children have for the supply of water for domestic use, their opinions, and special needs should be taken into account in the planning and implementation of water supply and sanitation projects.
- 7.6.2 Women's clubs, churches, the Women's League of the Party, literacy classes, etc, should be used to prepare women for fuller participation in water supply and sanitation projects.

Recommendations

- 7.6.3 In all community-water supply and sanitation projects special training programmes should be developed and targeted at women to equip them with skills necessary for planning and management of water and sanitation schemes.
- 7.6.4 Wherever community level institutions, such as water or well committees, are formed to manage a water supply point, at least 60 percent of members must be women.
- 7.6.5 All projects at community level should aim to maximise the use of female extension workers.

7.7 Appropriate Approaches to Provision of Water Supply and Sanitation

General Observation

- 7.7.1 There is a growing body of evidence in Zambia, and elsewhere on the effectiveness of community-based approaches to the provision of water supply and

sanitation in rural and urban fringe areas. Different approaches may apply to rural areas or to urban fringe areas. Therefore there is need for closer collaboration between various agencies to develop appropriate approaches to the provision of community water supply and sanitation.

7.8 Strengthening Intersectoral Cooperation and Community Participation in All Phases of Water Supply and Sanitation Projects

General Observations

- 7.8.1 The importance of a felt need, existing or created through the generation of community awareness, should always be kept in perspective in order for a community-participatory approach to succeed.
- 7.8.2 It is always important to sustain community enthusiasm for participation in water and sanitation projects. Hence once community awareness has been raised and positive responses obtained from the community, project promoters should perform their part and not disappoint the community.
- 7.8.3 There is still a significant number of water supply projects being implemented without the complementary inputs of sanitation and hygiene education. Such projects, with narrowly defined objectives, deprive the communities of the potential full health impact of improved water supplies.

Recommendations

- 7.8.4 Intersectoral (water, sanitation, health) collaboration should be further encouraged and strengthened at all levels.
- 7.8.5 Water and sanitation committees should be established, (and adequately constituted) before the implementation of water supply and sanitation schemes.
- 7.8.6 At provincial and district levels WASHE (water, sanitation and health education) committees should be established to promote inter-sectoral cooperation and to implement joint projects integrating water, sanitation and health education components.

7.9 Sharing Experiences in Piped Water Supplies and Sanitation

General Observations

- 7.9.1 Unsuccessful projects and negative experiences should be analysed to serve as lessons for planning future schemes.

- 7.9.2 Institutions collaborating in the PSSC project should commit themselves to applying positive approaches developed by the PSSC project on schemes funded by other donor agencies.

Recommendations

- 7.9.3 Workshops, seminars, etc, must be organised at district, provincial and national levels to share all experiences on the PSSC programme.
- 7.9.4 Manuals and Guidelines on various aspects associated with piped supplies should be prepared as a matter of urgency. The manuals/guidelines should be widely disseminated to communities and to other projects, at national and sub-regional levels.

7.10 Resources Coverage and Sustainability in Water Supply and Sanitation Projects

General Observations

- 7.10. Resources for extension and rehabilitation of water supply and sanitation are increasingly being constrained by adverse economic factors. Thus the achievement and sustenance of the goal of safe water supply and adequate sanitation for all is being severely compromised. Generally, levels of funding for operation and maintenance of facilities have continued to reduce drastically.
- 7.10.1 It is becoming increasingly appreciated that local resources, at the community level, should be mobilized to bridge the deficits caused by diminishing allocations from central authorities. At the same time appropriate mechanisms for community management of installed facilities should be implemented, and transfer of responsibilities for operation and maintenance of facilities should shift steadily from central authorities to the user community.

Recommendations

- 7.10.2 Communities should be encouraged and prepared, through training, campaigns, and other appropriate mechanisms, to take on a wider role in the technical and financial management of their own water and sanitation facilities.
- 7.10.3 In general user communities should be responsible for meeting all operation and maintenance costs of their facilities; where possible, the users should also bear some part of the capital costs.

8. CLOSING SESSION

- 8.1 The Hon. Minister of State for Health (Dr. J.K. Chijikwa) in the Ministry of Health delivered the closing address (see Annex VIII). The Hon. Minister of State called for close cooperation between various agencies involved with drinking water, sanitation and health. He stressed that for Primary Health Care programme to succeed it will be necessary to improve coordination and inter-sectoral cooperation. Finally, the Minister acknowledged the contributions of many donor agencies who have been supporting the water and sanitation sector and Primary Health Care in Zambia, including the Netherlands Government, NORAD, SIDA, EEC, the Irish Government, the Federal Republic of Germany, FINIDA, and the World Health Organisation. The Minister concluded by wishing all participants a safe trip to their respective homes in Zambia and abroad.
- 8.2 The Workshop was officially closed at 16.10 hours on Friday, 27th January 1989.

