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SYMPOSIUM ON COMMUNITY WATER SUPPLY IN DEVELOPMENT COOPERATION

under the auspices of the
Minister for Development Cooperation
of the Netherlands

Amsterdam, the Netherlands
7-10 Februari 1977



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REPORT



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International Reference Centre
for Community Water Supply

WHO International Reference Centre for Community Water Supply
Nw. Havenstraat 6, Voorburg (The Hague)
mail: P.O. Box 140, Leidschendam, The Netherlands



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SUMMARY BY THE CHAIRMAN

The symposium reported here, was initiated by the Dutch Government in preparation for the United Nations Water Conference in Argentina. This conference will be taken as a starting point for the Habitat resolution which recommends the setting of high priority targets by nations to provide water and sanitation for urban and rural communities. One specific target is the availability of an adequate supply of water for all by 1990.

All participants of the symposium accepted water as a basic need and a human right. It was felt that there is clearly a risk in setting unachievable goals but that targets are useful in providing a means of measuring achievements.

The Amsterdam meeting concentrated on the rural and urban fringe community where the problems are almost severe. If significant progress is to be made here, not only world massive increase be necessary in money and trained personnel for construction, operation and maintenance of installations, but improvements in organization and the encouragement of the active participation of the recipients will be necessary. Presently, women take the grant of the hardship and misery associated with inadequate water and sanitation and their active involvement at all stages of development could have a significant influence on the degree of success. By removing obstacles the latent motivation which undoubtedly exists in a community could be harnessed, possibly with dramatic effects. If adequate finance is to be made available it will be necessary for international and national finance agencies to introduce more flexibility in lending and procurement terms particularly to encourage the use of low cost appropriate technologies.

It is also recommended that separate decentralized departments be set up with responsibility for all aspects of water and sanitation systems. Urban systems should be self-financing and rural development should involve a partnership between government and community. The policy should be maximum accessibility to water supply for as many as

possible and this should take precedence over improvements in existing services.

The establishment of effective clearing house mechanisms would enhance the generation and application of specific knowledge and information. It is a prerequisite for the establishment and improvement of water supply systems to put strong emphasis on appropriate manpower development, not only including the generation of skills through various forms of education and training, but also providing employment opportunities and aiming at optimal job satisfaction for trained manpower.

It is firmly believed that improvements in water supply and sanitation can assist greatly in effecting improvements in health, food production and the ability to work. Such schemes should therefore be part of an intergrated development programme.

If interest and concern over community water supply and sanitation is to be sustained and if real improvements are to be achieved, follow-up actions will be necessary after the Argentine meeting. High-level regional meetings are proposed to prepare and review national plans.

Above all, success will depend on the will of governments and the community for change. It is hoped that the results of the symposium reported will play a small but constructive part in the encouragement to success.

G. Ringnald,
Chairman

RECOMMENDATIONS

To National Governments

- Developing countries should review their development policies giving a high priority to the community water supply and sanitation sector with emphasis on community water systems in the context of water resources management and public health care as part of an integrated development programme. Donor countries and International Aid Agencies should also give a high priority to this area in their technical and financial aid to developing countries. Human resources should be strengthened in community water supply programmes, using a systematic approach to manpower development, fully utilizing appropriate methodologies and instructional materials.

- Governments should generate necessary funds for water supply needs from the sector itself using an economically efficient and socially equitable progressive block tariff scheme. Access to water should be obtained for as many people as possible without a supply, before improving services to existing customers.

- National revolving funds should be created for community water supply financed from substantially increased loans and grants from national and foreign sources. This will accelerate the development of the sector on terms reflecting local requirements.

- As many recently constructed community water supply and sanitation schemes fall short of expectations often due to the lack of adequate organization and management, countries should strengthen or establish appropriate institutional arrangements based on existing government administrations. They should assign to them specific responsibilities and authority for planning, implementation and monitoring of progress of realistic, phased action programmes with appropriate solutions to institutional constraints.

- The design of a community water supply and sanitation system should be based on an optimal economic solution including technical and non-technical factors appropriate to local conditions using standardization as far as possible. No scheme should be considered complete without adequate provision for operation and maintenance, including the supply of spare parts.
- A critical part of the process of choosing a water supply system, executing the project, using and maintaining it, is that those affected by these activities should participate and have control at all points of the process. As the role of women is central because it is they who generally have the task of water collection and use, it is recommended that governments ensure that women play a central role at village and higher levels in the above mentioned process.
- To initiate the participation of the population, the various national, international and local agencies and agents involved in community water supply should be clear about the specific financial, institutional and technical constraints and these should be communicated throughout the system, especially to the communities in which dialogues are conducted. The national, regional and local public authorities should be thoroughly informed and, where possible, should guide and stimulate the process of participation, especially in the development of community water supply.

To the International Community

- One of the great failings of many United Nations Conferences is the weakness of the follow-up activities. To ensure an adequate follow-up to the Water Conference, it is essential to hold a series of meetings under the auspices of the Regional Economic Commissions by March of 1978. These gatherings should be held at the ministerial level and must include senior representatives of the relevant bilateral and multilateral funding agencies. Their purpose would be to develop national and regional plans for the achievement of community water supply goals, which would include appropriate financial arrangements.

- An effective clearing house mechanism should be developed by international cooperation to provide for the communication of selected information concerning community water supply and sanitation. This should be achieved by strengthening existing mechanisms rather than by the creation of new organizations. At the national level information services should be organized to promote the use of appropriate information in planning, operation and management of community water supply and sanitation programmes and to foster the communication of information about projects, programmes, local materials, locally-manufactured equipment and indigenous techniques. A communication function should be included at every stage in all community water supply and sanitation projects.

- International and national development finance agencies should adopt more flexible lending and procurement terms to encourage the application of low cost appropriate technologies and the concern for operation and maintenance.

To the Government of the Netherlands

- The establishment of National Manpower Development Systems for community water supply programmes should be promoted. The WHO/ International Reference Centre for Community Water Supply should be strengthened so that it can provide support to countries initiating such systems and so that it can stimulate, wherever possible, inter-regional cooperation with existing institutions.

- The follow-up of the present symposium to have a regular exchange of ideas and an improved coordination between the various disciplines represented, which are directly or indirectly involved in water supply and sanitation, should be encouraged.



REPORT OF THE SYMPOSIUM

1. INTRODUCTION

The Symposium

On the eve of the United Nations Water Conference in Argentina, the Dutch Government sponsored a symposium in Amsterdam to assist in formulating a firm and realistic policy at the United Nations meeting. Although a very broad range of topics would be covered in the Argentina meeting, it was firmly believed that one of the foremost objectives should be to achieve increased emphasis on the provision of water supplies and sanitation to the poor elements of the population living in rural and urban fringe areas. The objective of the symposium was therefore to focus on this topic and to formulate policy guidelines and provide recommendations for concrete action.

The meeting was aware that community water supply had been considered in depth by other bodies, particularly the World Health Organization and the World Bank, and that comprehensive documents had already been circulated. The objective of the present report therefore is not to duplicate these documents but to reinforce, re-emphasize and perhaps to disagree with certain aspects of the existing papers. The conclusions and recommendations put forward in this report were formulated in a series of plenary and working sessions, in which participants were divided into the following working groups:

- a. Policy and Planning
- b. Manpower Development
- c. Organization and Management
- d. Finance
- e. Technology
- f. Motivation

The Dutch Government invited to the meeting national and foreign participants in their personal capacities, the delegates having backgrounds in policy making and practical field operations and representing various disciplines.* This deliberate choice was made so that the resulting interaction would lead to realistic but compositive views on the topics under discussion in a context of general development cooperation. The ideas expressed therefore, especially in the working group reports, represent collective opinions and not necessarily a completely unanimous view.

* A full list of participants is given in Annex 4

General Principles

The symposium fully supported the view expressed by Minister Pronk in his opening speech* that water supply and basic sanitation are basic needs and human rights and are corner stones in the general development and improvement of life, particularly for the poor sector of the community. Participants recognized the benefits which an adequate water supply would have in improving health, in upgrading the capacity to work, in increasing food production and in assisting the redistribution of wealth. It might also have an indirect effect on the reduction of drift towards cities and could assist in the problems of population growth. It must, however, form an integral part of total development. The meeting also recognized the very significant investment necessary to produce the changes desired and the need to make this investment cost-effective. This calls for an examination of the appropriateness of all factors: policy, organization, technology, finance and manpower development. Although the lack of water is a general problem, it was thought that general solutions were not likely to be effective. The meeting considered it constructive to consider why better progress had not already been made in the provision of community water supply and sanitation. Some factors were enumerated in the key-note address delivered by Dr. Dieterich of the World Health Organization** . They included the lack of awareness by policy makers of the will of the people, inadequate finance, insufficient trained manpower, lack of external assistance, poor internal arrangements and inferior financial policies.

The situation is made worse by the absence of policies linking community water supply to the sectoral portions of national development strategies. Progress has been so discouraging that even if the original goals of the Second Development Decade had been realized the numbers of people in the rural and urban fringe populations without an adequate supply of clean water would still have increased. Recently, however, two developments have given cause for some encouragement. The unanimous adoption of the Clean Water target by the Habitat Conference demonstrated the increasing concern of governments with the subject. Discussion on the New Economic Order and new patterns of development have begun to center on the provision of the basic needs of the poor - food, shelter, employment and water. If every human being has a right to these four things, then national and international development strategies must be re-orientated to provide them. In respect to water, it is hoped that the Argentine meeting will act as a spur to change.

* Annex 1

** Annex 3

This hope was summarized in the key-note speech by Mr. Mageed, Secretary-General of the United Nations Water Conference *.

"I have every hope, confidence and faith that the forthcoming Water Conference will be an occasion for a declaration of the resolute will and deep commitments of the national governments and the international community to leave no stone unturned in their efforts to provide clean water for all by 1990".