ANNEXES

- Annex I - List of Participants
- Annex II - Workshop Programme
- Annex III - Official Opening Speech by the
Minister of Water, Lands and
Natural Resources, Hon. Paul
Malukutilla, MCC, MP
- Annex IV - Statement by First Secretary
for Development (Mr. G.J. Tempelman),
Royal Netherlands Embassy
- Annex V - Statement by Representative of the
International Reference Centre for
Community Water Supply and Sanitation
(Mr. M. Seager)
- Annex VI - Guidelines for Group Discussions
- Annex VII - Guidelines for Field Visit to Lusitu
Rural Piped Water Scheme
- Annex VIII - Workshop Evaluation Evaluation

ANNEX 1

PIPED SUPPLIES FOR SMALL COMMUNITIES NATIONAL WORKSHOP

23RD TO 28TH JANUARY, 1989

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26. Mr. B. Mphande
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ANNEX II

NATIONAL WORKSHOP ON PIPED WATER SUPPLIES FOR SMALL
COMMUNITIES IN ZAMBIA, 23RD - 28TH JANUARY 1989
SIAVONGA, ZAMBIA

PROGRAMME

Monday, 23rd January, 1989

08.30 - 10.00 Hours : Registration of Participants

10.00 - 10.30 Hours : Tea Break

OPENING PLENARY SESSION

Chairman : Permanent Secretary, Ministry of Water,
Lands and Natural Resources (Mr. N. Mukutu)

10.45 - 11.00 Hours : Welcome Remarks by Chairman

11.00 - 11.30 Hours : Official Opening Address by
the Honourable Minister of
Water Lands and Natural Resources
(Hon. Paul Malukutula, MCC, MP)

11.30 - 11.40 Hours : Vote of Thanks by PMC Chairman

11.40 - 11.50 Hours : Statement by a Representative
of the Royal Netherlands
Embassy (Mr. G. Tempelman)

11.50 - 12.10 Hours : PSSC - Inter-country Project,
by IRC Official (Mr. M. Seager)

12.10 - 12.15 Hours : Closing Remarks by the
Chairman

12.15 - 13.45 Hours : Luncheon

AFTERNOON PLENARY SESSION

14.00 - 15.00 Hours : Public Standpost Water
Supplies and Piped Supplies For
Small Communities Projects
- Project Manager (Mr. M.K. Chimuka)

15.00 - 15.30 Hours : Tea Break

- 15.30 - 16.00 Hours : Discussion of PSWS and PSSC Projects
- 16.00 - 16.45 Hours : Rural Piped Water Supplies in Zambia
- Deputy Director of Water Affairs (Mr. L.L. Mbumwae)
- 16.45 - 17.30 Hours : Water Policy in Zambia
Secretary Water Board (Ms. M.S. Lungu)

Tuesday, 24th January, 1989

MORNING PLENARY SESSION

- 08.30 - 09.15 Hours : An Evaluation of the "Decade Approach" in the Implementation of Water and Sanitation Activities in Zambia
- IDWSSD Adviser (Dr. I.L. Nyumbu)
- 09.15 - 10.00 Hours : Sanitation and Hygiene Education for Piped Water Supplies Projects
- Chief Health Inspector (Mr. S.A. Goma)
- 10.00 - 10.30 Hours - Tea Break
- 10.30 - 11.00 Hours - Appropriate Technology for Piped Water Supplies and Sanitation
- Manager, TDAU, University of Zambia (Dr. E. Pensulo)
- 11.00 - 11.45 Hours - Piped Supplies For Small Communities Project in Malawi
Project Manager (Mr. F. Kwaule)
- 11.45 - 12.15 Hours : Piped Water Supplies in Zimbabwe
- Miss E. Khaka
- 12.15 - 13.00 Hours : Community Participation in Piped Supplies and Sanitation Projects
- Commissioner for Social Development (Mr. E.P. Katati)
- 13.00 - 14.00 Hours : Luncheon

AFTERNOON PLENARY SESSION

- 14.15 - 15.00 Hours : Engineering Feasibility Studies on PSSC Project in Zambia
Project Engineer (Mr. D. Ng'ambi)
- 15.00 - 15.30 Hours : Tea Break
- 15.30 - 16.30 Hours : Formation of Working Groups

Wednesday, 25th January, 1989

GROUP SESSIONS

- 08.30 - 13.00 Hours : Group Discussion
- 13.00 - 14.00 Hours : Luncheon
- 14.15 - 15.00 Hours : Group Discussion Continued
- 15.00 - 15.30 Hours : Tea Break
- 15.30 - 17.00 Hours : Preparation of Group Reports

Thursday, 26 January, 1989

- 08.30 Hours : Departure for all day field visits

Friday, 27 January, 1989

- 08.30 - 10.30 Hours : Presentation of Group Reports
- 10.30 - 11.00 Hours : Tea Break
- 11.00 - 13.00 Hours : Preparation of Draft Report
- 13.00 - 14.00 Hours : Luncheon

AFTERNOON PLENARY SESSION

- 14.00 - 15.00 Hours : Presentation of Preliminary Workshop Report
- 15.00 - 15.30 Hours : Closing Session
- 15.30 - 16.00 Hours : Tea

Saturday, 28th January, 1989

- 08.30 Hours : CHECK OUT AND DEPARTURE

ANNEX III

SPEECH BY THE MINISTER OF WATER, LANDS AND NATURAL RESOURCES,
HON. PAUL MALUKUTILA, MCC, MP, AT THE OFFICIAL OPENING OF
THE NATIONAL WORKSHOP ON PIPED WATER SUPPLIES FOR SMALL
COMMUNITIES IN ZAMBIA. 23 - 28 JANUARY, 1989
MANCHINCHI BAY LODGE, SIAVONGA

Comrade Chairman,
Workshop Participants,
Distinguished Guests,
Ladies and Gentlemen.

I am very pleased and grateful for the privilege you have accorded me to come and officiate at this National Workshop on Piped Water Supplies for Small Communities in Zambia.

On behalf of the Party and its Government and indeed on my own behalf, I wish to welcome each one of you gathered here, especially the participants and colleagues from Malawi, Zimbabwe and the International Reference Centre (IRC) of the Netherlands, who have travelled all the way to our country to come and attend this workshop.

I also wish to welcome the representatives of the international organisations and donor countries and agencies who have been supporting our activities in the water sector and have accepted our invitation to attend this workshop and to share their experiences and ideas with us. I am sure you will all have a good and pleasant stay here in Siavonga which is one of our country's up-coming tourist centres.

Objectives of the Workshop

Mr. Chairman, I am sure you have all received the relevant information which was circulated to you showing the objectives of this workshop. The aim of the workshop is to provide a forum for the exchange of information and ideas in the planning, development and management of piped water supply systems in small communities in Zambia, together with complimentary programmes of sanitation and hygiene which may directly be achieved by our communities in our efforts to improve the quality of life of our people.

Mr. Chairman, Ladies and Gentlemen, we attach great importance to the goals and objectives of the International Drinking Water Supply and Sanitation Decade which is an expression the world community has made to make safe drinking water and proper sanitation facilities available to the majority of the people in the whole world.

It is within this context that I would like to draw your attention to several key issues which the Party and its Government has identified and which require particular emphasis during the implementation of water supply programmes.

Firstly, we need to spell out the relationship between water supply and sanitation and primary health care and our goals in our national development. Statistics at hand presently indicate that out of an estimated population of over 7 million people in Zambia, about 50 percent live in the rural areas in relatively small settlements with individual dwellings or villages being dispersed over a relatively large area. In some parts of our country, the communities live in densely populated areas with 20 to 60 inhabitants or more per square kilometre. The main economic activities of these people are centred around agriculture with more than 95 percent of the population engaged in small scale subsistence farming and domestic animal rearing.

Mr. Chairman, the health situation arising from water related diseases of these rural populations is far from satisfactory. In many areas water related diseases account for about 20 percent of all cases recorded at health centres and clinics. In some localities the diseases are principally associated with poor hygiene and insufficient quantities of water. Thus worm infestations are numerous, particularly in populations in the peri-urban zones of our large cities. In many localities both urban and rural areas, diarrhoea diseases are endemic and they are associated with consumption of polluted water.

Secondly, we need to examine the mode of our communities in the implementation of water supply programmes and indeed all other facilities.

Thirdly, we must take into account the present and future economic situation of our country and the impact this may bear on our ability to provide improved services to the communities.

Comrade Chairman, let me return to our National development goals. The Fourth National development Plan clearly lays particular emphasis on the revival of our national economy while at the same time acknowledges that all sectors of the economy are interdependent. Hence we all know that people have to be healthy in order to be productive. The Government is therefore committed to the primary health care approach which stresses prevention of diseases in preference to curative medicine. Improvements to our water supplies and sanitation as well as health education are all integral parts of primary health care. These are long-term investments in the welfare and economy of our Nation, but are directly important to the development and well being of all our communities.

The goals of the water supply and sanitation decade are therefore directly in line with our party policies of equitable distribution of wealth and resources to all the people of Zambia and are therefore highly commended.