The symposium endorsed the principle of setting goals for improvement in community water supply and enumerated the major factors relevant to the achievement of these goals. The report therefore, offers comments and recommendations in the hope that they will in a small way assist in the overall tasks.

* Annex 2

2. WORKING GROUP REPORTS

2.1 Policy and Planning

In many countries a national water policy may be developed on its own or as part of an overall basic need strategy. However, in most countries, community water supply and sanitation policies will be integrated into both multisectoral and sectoral development programmes. It can easily be shown that community water supply facilities are essential to the success of many sectoral policies.

Multisectoral Policies

Integrated rural development policies have recently shown signs of bringing renewed life to the countryside of the Third World. Although their fundamental aim is increased food production, they may also serve to stimulate rural employment and to partially stem the tide of migration to the cities. Although many factors are involved, water supply is critical to their success; in the words of the FAO document for the Water Conference "It is important to realize that water supply....is the essential catalyst without which no community development can take place."

Similarly, improved water supply and sanitation are at the core of all programmes discussed at the HABITAT Conference for the improvement of squatter settlement communities.

Sectoral Policies

Community water supply and related sanitation measures have often been regarded as ancillary or even irrelevant to other sectoral approaches to development. Experience has shown this to be a mistake.

Population policies for instance are critically dependent for their success on decisions by couples to voluntarily limit family size. One of the chief determinants of such decisions is a reduction in infant mortality rates. Unless therefore the provision of good water supply and sanitation services being one of the main preventors of water-and filth- borne diseases are included in population policies, their success in limiting family size will be mixed. Similarly efforts to develop national health policies leading to the availability of human beings fit to play a role in the development process will be exceedingly difficult unless the prevention of water borne diseases is an integral part of such policies.

Community water supply programmes can be of substantial help to rural employment policies. The construction, operation and maintenance of the facilities themselves will provide employment. The provision of an adequate supply of water is essential to the development of rural industries, particularly food processing. Finally, relief from the suffering of water borne diseases and from the backbreaking task of carrying water will greatly increase the productivity of the rural population.

The World Food Conference recommended an annual 5% increase in Third World food production. In order to achieve this, the conference recommended an increase of 25% in the world's irrigated land coupled with the rehabilitation of 50% of the existing irrigation schemes. Traditionally, irrigation schemes have neglected complimentary community water supply systems although they can often be made compatible such as has been realised on a limited scale in the Sudan. This opportunity must not be missed in the follow-up to the Rome Conference. In addition, in many instances - such as in Nepal - the development of water supplies in itself can play an important role in food production.

Public participation

Whether community water supply programmes are pursued separately or as basic elements in multi-sectoral or sectoral development strategies, past experience with maintenance and operation suggests that public participation by those who benefit is essential.

National policies must be designed to create a demand for clean water and sanitation facilities at the village level. In some cases this may involve an intensive campaign of basic education in hygiene, establishing the relationship between bad water and disease.

This campaign should involve schools, agricultural extension and health workers, the modern mass media and traditional mass media such as theatre, mime and music.

However, the development of water supplies and sanitation facilities cannot be successful from a health point of view if there is no awareness by the community of its health implication. The way of arriving at this awareness should be through continuous practical education in which the population, including children, is involved and should be carried out by health or community workers, who have been trained for this purpose.

National policies should support community water supply systems through the provision of appropriate resource and ecological surveys, appropriate technology, and construction assistance. Training of local personnel in the efficient operation and maintenance of the system is absolutely critical as the local population should be at least partially responsible for these functions either through payment of fees or in kind.

National development strategies should be oriented to ensure the coordination between ministries necessary for multi-sectoral planning and the design of appropriate legal and administrative frameworks. Standardization of equipment - if necessary to be imposed on the suppliers of such equipment - and an assured supply of spare parts are also essential.

International Action

If national development strategies and sectoral policies are changed to give a greater priority to basic needs such as water supply and sanitation facilities and to the development of self reliance, international agencies and national donors must be prepared to respond to these requests. This response may take the form of a requirement that a certain percentage of development assistance be devoted to the satisfaction of basic needs. Greater attention to these needs will also require a modification of many of the traditional criteria used by development assistance agencies. Rate of return criteria must be modified and more prominence must be given to programme aid for infrastructural and multisectoral projects. Voluntary agencies and other non-governmental organizations also have a vital role to play. They must be encouraged to expand their role in encouraging public participation, community development, and appropriate technology.

The Water Conference must serve to establish commitments by governments and international agencies to the HABITAT Clean Water Goal. If due commitments are to be taken seriously, representation by governments from both developed and developing countries at the ministerial level is absolutely essential.

The conference must strengthen the existing mechanisms for cooperation within the international system rather than creating new organizations. The relevant international agencies should coordinate their efforts on community water supply at both Mar del Plata and subsequent regional meetings. New clearing house mechanisms must be developed for the collection and dissemination of information in areas such as training facilities, appropriate methods and technologies and case studies of water supply programmes. The IRC seems already to be well placed to perform such a function.

One other activity which - resulting from the Latin American experience - might enhance the viability of rural water supply and sanitation programmes would be the urging of agencies and countries to commission the preparation of promotional material through the provision of "science writers", the provision of a means for dissemination of the articles thus developed and the assistance in the preparation of audio-visual aids and exhibits, for both international, national and local level.

In order to ensure an adequate follow-up to the Water Conference, it is essential to hold a series of meetings for example under the auspices of the regional economic commissions within a year. These gatherings should be held at the ministerial level and must include senior representatives of the relevant bilateral and multilateral funding agencies. Their purpose would be to develop national and regional plans for the achievement of the Habitat target, including appropriate financial arrangements.

The types of plans and commitments that emerge from the Punta del Este meeting of the Organization of American States in 1961 could serve as a model for these meetings.

2.2 Manpower Development

Without an adequate number of manpower, qualified and motivated to design, install, operate and maintain water supply systems in accordance with the needs and potentials of communities, investments in these systems will either be wasted or not fully utilized. The manpower-working group considers that the areas of concern which are most significant, are: concept, framework and relevance.

Concept

Manpower development in community water supply is often viewed in a restricted sense of training to acquire a skill rather than in the context of also developing an employee to achieve personal and utility goals in harmony with the specific needs of the underserved population. Lower echelon personnel are often neglected. Divergent points of view and attitudes towards manpower development tend to delay decisions on much needed action and lead to diluted training efforts.

It is recommended that:

- a. decision makers, utility staff and the community look upon manpower development, not only as a training in technical skills but also as the establishment of a personally satisfying and productive relationship of this manpower to the organization they operate in and to the community they serve
- b. manpower development is seen as having a role in the improvement of national health, social and economic conditions
- c. all levels of staff and disciplines are involved in a continuing manpower development process, also paying attention to people recruited from villages

Framework

Although the importance of manpower development is generally recognized, it is often carried out in an unsystematic way, with minimal planning and without sufficient means.

It is recommended that:

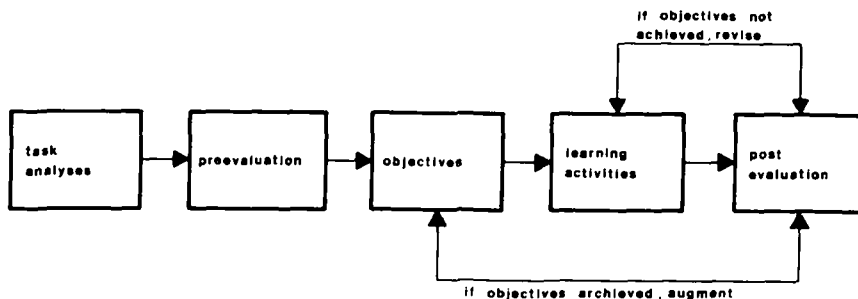
- a. a systematic approach to manpower development be adopted for the entire community water supply structure, from village to central level with special emphasis on, i.a.:
 - a well defined manpower development policy
 - an appraisal of the community needs and ability to participate
 - a detailed manpower and training resources inventory
 - a quantitative/qualitative forecast, on a time scale, of manpower requirements
 - a definition of training objectives
 - an objective-orientated manpower development plan
 - an interrelated training and personnel policy
 - a follow-up preservice training by supportive guidance in supervision on-the-job
 - a clear assignment of responsibility for manpower development
 - a firm financial commitment

Relevance

The incidence of inefficient and socially inappropriate water supply systems indicates that the relevance of some current manpower development efforts is questionable.

It is recommended that:

- a. a systematic approach to training should be developed which would include the essential elements illustrated below:



Note:

Feedback thus results in an "accountability" system for providing the training officer and management with qualitative/quantitative measures of effectiveness.

- b. training materials, techniques of instruction and on-the-job supervision as well as methodologies should be developed, adapted to local requirements as well as to student aptitudes, attitudes, knowledge and skills

International cooperation

The working group recommends that priority be given within community water supply development programmes to the establishment of National Manpower Development Systems and proposes that the WHO International Reference Centre for Community Water Supply (IRC) be strengthened so as to give full support and collaboration to countries initiating such schemes. In order to intensify working relationships on a regional basis, inter-regional cooperation should be encouraged using existing institutions as much as possible. The WHO/IRC and institutions at the inter-regional level could perform the following functions related to manpower development:

- a. setting up of appropriate mechanisms for the coordination of activities and cooperation among institutions concerned with community water supply programmes
- b. providing guidelines for the methodology for systematic manpower development for community water supplies in developing countries and collaborating, if requested, during application of guidelines
- c. assisting in the creation of a pool of trainers for effective implementation of community water supplies
- d. providing appropriate case studies and relevant information to national and regional institutions which could select, adapt to local conditions and disseminate the information in local languages to agencies and persons working on community water supplies
- e. assisting the national and regional institutions in the development of teaching aids and training tools appropriate for their community water supply manpower

The working group further recommends that the Dutch Government should promote the establishment of National Manpower Development Systems and of international supporting institutions and should further strengthen the work of the WHO/IRC. It advises that support to village water supply activities should only be given on the condition that national governments have a clear policy on manpower development in this field, that they have clearly defined responsibility for its implementation and they make sufficient financial commitments for this purpose.