Comrade Chairman, drinking water is one of the most important and basic requirement for all human beings in our communities. The quality of life depends to a large extent

on continuous provision of water of acceptable quality and quantity. Indeed this very important service cannot be achieved unless concerted efforts are made at all times to develop, construct and maintain water supply facilities for our populations. It is in this context that the Fourth National Development Plan outlines our task to implement rural water supply schemes throughout the country, as a matter of priority.

Comrade Chairman, I am also informed that as part of the United Nations International drinking Water Supply and Sanitation Decade Activities, Zambia signed an agreement with the International Reference Centre for water supply and sanitation based in the Netherlands, under which agreement a multi-country public stand-post water supply project was implemented between 1983 and 1987 here in Zambia, among other countries. The main objective of this project was to investigate feasible and sustainable means of serving low income urban and rural growth point communities with piped water supplies. I am also happy to learn that the International Reference Centre is continuing further support by funding an extension of the project into a new phase now called, the piped water supplies for small communities project.

Mr. Chairman, I am sure that the results achieved from this project are quite important and will be useful in your discussions for effective and critical approaches to the problems associated with the programmes of provision of water supply services to low income communities. The experiences gained in Malawi or in Zimbabwe in this field may be used to enrich our own.

The Role of the Community

Comrade Chairman, on the role of the community in water supply and sanitation and other services we believe that the communities should be encouraged to participate in planning, implementation and maintenance of water supply facilities as well as in sanitation improvements.

Our party's national policy clearly states and I quote: "Zambia's development is through the people, by the people and for the people" end of quote. We should therefore encourage people to help themselves to give them a sense of pride and ownership and motivate them to maintain service facilities. By so doing we will also be striving to reduce construction costs as well as promoting the commitment to ongoing care and maintenance of the water supply facilities.

Comrade Chairman, to achieve real participation is a challenge to all concerned including project implementing agencies, donor countries and agencies, health educators, community development officers and the party leadership at all levels from the grassroots.

I am given to understand that participants to this workshop indeed comprise a selection of experts from the

various ministries and organisations such as Health, Decentralisation, donor agencies and my own ministry.

I believe that a gathering of this nature will not only enhance our exchange of ideas, but will also promote and elaborate ways and means of co-ordinating water development programmes as well as other services in our country.

Comrade Chairman, I would now like to turn back to the key issue of our Party and Government role in the programmes of improving the living standards of our rural people. You all know that my Ministry which is concerned with water and land matters as well as with environmental and natural resource matters, has been mandated to identify and open up new land to resettle people. This programme is cardinal to our effort to resuscitate the economy of Zambia. Specific emphasis is laid on agriculture development. But all these programmes can never succeed unless the provision of water is undertaken.

Comrade Chairman, Ladies and Gentlemen, may I at this juncture appeal to you all, to ensure that agreed policies, programmes and strategies set forth in the Fourth National Development Plan accorded appropriate priority by the Government, are seriously undertaken on your part, with fullest commitments.

We acknowledge with gratitude the support we have all along been receiving from bilateral, multilateral and other donor agencies gathered here. We hop that their commitment will continue.

Particular words of appreciation to the International Reference Centre who are the sponsors of this workshop, in conjunction with the on-going project on piped water supplies for small communities.

I am also happy, comrade Chairman that this workshop is being chaired today by yourself as Permanent Secretary. I am therefore sure that you will be able to follow up the resolutions and recommendations of this workshop to enable me receive your timely report on various issues to be raised.

Lastly, comrade Chairman, may I also thank the resource experts who will present papers at this workshop. Your contributions will play a vital role in the success of this workshop.

It is now my pleasure and privilege to declare this workshop officially open.

Thank you.

ANNEX IV

NATIONAL WORKSHOP ON PIPED SUPPLIES FOR SMALL COMMUNITIES
IN ZAMBIA. 23RD - 28TH JANUARY 1989, SIAVONGA, ZAMBIA

STATEMENT BY REPRESENTATIVE FROM THE ROYAL NETHERLANDS
EMBASSY (MR. G.J. TEMPELMAN)

Ladies & Gentlemen,

On behalf of the Ambassador of Her Majesty the Queen of The Netherlands to Zambia, it is my pleasure and privilege to present a message from the donor country to this Workshop. As you may be aware, water has been a lifelong friend and enemy to the Dutch. An enemy, because we literally had to wrestle our country from the sea and since then we still have to defend our reclaimed lands against the surrounding seas and major rivers. Sometimes we lost this battle, but mostly we won, as built-up experience gained momentum and through concerted efforts of government and population. Water has also been a friend. By sailing our surrounding seas and major rivers, we became a nation of traders. We harnessed the rivers and used the water for human and animal consumption, as well as in agricultural and industrial development.

As such, the Dutch gained more and more experience in drainage, irrigation, canalisation, water supply and evacuation of sewage water. And, we are most willing to share this experience with other nations. In Bangladesh and India, The Netherlands assist in harnessing the rivers and flood control, in Egypt we support irrigation and drainage systems and in Mali a large irrigation scheme has been developed, to name but only a few. Many water engineers from various developing nations are invited each year to come to The Netherlands to be trained in our specialised institutes.

Also in Zambia, part of our donor assistance is geared towards water development in various ways. In Western Province, an irrigation & drainage project for small farmers is being funded, whereas also one of the major inland waterways - the Mongu/Kalabo Canal - is being rehabilitated. In Northwestern Province, the Rural Water for Health Project aiming at a reliable and constant water supply near to settlements in the rural areas, is supported, whereas in Lusaka, the derelict water supply system of the University Training Hospital, the largest hospital in Zambia, is being renovated with Netherlands's assistance.

Our support to the PSSC project, the Piped Supplies for Small Communities Project (which this workshop is mainly about), however, is somewhat different. Whereas the earlier

mentioned projects receive both financial and technical assistance, PSSC is a full Zambian undertaking, to which donor assistance only concerns backstopping services. As the Project mainly focusses on the development and dissemination of information, who else than the Zambians themselves should perform this task? The constant and reliable provision of clean water is a major precondition for sound socio-economic development, both in the urban and rural areas, and should be a major concern to government at all levels as well as the populace. PSSC could and should be a crucial instrument to make policy and decision makers, as well as the end users of water alike, aware of this concern.

In this respect, I welcome this workshop, which enables participants to share past experiences in this striving for more awareness and to discuss ways to enhance the spread of information in a broadened context. I congratulate the organizers on their initiative and hope for a successful outcome, not only in the interest of the Piped Supplies for Small Communities Project, but in general towards accelerated water development, both in Zambia and the Southern African region.

ANNEX V

ZAMBIAN NATIONAL WORKSHOP
ON
PIPED SUPPLIES FOR SMALL COMMUNITIES
SIAVONGA, ZAMBIA
23RD TO 27TH JANUARY, 1989

OPENING SESSION CONTRIBUTION BY M. SEAGER IRC
(THE INTERNATIONAL REFERENCE CENTRE FOR COMMUNITY
WATER SUPPLY AND SANITATION)

Honourable Minister, Comrade Chairman, Distinguished
Guest, Ladies and Gentlemen:

It is a great pleasure for me to be back in Zambia again, to say a few words at the start of this workshop and to take part in it. These are very pleasant surroundings for the hard work to come and importantly, Kariba's waters will make sure we keep our subject matter in mind!

Let me at the outset add my appreciation on behalf of IRC that both the Hon. Minister and Comrade Permanent Secretary were able to be here today and to thank them for their kind words of encouragement and support to both the workshop and the Project.

Perhaps I may spend a little more time helping to set the scene for the Workshop. The theme of our week of study and discussions, piped water supplies for small communities and appropriate sanitation, is a very relevant one. Community taps, shared by a number of families and supplemented by house connections where appropriate, will continue to be important levels of service both for growing rural centres and for peri-urban areas. And yet, world wide, such supplies suffer from problems. Problems of shared and often badly-defined responsibility for operation and maintenance; problems of inappropriate application and use within an inflexible project framework; problems of how to generate revenue and cover resources; and above all, communities that are often ill-prepared, poorly motivated and under-supported.

In Zambia, with its strong planning for the remainder of the Drinking Water Supply and Sanitation Decade and beyond and for Water-Sector re-organisation, improvements in the use and effectiveness of piped supplies, old and new, and a reduction of selecting the recurrent-costs burden often associated with them, would indeed be a useful contribution. But we must be careful not to promote piped water supplies to the detriment of other types of supply, which will often be more appropriate. "How to select piped Supplies only when viable" and "how to make them work" should instead be our twin themes of discussion.

On the potential of this workshop it seems to be there are three main uses we can make of it:

Firstly: to share views and experience of piped supplies and sanitation, and of community based approaches. Secondly to enable Zambian staff of the Piped supplies for small communities (PSSC) Project here to present the Project and get your reactions to it.

Thirdly: For us jointly to see how promising approaches, particularly those that are community based, can be further improved and used on a wider-scale both within Zambia and the region.