It is further recommended that in the context of the afore-mentioned, the Dutch Government should promote and organize special short courses in community water supply in the countries, for training at all levels, taking local problems into account.

2.3 Organization and Management

Management in general is the organization and control of human activities towards a specific goal.

In community water supply and sanitation the goal has been set by the HABITAT-Conference, to provide water for urban and rural areas by 1990 for all people, if possible.

Many recently constructed community water supply and sanitation schemes fall short of expectations. One of the main causes of the disappointing results is the lack of adequate organization and management.

The role of management is to obtain the facts, to project, to direct, to co-ordinate, to control and to motivate people in using the resources (men, materials, money and water resources) in the most efficient way in order to produce an adequate water supply and waste disposal service.

The following recommendations are put forward:

- a. each country should establish realistic phased action programmes with appropriate solutions to institutional constraints
- b. countries should strengthen or establish appropriate institutions based on existing administration levels and assign to them specific responsibilities and authorities for the planning implementation and monitoring of progress of the programmes as well as operation and maintenance of community water supply and sanitation systems.

Each country should design an organizational framework, including:

- (i) description of the interrelation with the government administration on each level
- (ii) detailed job descriptions of each function in the organization chart
- (iii) qualifications for each function
- (iv) salary scales for each function
- (v) career planning
- (vi) and they should fill the positions of the organization chart with well trained qualified men and women in due course

- c. the organization and management structures for the implementation, operation and maintenance should be decentralized with the basic concept of self-financing in urban areas and self-help (partnership of government and community) in rural areas.

Note:

Decentralization means that there should be a delegation of work, authority and responsibility and the power to take decisions from the higher to the lower levels of an organization. Decisions should be taken at the lowest permissible level. This is a general organization rule, but especially true in those countries where communication and consultation between the government administration levels is difficult.

Moreover decentralization may stimulate the participation of those immediately interested. Decisions which affect other sectors or areas should be brought up to the level that is competent to take a balanced decision regarding all interests involved

- d. the establishment of national water supply associations as beneficial institutional arrangements should be promoted
- e. to make optimal use of the available national capabilities and resources, dependent on the economic, social and cultural structure of the country, a co-ordination of efforts of all sectors active in the rural areas should be promoted, especially in the field of agriculture and village water supply and sanitation
- f. the design of a community water supply and sanitation system should be based on cost-effective technology, appropriate to local conditions applying the management technique of standardization as far as possible. No system should be considered complete without adequate provision for operation and maintenance including the supply of spare parts

Note:

Cost effective technology means:

the optimum economic solution for a technical problem, taken into account e.g. investment and life time, reliability, operation, maintenance, and non-technical factors like taste, hygiene, appreciation, etc.

- g. each country should strengthen its existing organization or establish a new one for the training of the community water supply and sanitation personnel in the technical, administrative, management, health and sanitation fields. This should be implemented at the professional, intermediate and village technician levels. The international community should support governments in the field

- h. the initiative that international agencies are about to take with the IRC to collect, revise critically and distribute information regarding appropriate community water supply and sanitation systems is supported

2.4 Finance

General policy considerations

Access to an adequate supply of safe water is regarded as a basic human right. Hence it is an obligation of society to provide this service. In doing so however, it should be recognized that water is not a free commodity and therefore it is considered necessary to charge the consumer for the provision of this service.

The financial aspects of water supply depend on an overall policy framework formulated at the national level. This implies that the objectives of the governments should be clearly defined, taking into account inter alia the following:

- a. the priority given to each water resources sub-sector
- b. the determination of water quality standards
- c. the level of service (quantity, ease of access, etc.) to be made available to consumers

Water supply policy

Water supply policy has to fit into local circumstances and must take into account the financial viability of the scheme. It is recognized, however, that a self-generating finance system cannot always be achieved and that additional financial resources in the form of subsidies or other means of concessionary financing are necessary in such cases. Within the sector, water for commercial or industrial purposes forms an integral part of the water supply system.

It is recommended that:

- a. as a general objective, governments give priority to maximize accessibility to water supply to as many people as possible, before improving service to existing consumers
- b. financial policy should be to generate the necessary funds from the system itself taking into account the cost of water and the overall goal of social equity

Structure of tariffs

On the basis of the above general considerations a tariff structure should be designed as a major tool to finance and enlarge the water supply system. The structure should be aimed at reaching self-sufficiency of the system to the largest possible extent, but must also consider the ability of the individual consumer to pay. In most cases the operation and maintenance cost of a system can be covered by the tariffs to be charged and it is important to ensure that the availability of additional funds does not result in the construction programme which exceeds the sector's capacity to provide resources for recurring costs.

The success of any tariff system is fully dependent on the ability to collect the charges. In cases where collection is highly inefficient, it is recommended that collection should be continued and improved. Collection in itself has positive effects on education and motivation, on social equity and on the desire to expand the system in the future. A progressive block tariff has the following advantages:

- a. the system increases social justice as it charges the highest rates on the biggest consumers which are in most cases well-to-do people
- b. the system encourages its own expansion
- c. the system discourages the waste of scarce water resources

It is therefore recommended that a progressive block tariff should be designed and implemented.

Social needs

The way the community wishes to pay for minimum consumption by low income population is heavily dependent on local circumstances and must be left to the jurisdiction of the community concerned.

It is recommended that whatever system of pricing is applied it should prevent the possibility that minimum consumption is charged at rates higher than the minimum of the progressive block tariff structure.

Waste disposal

The provision of water supply leads to the necessity of a waste disposal system when certain quantities of water consumption are reached.

Preferably water supply and waste water disposal should, also for financial reasons, be the responsibility of one single authority.

It is recommended therefore that in preparing water supply systems the need for waste disposal should be taken into account even though there might be a time lag between the implementation of the supply system and the need for a waste water disposal system.

International cooperation

It is necessary to increase multilateral and bilateral assistance in the sector of water supply, because national funds are insufficient as demonstrated in the WHO/IBRD report to be submitted to the U.N. Water Conference. Serious doubts are expressed on the desirability of the establishment of a new international fund, especially for this purpose, as recommended in the consolidated action proposals for the U.N. Water Conference. It is recognized however, that the creation of a channel through which international aid can flow into the sector could provide better coordination of the international, regional and national level and thereby increase its efficiency.

A point which must be considered in increasing foreign assistance is that such assistance may lead to enlargement of the foreign debt burden and inflation of developing countries. In the former case increasing the grant element of foreign assistance will help. Further there should be more flexibility on financing of local capital cost and easing of procurement restrictions than is the case at present.

It is recommended that national revolving funds for community water supply should be created, financed from national and foreign sources, in order to accelerate the development of the sector on terms reflecting local requirements.

2.5 Technology

The recommendations on the subject of technology as presented in the Consolidated Action Recommendations of the Committee on Natural Resources were reviewed. The general approach was considered to reasonably cover for technological matters. However, the separation of "appropriate technology" in paragraphs 46-49 and elsewhere creates an unnecessary division since all technology should be appropriate. In order to promote accelerated implementation of programmes it is necessary to review in detail some of the problems and constraints inherent in technology.

Problems and constraints which have hindered progress include the following:

- a. deficiencies in operation and maintenance
- b. inadequate access to local water resources data
- c. the diversity of equipment and techniques used in a particular area, due to uncoordinated import policies or uncoordinated local manufacture
- d. a lack of involvement of local skills and capability
- e. inadequate organizational infrastructure and motivation
- f. a lack of knowledge about the most appropriate materials, equipment and techniques

It was agreed that the following should be allowed for when choosing appropriate technology, making a design and carrying out work:

- a. the ease of operation and maintenance, including availability of spare parts
- b. use of standardized equipment and design where this would reduce costs, facilitate maintenance and training, and favour local manufacture
- c. involvement of locally available skills and the use of indigenous materials and equipment
- d. adaptation to local conditions

To allow for the factors mentioned above, it is necessary to promote the development of:

- a. collection, storage, processing, easy retrieval and selective dissemination of information at local and central levels
- b. training and education

- c. local production of materials and equipment, and research and development of local materials and techniques
- d. appropriate organizational infrastructure
- e. appropriate communication

A basic pre-requisite to implement all these recommended developments is the generation of appropriate and specific information, and the establishment of adequate communication structures.

All projects should include a communication phase during which appropriate information is obtained to enable the work to be designed. A communication function at all stages of a project or programme should allow for pertinent information to be transferred between those responsible for the project and

- (i) national policy-makers
- (ii) technical departments
- (iii) administrators and technical personnel at the provincial level
- (iv) members of the public who will be affected by the project
- (v) community development and health workers directly involved with people affected by the project
- (vi) training and research institutions
- (vii) local manufacturers of material and equipment which might be used

These project/programme support communication functions should be organized through national information centres to promote the use of appropriate information in the planning, operation, maintenance and management of water supply and sanitation programmes.

At international level efforts should be made to provide for specific assistance to the development and organization of project support communication and to the establishment of national and regional information services in the field of water supply and sanitation.

2.6 Motivation

The group believes that the correct emphasis is on participation and mobilization, rather than on motivation.

The following comments are primarily aimed at the village level, although many are equally appropriate to urban areas.

The distribution of benefits within communities

There should be equal access to facilities and the distribution of facilities should not be detrimental to the poorest segments of the community.

Conscious efforts should be made to ensure that programmes do not contribute to intra-community stratification.

Any policy which allows wealthy members of the community to continue to acquire improved services, raises serious problems with regard to the equitable distribution of resources. It should be viewed with caution and the interest of the poorest members of the community should be safeguarded.

The distribution of benefit between communities

Where countries lack site selection processes, the actual selection can become highly political, to the detriment of the general goals of equal access and reaching the poorest segments. Donors should be aware of that and look to local levels as the primary planning points in these cases.

Site selection criteria may be made on either economic or social grounds. It is recommended that a "worst-first" criterion be included, among other criteria, at least to the point where there is an improved water source in each community.