The Workshop has been organised by Zambian staff in the context of the multi-country PSSC Project. This is an information development and demonstration Project and, as you have heard, is supported by the International Reference Centre (IRC) utilising Netherlands Government funding. Perhaps it is useful that I say a few general words here about the Project of which we will be hearing more late:-

In brief the Project was designed specifically to look into the problems of small piped supplies mentioned a moment ago. It is designed therefore to concentrate on developing and then promoting application of new information on the planning, implementation and management of piped supplies, both for rural growth centres and low-income urban areas. This information development and application process is carried out by national institutions themselves through demonstration schemes, through special studies into subjects of particular interest (such as revenue generation, and maintenance) and through information sharing activities such as workshops and publications of guidelines. The Project puts special attention on three key issues: PARTNERSHIP, SUSTAINABILITY AND FLEXIBILITY

- PARTNERSHIP
In developing approaches that are community based but where a realistic balancing role form institutions is recognised.
- SUSTAINABILITY
In highlighting long term sustainability, especially financial management and maintenance aspects.
- FLEXIBILITY
In developing approaches within piped supplies that include flexible and progressive mixes of service levels (public taps, neighbourhood taps, yard taps and house connections).

There are two other important aspects to the Project:

- 1) The development of in-country activities by national teams themselves and through co-operation between national agencies with minimal external support.
- 2) The sharing of information and ideas within each country and between participating and other interest countries.

The Project began in 1988 and a similar project is also underway in Malawi. Zimbabwe too is interested in participating and hopes to join the Project during 1989. I am pleased to mention that representatives from each of these countries are with us this week and we can therefore also add their experience of similar projects to the discussion.

IRC's role in the Project is a low-key one and includes some funding support, Co-ordination between the countries taking part, support through regular visits, promotion of international activities such as workshop and meetings of national Project staff and importantly, information exchange.

And now something on the scope of the Project: of course the objective of a demonstration Project doesn't stop short at implementation and operation of demonstration schemes, themselves. Information coming from the Project has to be shared, compared and contrasted with other experiences, successes built on, problems aired and solved.

This workshop forms an important part of that sharing process. Consensus will, I hope, emerge for application of improved approaches on a much wider scale. The development of WASHE Committees in Zambia and accelerating co-operation between the Department of Water Affairs, Ministry of Health, Department of Social Development and other Agencies together with participation of a wide range of organisations in this and other workshops, should all be vehicles for getting recommendations of the Workshop used. Let's keep that practical objective of use in mind.

On future needs and many remaining gaps in knowledge on piped supplies and appropriate sanitation I should like to highlight a few for later consideration. I have already mentioned the need for further work on operation and maintenance and the revenue-generating mechanisms that go with this if continuity and reliability are to be assured. Important too for piped supplies are water quality aspects. And if community based methods can indeed be successfully applied for new facilities in rural centres, how can they be adopted and improved for rehabilitation of old supplies, where communities may have become disillusioned with less-than-successful water projects? what of the special problems of the much less cohesive urban-community? How to promote involvement in the choice of service level and type of water supply and sanitation, and how to do community-based approaches need to be adopted for other types and mixes of systems? In what way can approaches

respond to cultural and socio-economic variations between and within communities and how, especially, can the potential role of women be widened? Importantly, how do we improve the flow of information and experience both to prevent mistakes being repeated and to ensure promising approaches are quickly used on wider scale? And, a key question, if the community based methods pay off what are the future implications for human resources development generally and specifically for training of more staff in the special skills needed to motivate and work through the community? Equally importantly, what is the financial implication of all this and how can it be covered?

These and many other issues are some that we will be talking about in the workshop. They are subject also I hope there will be continuing information development and demonstration activities in Zambia and elsewhere in coming years.

I would like to close with some important acknowledgements. Firstly to the national Project staff of the PSSC and the earlier PSWS Projects here. They have made good efforts in developing the Projects and in giving new examples of the principles of community self reliance and the parallel development of hygiene education, water supply and sanitation. We have been very pleased to see some valuable initiatives coming from the Project in Zambia, including this workshop which we very much support. Special recognition must be given to the Project Co-ordinating Institution, the Department of Water Affairs, for its continuing support of and commitment to the Project, to the Ministry of Health for Collaboration and release of staff, to the Department of Social Development for continuing advice and manpower inputs and to all who participate in the inter-agency Project Management Committee and co-operate at community and district levels.

Mr. Chairman, IRC would like to wish the workshop every success and we hope that through this national initiative, there will be further development, sharing and application of ideas for the greater benefit of the community in Zambia. I shall look forward very much to hearing the views and experiences of fellow participants during this coming week and to some enjoyable joint work together.

Thank you very much.

ANNEX VI

GUIDELINES FOR GROUP DISCUSSIONS

GENERAL GUIDELINES FOR ALL GROUPS

- a) Emphasis should be on piped water supplies and appropriate sanitation, and human resources development
- b) Groups should come out with appropriate recommendations
- c) Topics are guidelines only, add or subtract as appropriate
- d) Groups should choose their rapporteurs

TOPICS FOR WORKING GROUPS

GROUP A

1. Financial Management and Community Organisation:
 - a) for piped water supplies and appropriate sanitation how can community based financial management and community organisation be enhanced?
 - b) For piped water supplies and appropriate sanitation how can we ensure that the necessary resources are covered and what are the organisational implications at community level?
2. For piped water supplies, how can the integration of hygiene education and sanitation be ensured?