Site selection criteria should be formulated by central planning agencies in collaboration with one another and should be widely publicized.

It is pointed out that participation and acquisition of necessary skills are within the capabilities of the poorest communities when a step-by-step approach is followed.

Where there is local initiative, this should be encouraged, but within the guidelines and constraints laid down by central planning agencies. Care should be taken to avoid giving communities the impression that they will be served with financial, technical and material assistance simply because they initiate action. Later participation can be destroyed by premature encouragement of local initiative.

Mobilization principles

Mobilization should not be seen so much in terms of motivation and instruction but, as a process in which obstacles are removed, thus enabling communities to develop and run their own water supplies. The setting of goals, planning programmes, designing and executing projects in the field of water is a long term process, linked to economic and social change.

A critical part of this process is the participation of those affected by the activities.

Participation, to be effective, must involve a high degree of control and responsibility at all points in the process by those affected by the activities.

In third world countries women bear the burden of obtaining water. They are also those who must accept and use the improved community system. Because of this strong vested interest full participation by women will often increase the effectiveness of community control in the operation and maintenance of community water supplies.

Mobilization techniques

There are various techniques available for promoting mobilization in ways consistent with the above principles. The committee's bias, but also by way of illustration, rather than exclusion, is towards the use of consciousness-raising dialogue carried out at the community level. The main aim of this dialogue is to bring people to the point of awareness that they have the power to change their own lives collectively, and to focus this understanding upon the solution of community water problems.

Women must play the most important, if not exclusive, part in these dialogues and subsequent action programmes. In many cases the initiators of the dialogue should be women.

Appropriate agencies for water programmes conducted in this way may sometimes be other than governmental. Care should be taken to enter development through the appropriate channel for ensuring maximum community participation and control.

Responsibility is an important component of effective participatory programmes. The important elements of planning, design, construction, operation and maintenance should be clearly introduced into the dialogue phase and clear decisions should be taken as to the expected division of responsibilities. The evaluation phase should check implementation of these decisions. Appropriate technological solutions should be introduced by technicians into the dialogue. Really appropriate technology is peoples' technology and can only be developed on existing village science and technology during the dialogue phase.

When communities request statutory power to facilitate the implementation of various aspects of their programmes, such as local financial contributions, governments should be prepared to respond positively. Enabling legislation may be required.

The accumulated experience in the use of mobilization techniques in rural development efforts suggests that peoples' enthusiasm cannot be sustained indefinitely with the use of the same technique. Therefore, care should be taken to develop consistent and complimentary techniques to dialogue for use in subsequent phases of community water development.

Training

Part of the task of the mobilization dialogue should be to have the community select a woman and/or man for short-term training in water maintenance and other such skills as may be required.

Water technicians from government and non governmental organizations should be trained in the techniques of dialogue and water programme development based upon community participation and control. If they are not the actual dialogue initiators, they should at least be cognizant of and sympathetic to the approach.

The general philosophy of equal opportunity programme development and community participation and control should be integrated into every level of training for water development.

Communications

The various national, international and local agencies and agents involved in community water development and supply should be clear about the specific financial, institutional and technical constraints and these should be communicated throughout the system, especially to the communities in which dialogues are conducted.

The national, regional and local public authorities should be thoroughly informed and, where possible, guide and stimulate the process of participation, especially in the development of community water supply.

Although the role of mass media is a limited one, there are possibilities for its use in national community water development programmes in ways consistent with the above approach to community participation and control.

Changing structures at the village level

Water supply projects and programmes can have a net impact of increasing or decreasing the economic and social stratification within villages. Care should be taken to assess carefully the likely impact of particular programmes so as to avoid results that are inconsistent with general goals and principles stated above, and to stress those in harmony with these aims.

In particular, members of the working group wish to call attention to the fact that community water programmes may have the effect of:

- a. increasing the oppression of women. In some communities, collecting water is the primary opportunity for women to have social interaction outside the home. It is necessary to guard against the removal of such opportunity. In other instances, women freed from collecting water may be coerced into undertaking equally arduous tasks
- b. extending the dominant position of certain unrepresentative groups

Women

The role of women in the entire area of community water and at all levels is so central that it is recommended that the Dutch Government:

- a. include a significant proportion of qualified women in its delegation to the United Nations Water Conference
- b. use its good influence with other governments towards ensuring an adequate representation of women at the Conference

Research

The Dutch Government should initiate and encourage a programme of applied research and evaluation designed to investigate on a comparative basis, various strategies for promoting community participation. To respect traditional communities and to encourage efficiency, sociological research should be carried out before each operation concerning the culture compatibility and existing needs for clean water as seen by the population. This will help to ensure that programmes do not fail due to lack of interest and participation on the part of the population.

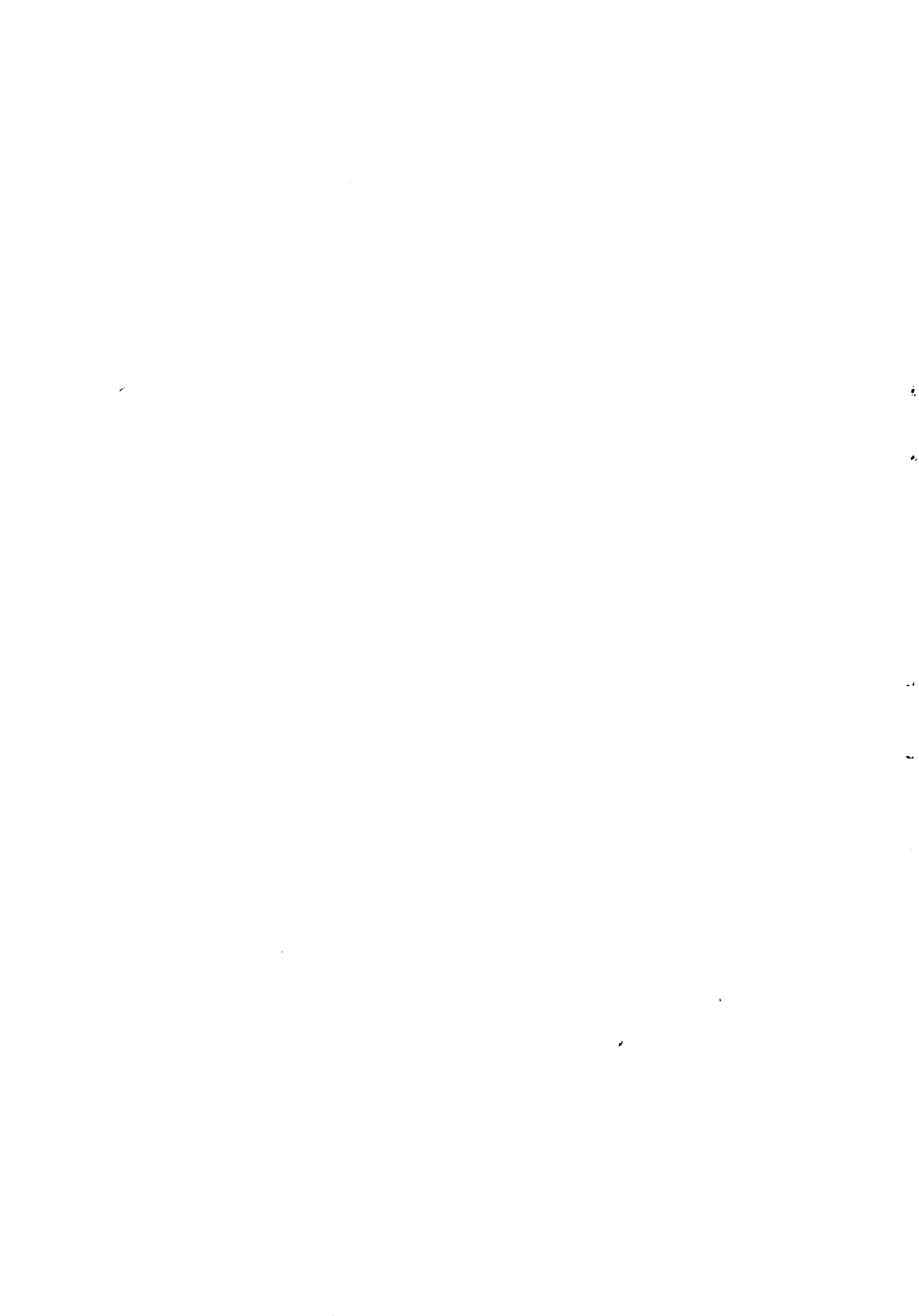


Opening Address by Mr. J.P. Pronk

Minister for Development Cooperation
of the Netherlands

to the

Symposium on Community Water Supply in Development Cooperation
Amsterdam 7-10 February 1977



Ladies and Gentlemen,

The United Nations Water Conference due to open next month at Mar del Plata, Argentina has not yet attracted much public attention. However, it deals with a subject of vital importance. The provision of safe water is an essential pre-condition for the improvement of the health and well being of the majority of world's population. Community water supply is a basic human need; access to safe drinking water a basic human right.

It is important to stress this human right, because many people do not share it. In the seventies only about 30 percent of total population of the developing countries has reasonable access to safe water being no more than about 15 per cent of the rural population and about 70 per cent of the population in the urban areas. At present 1.2 billion people have no proper water supply, they must rely on contaminated water. They are the poorest people in this world.

We know what this means. It means that in many countries millions and millions of people, especially women, have to walk miles and miles every day to ensure an adequate supply of water for the family. It means that, millions of millions of people, due to a lack of clean water, are unfit to work. It means that again millions and millions of people suffer from chronic water borne diseases. We know that biological pollution of water through fecal contamination is a major cause of death amongst poor people in developing countries. We know that diarrheal diseases, stemming from the lack of clean drinking and washing water is the most common cause of death for children.

This lack of water until now hardly has been recognized as a big problem, let alone as a political problem, like the lack of food or the lack of employment. Yet, basically it is a political problem. World water resources cannot run out. The trouble is their uneven distribution. To quote Barbara Ward: "The trouble is that the rich, hardly by coincidence, are well watered and thus uninterested." Or in the terminology of a recent statement of experts:¹ "The issue before us is not one of fundamental physical constraints, or technological gaps it is clearly not one of lack of available material

¹ From "Water for All", Statement of the International Institute for Environment and Development, Earthscan, Symposium on Water (in preparation for the U. N. Water Conference), Washington, December 1976.

and financial resources, or the absence of potential human resources. It is mainly one of awareness, imagination and political will." And therefore, may I add, it is a matter of priorities, of political decision making and of equality of distribution.

The United Nations, on the basis of a resolution of the recent HABITAT Conference, has called upon governments to give priority in their development planning to the goal of safe drinking water and related sanitation measures in every community by 1990. The experts tell us that the realization of this target would imply total financial outlays of the order of \$9 billion per year for fourteen years (\$6 billion for water and \$3 billion for sanitation). This investment, if supported by complementary education and human settlement policies would greatly improve health and reduce death rates, especially among children.

It would do even more than that. It would play a role in overall development as it would relieve labour, especially for women, who would be released from the burden of getting the daily water for house and family. In addition, good health, implies more energetic people working in the development process. And finally, reduced infant mortality and the prospect of a better life, can determine parents' decisions on family size.

Again I quote Barbara Ward, "If we combine the annual 9 billion which are necessary to reach the Habitat target for clean water and sanitation with the annual 25 billion which according to the World Food Conference are necessary to finance the necessary agricultural investment to step up world food production, and if we compare the sum total of \$34 billion per year - largely productive investment - with the \$ 300,000 million spent each year on arms, then we can say:

"For just one tenth of the world's most inflationary and unproductive expenditure, the human race might have clean water and enough to eat by the beginning of the twenty-first century. It would indeed seem to be at a bargain price².

²Barbara Ward: "The possible dream ? Reflections on the forthcoming U.N. Water Conference", January 1977.

Let us go back to water supply itself. Of course, money will not do the job. An integrated set of policy measures is called for, including:

- water resource development on consistence with ecological principles
- management of water supplies for agriculture within the framework of an overall integrated rural development strategy.
- conservation of available water resources and measures against environmental abuse and against waste of water
- health and sanitation education programmes
- a human settlement policy based upon people's motivation and participation, community development and equal access to all scarce resources, including water.

It is against this background that we have organized this "Symposium on Community Water Supply in Development Cooperation". It is not our intention that this Symposium deals with all the problems which I have touched upon. This Symposium will only deal with part of the agenda of the forthcoming United Nations Water Conference.

When we decided to organize this Symposium our first aim was to deepen our preparations for the U. N. Water Conference and to give further guidance to the Netherlands delegation to the conference. It seemed therefore a good idea to confront the general policies as developed in the Netherlands with the probably more practical experience of Dutch experts working in developing countries and to invite some experts and policy-makers from other countries to add some international experience to the Dutch approach to community water supply.

A second aim of this Symposium is to identify possible contributions to the follow-up of the U. N. Water Conference. Therefore we hope that the discussions and recommendations of this Symposium will be practical, suited to local circumstances and above all directed towards the most needy people of the developing countries. More and more international development co-operation is oriented towards a direct improvement of the living conditions of the poorest people. This orientation should have consequences on each sector when choices have to be made between target groups, policy instruments and institutional arrangements. It is self-evident that this also applies to the choices to be made in the field of water supply.

A third aim of this Symposium is, at least in the Netherlands, to draw attention to a problem which as yet hardly is being recognized by the public.

By organizing this Symposium we hope to contribute to the success of the U. N. Water Conference. After all, its success, like that of all international meetings, depends upon four conditions: on expertise, on good insight on the integral character of the problem and its relations with other problems, on the level of public awareness and the degree of public support, and last but not least on the political will to make the right choices and to take the good decisions. May this Symposium add to the improvement of the quality of the various decisions involved in the field of community water supply, both within the developing countries themselves and in so far as development is concerned.

Address by Mr. Yahia Abdel Mageed

Secretary-General
of the United Nations Water Conference

to the

Symposium on Community Water Supply in Development Cooperation
Amsterdam 7-10 February 1977

1. Introduction

The first part of the paper discusses the importance of the study.

The second part of the paper discusses the methodology used in the study.

Mr. Chairman,
Distinguished delegates,

It is a matter of great privilege and pleasure for me to have been invited to participate in this symposium on community water supply and sanitation organized by the Government of the Netherlands within the framework of its preparations for the forthcoming United Nations Water Conference in Argentina next month.

At the outset, may I express my gratitude to the Government of the Netherlands for their kind invitation and my appreciation of the pioneering efforts they have been making in promoting international cooperation in this important sector.

Coming as it does on the eve of the Conference, I have no doubt that the symposium will contribute actively to the formulation of firm and realistic policies during the Conference in the matters of community water supply and sanitation since it provides an opportunity to integrate the views, knowledge and experience of experts working in the field and those in charge of decision-making and policy formulation. Further, it appears to me particularly appropriate that the symposium proposes to address itself to aspects of development cooperation, as its very title suggests, because, if ever there was the greatest need for cooperation in international development, it is obviously in the sector of community water supply and sanitation.

1. Role of water in human society

It always struck me as a puzzling paradox of the times we live in, characterized by spectacular advances in the domains of science and technology, when man, transcending the pull of gravity, is on the point of acquiring unprecedented mastery over space and other planets, that, more than two-thirds of humanity, not having access to such a basic and fundamental necessity as clean water for sheer survival should be exposed to the ravages caused by disease and death on this planet.

Notwithstanding the fact that it appears almost superfluous to expatiate on the role of water in human society, it would perhaps be prudent to remind ourselves of the primordial importance of water to every goal of social and economic development or the preservation and protection of the environment. No efforts directed towards the improvement of public health, eradication of disease, reduction of infant mortality, higher levels of labour productivity, or any other aspect of our developmental effort, will bear fruit without the provision of at least tolerably clean drinking water and rudimentary sanitation facilities. It will not be possible to achieve significant increases in food production in the third world, without "a quantum jump in irrigation". The plans for industrial development call for much larger quantities of water than are commonly imagined. Plans for human settlements will be incomplete without consideration of the related problems of community water supply. It is, therefore, no wonder that the recent United Nations Conference on Human Settlements drew particular attention to this and referred the problem for fuller consideration and further action by the forthcoming United Nations Water Conference. Water is the key sector for all human activity, the core of all social and economic development and should, in fact, be considered as the most reliable index or parameter to define the level of development.

It is in this background of the realization of the importance of water that considerable effort has been made at various levels, nationally and internationally, to improve the level of service of community supplies during the last few decades. And yet, as the relevant recommendation of the United Nations Conference on Human Settlements pointed out as recently as in June 1976, "in the less developed countries, nearly two-thirds of the population do not have reasonable access to safe and ample water supplies, and even a greater proportion lack the means for hygienic waste disposal". It will be pertinent to pause here and reflect for a while on the reasons which contribute to the realities of the present situation so that we take them into account in formulating plans for future action. In this task of constructive but critical assessment of the present situation, it will be useful to recall the historical fact that a great majority of the less developed countries of the world of today attained national independence only in the years after the last world war and many only in the sixties.

And, at the time of their independence, they inherited administrative and institutional structures and national economies not geared to the needs of national development, with the result that the demands of development on their frail resources, - financial, administrative, institutional and other - were overwhelming, be it in the fields of water supply or schools, hospitals, rural roads, other forms of transport, forests, fisheries, agriculture, industry and, in fact, the entire gamut of social and economic development, accentuated in the context of meagre material and manpower constraints. It is, therefore, no wonder, that progress in the field of community water supply was not as rapid as all of us desire or as the situation demanded. The crying need of the present situation requires a close and critical assessment, a complete break with the past and a radical reorientation of policies and programmes to enable a majority of mankind to live in decency and dignity. Adequate and suitable policies will have to be formulated and vigorously implemented at local, national and international levels to realise the targets set by the United Nations Conference on Human Settlements for 1990.

2. Multi-sectoral approach to development

In considering new policy reorientations, due recognition must be given to the fact that the sector of community water supply and sanitation cannot be treated in isolation but must be taken up as an important component of integrated agricultural development which, in itself, must be considered as a part of the wider question of rural development. A majority of the people in several developing countries live in rural areas and provision of drinking water and sanitation must form part and parcel of schemes of rural development. For instance, long lengths of irrigation canals in rural areas can very well serve as sources of drinking water both for human as well as cattle population and provision for this must be incorporated in the irrigation distribution systems even at the planning stage, with due attention being paid to the maintenance of minimum standards of public health. Similarly, the planning of schools, hospitals, rural libraries, primary health centres, agricultural farms and, in fact, every sector of rural life must be integrated with the planning of water supply and sanitation schemes. In the broader context of things, water supply schemes profoundly influence the patterns and trends of rural-urban migrations and thus help to reverse the increasing trend of urbanization in certain parts of the world with consequent social repercussions of far-reaching significance.

The point will become clear if it is remembered that the absence of access to water sources provides the basic motivation for the movements of nomadic tribes and provision of water supply in itself would be the most important single factor in the promotion of new human settlements.

Then again, there are various projects for the welfare of rural women, children, family planning clinics, etc. The simple provision of drinking water facilities in rural areas would release labour for other essential occupations and economically more productive activities - and especially release the labour power of rural women from the literally crushing burden of spending a few hours every day carrying headloads of water over long distances. All this underlines the need for evolving a multi-sectoral approach to development, inclusive of the sector of community water supply and sanitation. Social and economic development is an indivisible, single entity and cannot be approached in piecemeal but only in the context of a coordinated and integrated strategy.

3. Mechanisms for accelerated development

In translating such a multi-sectoral approach into practical action, attention must be focussed on the need to set up suitable institutional arrangements to promote accelerated development.