GROUP B

1. For piped water supplies and appropriate sanitation, what technical improvements could be made for easier and more community-based maintenance and greater user convenience?
2. What mechanism should be established to strengthen intersectoral collaboration and co-ordination for piped water supplies and sanitation (including Donors, Non-Government Organisations, private sector etc)

GROUP C

1. How can we widen the role of women and children and maximise their benefits in piped water supplies and appropriate sanitation?
2. What are the different approaches necessary for piped water supplies and appropriate sanitation in low income peri-urban areas and compared to rural growth centres?

GROUP D

1. How can active community participation be promoted not only in the implementation but also in planning and management of piped water supplies and sanitation?
2. How can the growing experiences of piped water supplies and appropriate sanitation be shared and applied on a wider scale (ie. guidelines, workshops, training etc)?

ANNEX VII

GUIDELINES FOR FIELD VISIT TO LUSITU RURAL PIPED WATER SCHEME

OBJECTIVES:

- Exposure to piped water supply in a rural area.
- Consider the scheme as a potential project in PSSC or future projects funded by IRC or other donor agencies.

WHAT TO LOOK OUT FOR:

1. TECHNICAL ASPECTS

- Sources of water
- Method of Abstraction
- Treatment Method
- Water quality and water use
- Design - aspects of pipelines, pumps, standposts, troughs, soakaway, apron.
- Management, operation and maintenance
- Number of people served
- Fault reporting procedure

2. COMMUNITY INVOLVEMENT

- In operation and maintenance
- Sense of ownership
- Water/tap Committees (composition and functions)
- Benefits of Scheme to user communities

3. FINANCIAL ASPECTS

- Revenue collection mechanism
- Water rates
- Method of collection of levies
- Project fund
- Existence of financial committees
- Composition and functions

4. HEALTH ASPECTS

- Hygiene
- Appropriate sanitation
- Disease control measures
- Water quality

5. POSSIBLE IMPROVEMENTS :

- Technical
 - Organisational
 - Managerial
 - Financial
 - Community-involvement
- and any other relevant matters related to the project.

ANNEX VIII

SPEECH BY THE MINISTER OF STATE FOR HEALTH HONOURABLE
DR. J.K. CHIJIKWA, M.P. AT THE CLOSING OF THE NATIONAL
WORKSHOP ON PIPED WATER SUPPLIES FOR SMALL COMMUNITIES
IN ZAMBIA 27 JANUARY, 1989, MANCHINCHI BAY LODGE, SIAVONGA

Comrade Chairman,
Distinguished Guests,
Participants,
Ladies and Gentlemen

I am very pleased and grateful for the privilege you have accorded me to come and close the National Workshop on Piped Water Supplies for Small Communities in Zambia.

On behalf of my Minister and the entire Ministry I wish to pay tribute to the Hon. Minister of Water, Lands and Natural Resources, Hon. Paul Malukutula, MCC, MP, who officially opened this workshop, on Monday 23rd January, 1989. In the spirit of intersectoral co-operation, I feel honoured to be here with you. I am told the participants on this workshop have been drawn, from Water Affairs Department, Department of Social Development, UNZA and from my own Ministry. I am also told this seminar attracted international participants from Malawi, Zimbabwe, the Netherlands and the International Reference Centre for Community Water Supply and Sanitation, the sponsors of this workshop. I hope our foreign visitors and local participants have found this workshop useful and have likewise made worthwhile recommendations to our Government. I also do hope that the pleasant setting of this magnificent tourist facility contributed to useful discussion.

Mr. Chairman I am sure you have all received relevant information which was circulated to you showing the objectives of this workshop. The objective of which was to provide a forum for the exchange of information and ideas in the planning, development and management of piped water supply systems in small communities in Zambia together with complimentary programmes of sanitation and hygiene which may directly be achieved by our communities in our efforts to improve living standards of our people.

Mr. Chairman, Ladies and Gentlemen, Hon. Malukutula in his opening address reminded you of the fact that, in Zambia the Party and its Government attaches great importance to the goal and objectives of the International Drinking Water Supply and Sanitation Decade which is an expression the world community has made to make safe drinking water and proper sanitation facilities available to the majority of the people in the whole world. My Ministry, together with the Ministries responsible for water and sanitation, have participated fully in the Decade activities.