First, a mechanism is needed to be entrusted with the responsibility for planning, management, administration and training. One of the priority tasks is to prepare national plans and programmes, where they do not exist at present, and set up a suitable machinery for the administration and management of the projects. On the basis of such comprehensive plans and programmes, feasibility reports have to be prepared for specific projects.

The planning and implementation of rural water supply and sanitation programmes has in some cases been in the hands of many different government agencies and arrangements for their coordination will help effective implementation of programmes.

Second, the manpower situation should be assessed in detail and a detailed training programme prepared and implemented so that adequate and suitably trained manpower is available for the implementation, maintenance and operation of the projects at various levels and involving all the skills needed for the task. A suitable reorientation and rural bias must be imparted to national educational systems to equip national intelligentsia for rural science.

Third, a mechanism is needed through which the people are involved in all the phases of the developmental process by contribution of labour, material and cash for construction, operations and maintenance to work towards self-sustaining operations; for, there is no substitute for extensive and effective public participation, as the best guarantor for the success of any project or plan. Isolation from the people always leads to sterile inefficiency in execution whereas the active involvement of the people produces a galvanizing effect all round. Many attempts to ensure public participation have been made in this regard in several countries and there is need for broadening and deepening these efforts in all the countries.

Fourth, a mechanism is needed to continuously promote and develop technology in adaptation to local needs and situations. Here may I express the thought that, at the macro level, there are no technological constraints to promote development. The basic technology of water supply or waste disposal is known. If two-thirds of mankind do not have access to clean water, it is not because of lack of technology. Nevertheless, there is room for continuous adaptation of known technology to suit local needs. There is room for innovative technologies to solve particular local problems and for a greater use of local labour and local materials to help the people to participate more effectively in project construction, operation and maintenance. Simple equipment like hand pumps, and motors should be manufactured locally either in each country or at least on a sub-regional or regional basis so that scarce foreign exchange resources can be reserved for the import of more sophisticated equipment which has to be imported necessarily for other industrial projects.

Fifth, there should be suitable and effective mechanism for the transfer of information of such technological adaptation and innovations and of information on successes as well as failures, so that, over a period of time, nations reach a state of collective self-reliance in this vital sector.

Sixth, a mechanism is needed for the coordination of all the sectors active in rural development and for monitoring the implementation of the programme.

Last, but not least, a national financing system should be developed for the water supply and sanitation sectors including the supervision of the coordinated utilization of national as well as external financial resources, in addition to the mobilization of internal resources through an equitable structure of rates, taxes, subsidies, etc.

4. Concrete and realistic action

In the light of the above approaches and requirements, concrete and realistic action must be taken both by national Governments as well as by the international community.

The national Governments must take action to set up suitable institutional arrangements to perform the tasks indicated earlier particularly in the preparation of specific plans and projects based on a number of detailed studies of physical, socio-economic, and technical nature. Various demographic and statistical studies and projections must be undertaken to define the tasks and targets over a given time frame up to 1990 with intermediate goals indicated specifically to help evaluate periodic performance of progress.

International (bilateral and multilateral) organizations offering financial and technical assistance in the matter of community water supply and sanitation may like to examine ways and means of making their participation more effective and extensive. They may wish to consider the possibilities of increasing their financial contributions to the sector and also for pooling their resources and raising the level of grants and low interest bearing loans. There is also the need for their shouldering a higher proportion of local costs, increasing their allocations, particularly to rural water supply, and complementing local efforts in the rehabilitation and maintenance of systems.

External assistance will also be required in some cases in the preparation of national plans, programmes and specific projects in conformity with the national goals, policies and priorities determined by national governments. Assistance will also be required in manpower surveys, training and research. The activities of monitoring the progress of implementation need to be improved, expanded and streamlined.

Coordination within the United Nations system should be improved at the country level to ensure a multi-disciplinary approach and to integrate the water supply sectors with other sectors of rural development.

Greater emphasis has to be placed on expanding the scope of cooperation among the developing countries themselves by the establishment of inter-country training facilities, exchange of experts and information so that the experience available in one country is placed at the disposal of others who may be faced with similar problems.

5. The role of the United Nations Water Conference

The forthcoming United Nations Water Conference in Argentina next month will provide a unique opportunity to consider at a world forum the range and future implications of the water problems confronting mankind in a systematic and comprehensive manner. The main work of the Conference will concentrate on the policies which might be adopted over the next few decades so as to ensure wise future management and development of water resources of the world in all sectors like community water supply, agriculture, industry, energy, transport, in all aspects including policy, management, institutions, education, research, training, coordination and financing, etc. The Conference will also facilitate an exchange of national experiences in water resources development, water use and technical cooperation.

The recommendation of the HABITAT: United Nations Conference on Human Settlements on safe water and improved sanitation for all was referred to the United Nations Water Conference for further consideration and action. In order to pursue the matter, the implications of this recommendation were examined in depth by an ad hoc working group of experts who outlined a strategy and a plan of action for the achievement of this target by 1990.

This document, which will come up for review at the United Nations Water Conference, studied the targets, analysed the investment implications and pointed out that the rate of annual investment up to 1990 for the overall community water supply should be stepped up to 1.8 times the 1971-75 investment rate and that this rate should be 2.3 times for the overall community sanitation. For rural water supply alone, the corresponding rate of increase in investment would be 3.9 and for rural sanitation alone 4 times. The document also discusses various strategy options for development and finally outlines a plan of action in three parts; the first part indicating priority areas for action; the second, recommendations for action at the national level and the third, recommendations for action through international cooperation. The report also pointed out that only 12% of the total investment on urban water supply was provided by external aid. The corresponding percentages for rural water supply were 9%, urban sanitation 5% and rural sanitation 0.5%. These figures show that most of the investment comes from the developing countries themselves and that there is a considerable need and scope for enlarging the scale of external aid in this sector.

It is also noteworthy that as has been rightly stated, while capital requirements may seem high, they are actually small in comparison with the benefits. They are also small in comparison with funds being found by virtually all governments, rich and poor, for other areas of expenditure, such as armaments.

The issue of clean water for all is not one of physical, financial or technological constraints or gaps. The HABITAT targets are practicable and the study of the problem placed before the Water Conference points to a practical way of realising them. I have every hope, confidence and faith that the forthcoming Water Conference will be an occasion for a declaration of the resolute will and deep commitment of the national governments and the international community to leave no stone unturned in their efforts to provide clean water for all by 1990. I would also like to take this opportunity to express my profound optimism that the Conference will adopt, with such modifications as it may deem fit in all its wisdom, the action plan presented for its consideration to help realise the HABITAT targets.

Mr. Chairman,

The Conference is so close to us now in point of time that it is not necessary to take too much of our time at this stage to anticipate its recommendations or resolutions in specific terms. It is conceivable that in point of detail there can be some options but there can be no doubt that the Conference will engender a new spirit of dedication to the cause, a new sense of awareness of the urgency and importance of the problem, a new climate for greater allocations to community water supply and sanitation in the national budgets, higher levels of flow of funds through the channels of international financial assistance to the cause of development, and, in general, a firmer commitment on the part of all concerned to register a real breakthrough so that our planet will be a better place to live in, at least from the viewpoint of clean water, than it has so far been.

I wish the symposium all success.

Thank you

Address by Dr. B.H. Dieterich

Director
Division of Environmental Health
World Health Organization, Geneva

to the

Symposium on Community Water Supply in Development Cooperation
Amsterdam 7-10 February 1977

Ladies and Gentlemen,

I would like to make a few comments on what may be the reasons for the slow pace in improvement of water supply and sanitation on the objectives which have been proposed, and to suggest a number of strategies for the future. I would also like to then comment on the specific subjects, which will be discussed in the working groups and finally, I want to make a few comments on possible action.

As far as the problem is concerned, of course, the data which we have is not absolutely reliable, but what comes out so clearly is what Minister Pronk and Mr. Mageed have already emphasized: small part of the population at the present is enjoying the benefit of water supply, and even more so sanitation, in the developing countries.

One thing stands out: in the rural areas, just more than one out of five persons have access to what we might call a safe water supply. Statistical information is available in the World Health Statistics Report of December 1976. It is interesting to note in this report whether things are getting better or worse, and I think that this is an important piece of information which we must have. There has actually been an increase of the percentage of people served with water in the cities and towns between 1970 and 1975, that is the first five years of the Second United Nations Development Decade. The percentage did go up from fifty to fifty-seven percent and there was a concurrent increase in the number of people served with water either in the house, or through public standposts. Substantial investment was made, though not enough. As a matter of fact, on the average, checked against the number of people who have benefited from the investment, \$67 per capita have been spent in the cities and towns, but the analysis of that information shows that in the countries with a higher per capita gross national product, not only were these the countries with smaller need, but there was more investment in terms of the share of the gross national product. In those countries where the need was greatest, it was the reverse.

Working at the rural areas and water supply, I have already spoken of the small number of people which have access to a satisfactory supply: about one out of five. But here too, there has been an improvement. Money has been spent. But again, there is low investment associated with high need, particularly in the poor countries.

The rural poor have yet to receive their due, in spite of all the efforts which are made on their behalf and in spite of all the lip service, if you wish, which is paid at conferences and in public, when people speak about the rural population.

In terms of the target set forth by Habitat, the efforts are tremendous if the target is to be met. Investment figures in tens of billions have been quoted: \$51 billion for the urban community and \$40 billion for the rural communities as regards water supply and \$30 billion for waste disposal for the cities and towns and some \$8 billion for the rural areas.

The absence of sanitation is a major reason for ill health in the developing countries. That urgent health problems of these countries relate to poverty, to malnutrition, undernutrition and the lack of accessible potable water and often multiple environmental hazards. The provision of potable water and waste disposal as a health technology is truly fundamental. I would like to stress this particular aspect, because those engaged in the prevention of communicable diseases too often do not consider the provision of water and sanitation as a preventive health technology, indeed as the only lasting technology which can prevent the spread of communicable diseases resulting from the absence of basic environmental sanitation.

Quoting from the document submitted to the U.N. Water Conference on the subject of community water supply: "The global statistics which present a discouraging picture of the water supply and sanitation situation, particularly in rural areas, do not, in fact, portray the hardship, the inconvenience, and the sacrifice experienced by the poor, and particularly by women and children in urban and rural areas where water is scarce or obtainable in poor quality only after transport of a great distance. Few would disagree that of any single activity in these urban areas, the improvement of water supply would have the greatest impact on the prevention of disease, the improvement of living conditions, the cleaning of streets, the beautification of parks and lake grounds, and the servicing of commercial, governmental and industrial operations. Similarly, if any single action were to be taken in the rural areas with the aim of reducing exposure to the most prevalent diseases, upgrading lifestyle, particularly that of women and children, catalyzing community organization and participation and setting as a basis for the development of cottage industries and community development, it would be the improvement of water supply".

In any country where financial resources are limited, and where there is a need to stimulate trade, personal involvement, commitment of human and other resources, develop facilities for the common good, there are few, if any, projects with greater potential than those concerned aiming at providing community water supply and sanitation.

The lack of water supply is one of the many manifestations of poverty and of social injustice. The immediate consequences are ill health. The social consequences are only beginning to be understood. They contribute to wide spread social injustice, political instability and polarization, and to the slow pace of development as a whole.

What then are the reasons for the slow pace of improvement of water supply and sanitation?

Only too often we ask the wrong people to give us an answer to this difficult question. For instance, I do not think that this symposium would be the right group to ask. Now do I think that an outside individual body should be the analyst. And many people feel that the government official, the technocrat, the bureaucrat in the capital city, does really know the reasons for the slow pace of development in water supply and sanitation. Indeed, the answer must come from the people.

We are told that people say that they don't like to be sick; that they are willing to pay much more for water than we would expect, and that they want equality, social justice, and their due share of the benefits of economic growth. Perhaps the reason for the slow pace in development is the disparity between the perception of priorities in the capital city on the one hand, and the expectation of the people on the other hand; particularly those people who live in the villages or in the urban fringes where they are poor and where they are unable to participate in the decision making process.

The subjects which have been selected for these six discussion groups are those which are usually believed to be constraining rapid progress, i.e. finance, organization and management, policy and planning, technology, manpower development, and motivation. Governments were asked five years ago to express themselves as to how they see these factors contributing to the slow pace of development, and while it is difficult to analyze what they have said, it is nevertheless interesting to note that it is not only the lack of finance which governments feel is retarding progress.

The availability of manpower is at least equally important, and we will have to pay political attention to this subject during the symposium. Inadequate external assistance, and inadequate internal administrative arrangements have also been quoted as important constraints. The lack of a national approach to financing or of a financial policy was another major factor which in many countries has been preventing a more rapid development. Finally, there has been reference to insufficient local production, to technology which is simple, and to adequate legal frameworks.

Recalling the Habitat target, this can hardly be an end in itself. Habitat deals with the quality of human life in human settlements and concluded that any improvement of human settlement conditions must include an improvement of water supply and sanitation. Therefore, we should see the Habitat target in the light - or as a means toward economic development, as part of the new social order toward which the world is moving, as part of the efforts to achieve greater distribution of wealth, to create higher levels of income, and to provide for a better quality of life, and as part of the efforts to stimulate self-reliance of the community. If we look at water supply and sanitation as a sector in itself, or if we look at water supply and sanitation as part of other sectors, the investment in resources, not only financial, will be great, and it is therefore important that the Habitat target be achieved within the context of the overall agenda for development. It should also be understood that the achievement of the target can mean different things to different people. For a given rate of investment, the programme be selected will depend on a number of variables such as the percentage or the number of people served, the time it will take to serve them, the standard or level of service to be provided. It is here that the discussion must focus. It is in this context that we must speak of technology and the degree of sophistication of the services to be provided. It is here that trade-offs must be made between total coverage and service standard. Should water and sanitation be provided to all more rapidly though with lesser standard of service? Should the highest possible standard of service be achieved, though for a fewer people?

It has been said that new strategies must be developed in order to implement the Habitat target. It has also been said that international cooperation is essential, and that for such cooperation, commitment on the part of all partners involved is necessary. Therefore, a plan of action is required both at the

national level and for international cooperation. The commitment of national governments is essential and without it, international cooperation in development will not be successful. However, national strategies must stem from a political process, that is from the priorities in the countries concerned. No uniform solution or mathematic equation exists by which these strategies can be set. Nevertheless, there are a number of points which should be considered by our symposium.

1. Water supply and sanitation are rarely an end in itself. They are part of a basic strategy to remove poverty, to increase the distribution of wealth, and to improve public health and shelter, and therefore water supply and sanitation will essentially be one of the very central issues in the overall development policy. This will have many consequences for national decision making. An inter-disciplinary approach is required. Intersectoral planning and allocation of resources is needed, as well as a national plan and coordinated action giving the basis for subsequent identification of specific programs for water supply and sanitation.

2. Where a national water resources policy exists, one strategy would be to integrate water supply and sanitation into this framework and to allocate as part of this resource policies for most cases, the consumption of water for humans having the highest priority.

3. The urban population, better off as they are, have had the benefit of larger investment for water supply and sanitation, and the present rate of investment in urban areas would indicate that the Habitat target be met almost automatically, without an acceleration of our current expenditure. The urban poor and the rural people would thus, need to become the focus of priority attention.

4. The lesson to learn from a number of countries would show that for rural areas, new strategies are required. The informed villager can do a great deal for himself and will accept the improvement of water supply and sanitation as improvement of the quality of life. He will have to think of his health and he will understand better why to allocate part of his resources to the improvement of water and sanitation. But government must help him, and one of the strategies for improving water supply and sanitation in the rural

areas is to arrange for a new partnership between the village and the government at the central, regional, or provincial level. Governments must assist by strengthening planning and legislative support, with the improvement of inter-structure and the organization of manpower, the choice of technology, and by making special efforts to assist the village in operating and maintaining the facilities once they have been constructed. As part of such a strategy, governments will strive at combining all the efforts being made in the rural areas including these few agricultural or rural developments. In the village, one of the most difficult questions to answer is, should water supply be provided in terms of a vertical sectoral program, or should one attempt to improve water supply and sanitation through whatever program is designed with the aim of providing higher income for the villager.

5. Water supply and the disposal of waste must always be considered together.

6. There is much to be said about how to finance water supply and sanitation and where the money should come from. There is much to be said about the adaptation of the principle of welfare economics, the adaptation of administrative structure to a practicle financial scheme of overall policy, and about the relationship between national financing and international lending. There is the problem. What is the allocation of funds in percent of the gross national product, in percent of the budget, in percent of the capital investment forseen by economic planning? Within the sector itself, what is the share of the resources allocated to investment for water supply and sanitation or allocated to operation and maintenance, and surveillance. What is the distribution between urban and rural areas, training and research?

How should cost be financed? Through government, central or local, or through the consumer himself? What expectations should be put on investments? Should it provide an adéquate return? Should it be a subsidy, or should it be simply a contribution to the expansion of certain services. How should countries adopt their investment policies to external sources of funding? Should they strive at full cost recovery? Should they equalize between urban and rural populations, when it comes to the attainment of water? Should the rich pay for the poor? Should the city pay for the countryside? Should there be penalties for high consumption? I am just listing these questions

because they are at the core of the arrangement which countries will have to make in order to cope with the resources required.

7. Similarly, how should the effort be organized and how should it be managed? There is no uniformity in the interstructure of countries. Therefore, what approach can be used in setting up the necessary institutions? How can policy best translate into action? What kind of organization can deal with the planning, construction, operation, maintenance, and deal with financial management? What is the best unit of centralization, decentralization, and regionalization? Which administrative structure for management of water supply and waste disposal is viable within the limits of the existing political system and viable, taking into account, the viable manpower and other constraints.

Much can be said about the need to have a vertical sector organization for water supply and waste disposal. Much can be said against. The problem is to adapt the objectives to the structure of the country, and I would warn against the mistakes often made by external consultants, who blindly try to apply an objective which has worked somewhere else.

8. On the subject of technology, a number of interesting statements put forth in the working paper make minimum use of scarce resources, make maximum use of abundant resources, strive at maximum use of consumer involvement, and insure acceptability of technology to the user. Therefore, select technology on the basis of health requirements and do not compromise on health, though you might compromise on cost and convenience. Look at the social benefits. Compare total population coverage against the degree of technical sophistication. Select technology on the basis of suitability for operation and maintenance under the conditions existing. But I would like to add that speaking of technology should not mean speaking of hardware alone. We need a technology with respect to management, to the way of handling financial resources, to social animation, to social engineering, and the manipulation of public opinion aiming at creating a much larger awareness of the benefits both to the individual and to the community.

9. Manpower has been one of the most important assets in Latin America, where water supply and sanitation is so much more advanced than in the rest of the developing world. A concerted effort has been made in Latin America for manpower development, accompanied by the creation of opportunities for the

utilization of those who have been trained. There was a commitment that once the manpower is created there was going to be a program. Based on this experience, attention must be given not only to the training of personnel at all levels, how to train, by which means to train, but more so to investigate how this manpower once created will be utilized. Manpower needs a structure within which to work, and incentives for the person who has been trained, irrespective whether he is an engineer or middle level technician or village technician.

In closing, may I perhaps refer once more to the document which will be put before the Conference, and which includes proposals for national action and priorities for international cooperation. It is said there that national governments should set goals within their development plans, and milestones within each plan-period to allow procedure evaluation of papers. It has been proposed that planning must start immediately, that projects be identified, and preinvestment surveys be conducted and that programs and projects be implemented. It is further proposed that planning use low-cost and cost effective technology and that the community be involved; that managerial arrangements be made for operation and maintenance; that manpower be created and utilized; that public opinion be created; that mass campaigns be conducted. Institutional development should proceed and it should take into account the need for planning, implementation and operation of water supply and sanitation, maintenance, and the essential coordination, wherever programs and projects are carried out for the improvement of conditions and of income in the rural areas.