As you are aware the Decade activities have mainly focussed on the following:

- construction of water supply and sanitation facilities through direct labour or by contractor;
- proper maintenance of the facilities constructed;
- the giving of health education to users;
- promotion of community participation and intersectoral cooperation;
- integration of water supply and sanitation programmes with other development sectors.

The essence of the Decade was that it should be community oriented to ensure a wider distribution of benefits and services.

I would be particularly happy if you clearly spelt out the relationship between water supply and sanitation on one hand, and the broader concept of primary health care, on the other. Statistics at hand presently indicate that out of an estimated population of over 7 million people in Zambia, about 50 percent live in the rural areas in relatively small settlements with individual dwelling or villages being dispersed over a relatively large area. In some parts of our country the populations live in densely populated areas with 20 to 60 inhabitants or more per square kilometre. The main economic activities in which more than 95 percent of the population is engaged is small scale subsistence farming and domestic animal rearing.

Mr. Chairman, you are no doubt aware that the health situation arising from water related diseases of these rural population is far from satisfactory. In many areas these water related diseases account for about 20 percent of all cases recorded at health centres and clinics. In some localities the diseases are principally associated with poor hygiene and insufficient quantities of water. Thus worm infestations are numerous, particularly in populations in the peri-urban zones of our large cities. In many localities both in urban and rural areas, diarrhoeal diseases are endemic and are associated with consumption of polluted water.

The multi-disciplinary nature of water and sanitation calls for close co-operation between various agencies in the country. This principle is well applied in our primary health care programmes. We feel that if primary health care has to succeed it will require the support of the rest of the health system and other relevant social and economic sectors. For intersectoral co-operation to be effective, it must be well co-ordinated at all levels namely at local, intermediate, and national levels.

Comrade Chairman, drinking water is one of the most important and basic requirements for all human beings in our communities. The quality of life depends to a large extent on continuous provision of water supply of acceptable quality and quantity. Indeed this very important service can not be achieved unless concerted efforts are made at all times to develop, construct and maintain water supply facilities to our populations. It is in this context that the Fourth National Development Plan of our country outlines with utmost priority our task to implement rural water supply schemes through out the country.

Mr. Chairman, I am also reliably informed that as part of the United Nations' International Drinking Water Supply and Sanitation Decade activities, Zambia signed an agreement with the International Reference Centre for Community Water Supply and Sanitation based in the Hague, Netherlands, under which agreement a multi-country Public Standpost Water Project was implemented between 1983 and 1987 here in Zambia, among other countries, for demonstration purposes. The main objectives of this project, in short, were to investigate feasible and sustainable means of serving low income urban and rural growth point communities with piped water supplies. I am also happy to learn that the International Reference Centre is committing further support by funding an extension of the project into a new phase, now called, the Piped Water Supplies for Small Communities Project.

I also wish to take this opportunity to thank the agencies such as NORAD, SIDA, EEC, Irish, Government, Federal Republic of Germany, and FINIDA. The World Health Organisation has also contributed substantially by providing funding for consultants, fellowships and direct funding of water and sanitation projects in Zambia.

Mr. Chairman, it is not my wish to make a long speech as I am aware you have been here for a whole week and you have worked very hard. I wish therefore to take this opportunity to congratulate you for the serious effort you put into this seminar. Once again I would like to thank our foreign colleagues, from Malawi, Zimbabwe and the Netherlands for being with us. I am sure, I am speaking for all my local colleagues that we have benefited immensely by sharing your experiences. I wish them a safe trip to their respective countries and it is my hope that this interaction will continue.

Finally I wish all of you safe return to your homes, it is now my humble privilege, honour and pleasure to officially close this workshop. May the God Almighty be with you always.

Thank you.

ANNEX IX

WORKSHOP EVALUATION

QUESTION	NUMBER OF RESPO- NSES YES	NUMBER OF RESPO- NSES NO	TOTAL RESPO- NSES	PERCE-- NTAGE YES	PERCE- NTAGE NO
	1. Were preparations for the Workshop adequate?	17	12	29	59
2. Was the information about the Workshop adequate	28	1	29	97	3
3. Were objectives of the workshop clearly explained and understood at the beginning?	26	3	29	90	10
4. If so, were they met?	26	3	29	90	10
5. Were topics relevant to the theme "information sharing" in piped water supplies sector?	29	0	29	100	0
6. Would you have liked other topics included, which were not included in the workshop programme?	9	20	29	31	69
7. If yes which ones.					
8. It is hoped that you gained some knowledge and experiences from the workshop. How would you share the same with other people in your organisation and other agencies after the Workshop?					

9. Was the duration of the Workshop adequate?	26	2	29	90	7
10. Would you attend a similar workshop in future?	29	0	29	100	0
11. Any general Comments about the workshop?					