In terms of international cooperation, the overriding question is, how external inputs can help producing quantum increases in what is happening in the countries at present. Obviously donor countries, bilateral and multilateral assistance programs, and international agencies must interact with governments and understand the national strategy and commitment. Against this commitment, international development cooperation can be planned and developed. Social benefits are interpreted criterion for international cooperation and the paper for the Conference makes a strong case for that. More priority was given to those geographic areas which are definitely at the end of the scale. Cooperation in programming rather than in projects, the development of infrastructure and plans, and strengthening of infrastructures rather than sectoral improvement, are subjects of great importance in international development cooperation. Finally, cooperation between the developing countries themselves hold great potential and will allow for an exchange of vital and valid information.

In the industrialized countries, the dialogue will to a large measure depend on public awareness. There are countries where the public insists that the goal of development policy, namely 1% of the national income, be reached though many countries are far from this percentage.

I personally believe that this Symposium will contribute to creating public awareness in the Netherlands and hopefully also in other industrialized countries. This in turn can lead to a high priority for development cooperation and to identification of areas which appear to have a high impact on social and overall development rather than on GNP and economic growth. It also may help governments of the industrialized world to get out of the present impasse when it comes to deciding where the development funds would go. Presently, the situation is such that the industrialized countries wait until they hear from the developing countries what their greatest priority is. This is consonant with present trends in overall economic development policy at the international level. Though allocation of resources may not have to be necessarily socially relevant to the field of water supply and sanitation, I hope that this symposium will have the beneficially impact on those who speak with governments in developing countries with the result that high social relevance of community water supply and sanitation is promoted. I believe that the public in most of the industrialized countries would show great interest because it is the public money, which should be used in the developing world in accordance with the principle of international cooperation and it is obviously in the interest of the public whether these funds are allocated to socially important subjects or not.

List of Participants

of the

Symposium on Community Water Supply in Development Cooperation
Amsterdam 7-10 February 1977

SYMPOSIUM ON
COMMUNITY WATER SUPPLY IN
DEVELOPMENT COOPERATION

Royal Tropical Institute, Amsterdam
7-10 February, 1977

LIST OF PARTICIPANTS

Chairman

Ringnalda, G International Organizations Department
 Ministry of Foreign Affairs
 Lange Houtstraat 19
 The Hague
 The Netherlands

General Rapporteur

Miller, Dr. D.G. Water Research Centre
 Medmenham Laboratory
 45, Station Road
 Henley-on-Thames
 Oxfordshire RG9 1BW
 Great Britain

Dutch Participants

Amelsvoort, Dr. V.F.P.M. van Catholic University of Nijmegen
 Medical Care Division
 Verlengde Groenestraat 75
 Nijmegen
 The Netherlands

Assen, J. van Technical Assistance Department
 Ministry of Foreign Affairs
 Muzenstraat 30
 The Hague
 The Netherlands
 (duty station Colombia)

Bergen, A.R. National Institute for Water Supply
 Nieuwe Havenstraat 6
 Voorburg
 The Netherlands

Blumenthal, K.P. Department Water Resources Management
 Hooftskade 1
 The Hague
 The Netherlands

Brugman, A. Netherlands Organization for Development
Cooperation (NOVIB)
Amaliastraat 5-7
The Hague
The Netherlands

Cornelisse, Dr. P.A. Centre for Development Planning
Erasmus University Rotterdam
Burg. Oudlaan 50
Rotterdam
The Netherlands

Csonka, J. Groundwater Surveying - TNO
Schoemakerstraat 97
Delft
The Netherlands
(duty station Colombia)

Hasselt, A.M.I.C.E. International Land Development Consultants
Ltd. (ILACO)
Beaulieustraat 22
Arnhem
The Netherlands
(duty station Upper-Volta, Ouagadougou)

Heide, Dr. J.A. van der Eindhoven University of Technology
Department of Technical Research for
Developing Countries (TOOL)
Rijnlaan 14
Son (N.Br.)
The Netherlands

Hemmes, H. Netherlands Investment Bank for Developing
Countries (NIO)
Carnegieplein 4
The Hague
The Netherlands

Hommes, Prof. Dr. E.W. State University Utrecht
Sociological Department
P.O. Box 202
Utrecht
The Netherlands

Horst, Dr. G.J.C. van der Netherlands Universities Foundation for
International Cooperation (NUFFIC)
Molenstraat 27
The Hague
The Netherlands

Huisman, Prof. L. Delft Technological University
Stevinweg 1
Delft
The Netherlands

Kakebeeke, W.J. Ministry of Public Health and Environmental
Hygiene Protection
Dr. Reijersstraat 12
Leidschendam
The Netherlands

Koopman, Dr. F. Ministry of Foreign Affairs
Lange Houtstraat 11
The Hague
The Netherlands

Laan, J.C. van de International Land Development Consultants
Ltd. (ILACO)
Beaulieustraat 22
Arnhem
The Netherlands
(duty station Bangla-Desh)

Lucasse, Dr. Chr. Royal Tropical Institute
Mauritskade 57
Amsterdam
The Netherlands

Oomen, J.H.C.M. Dwars, Heederick & Verheij
P.O. Box 85
Amersfoort
The Netherlands

Peeters, W.H.A. Centre for Mediation in Co-financing of
Development Programmes (CEBEMO)
van Alkemadeaan 1
The Hague
The Netherlands

Pieper, A.H. International Land Development Consultants
Ltd. (ILACO)
Beaulieustraat 22
Arnhem
The Netherlands

Raalte, R.A. van Directorate Agricultural Assistance to
Developing Countries
Ministry of Agriculture
Bezuidenhoutseweg 73
The Hague
The Netherlands

Ridder, Dr. N.A. de International Institute for Land Reclamation
and Improvement
P.O. Box 45
Wageningen
The Netherlands

Rigters, K.A. Interchurch Coordination Committee for
Development Projects (ICCO)
Stadhouderslaan 43
Utrecht
The Netherlands

Santema, Ir. P. National Institute for Water Supply
Director
Nieuwe Havenstraat 6
Voorburg
The Netherlands

Schippers, C.	International Water Supply Consultants (IWACO) Schiekade 189 P.O. Box 183 <u>Rotterdam - 1</u> The Netherlands
Smith, E.C.	Hasselt & de Koning Berg en Dalseweg 61 P.O. Box 151 <u>Nijmegen</u> The Netherlands (duty station Pakistan)
Soels, K.	Technical Assistance Department (DTH) Ministry of Foreign Affairs Muzenstraat 30 <u>The Hague</u> The Netherlands
Veen, G. van der	Organization of Netherlands Volunteers (SNV) Ministry of Foreign Affairs Muzenstraat 30 <u>The Hague</u> The Netherlands
Versteeg, J.H.F.	Department on the Development Cooperation with Surinam Ministry of Foreign Affairs Muzenstraat 30 <u>The Hague</u> The Netherlands
Vierstra, G.A.	Royal Tropical Institute Mauritskade 63 <u>Amsterdam</u> The Netherlands
Vlieger, C.A. de	International Water Supply Consultants (IWACO) Schiekade 189 P.O. Box 183 <u>Rotterdam - 1</u> The Netherlands
Voorwald, H.J.C.	Research Institute for Management Sciences (RVB) P.O. Box 143 <u>Delft</u> The Netherlands
Weille, Dr. G.A. de	Royal Netherlands Meteorological Institute (KNMI) Utrechtseweg 297 <u>De Bilt</u> The Netherlands

Wildeboer, W. International Organizations Department (DIO)
Ministry of Foreign Affairs
Lange Houtstraat 19
The Hague
The Netherlands

Youskine, M.K. Technical Assistance Department (DTH)
Ministry of Foreign Affairs
Muzenstraat 30
The Hague
The Netherlands

Zevenbergen, W. Organization of Netherlands Volunteers (SNV)
Ministry of Foreign Affairs
Muzenstraat 30
The Hague
The Netherlands

Foreign Participants

Feachem, Dr. R Ross Institute of Tropical Hygiene
Keppel Street (Gower Street)
London WC1E 7HT
Great Britain

Harahap, Dr. F. Development Technology Centre, ITB
P.O. Box 276
Bandung
Indonesia

Lwegarulila, F.K. Ministry of Water, Energy & Minerals
P.O. Box 9153
Dar es Salaam
Tanzania

Mageed, Dr. Y.A. Secretary-General to the United Nations
Water Conference
United Nations
United Nations Plaza
New York N.Y. 10017
U.S.A.

Pickford, J.A. University of Technology
Loughborough
Leicestershire LE11 3TU
Great Britain

Pitchai, Prof.Dr. R. College of Engineering
Guindy, Madras 600025
India

Resnick, Dr. I.N. Economic Development Bureau, Inc.
234, Colony Road
New Haven, Connecticut 06511
U.S.A.

Runnalls, D. International Institute for Environment and
Development,
27, Mortimer Street
London W1N 8DE
Great Britain

Participants of International Organizations

Carefoot, N.F. Pan American Health Organization (PAHO)
Casilla 2117
Lima
Peru

Da Camara, F.L. Commission of the European Communities,
Directorate General for Development
(D.G. VIII/C-6)
200, Rue de la Loi
Brussels 1049
Belgium

Davelaar, H. Drinking Water Programmes
United Nations Children's Fund (UNICEF)
New York N.Y.
U.S.A.

Dieleman, P.J. Food and Agricultural Organization
Land and Water Development Division
Via delle Terme di Caracalla
00100 - Rome
Italy

Dieterich, Dr. B.H. Division of Environmental Health
World Health Organization
27, Avenue Appia
1211 Geneva
Switzerland

Etienne, G.C. Division of Manpower in Environmental Health
World Health Organization
27, Avenue Appia
1211 Geneva
Switzerland

Kalbermatten, J.M. Public Utilities Department
World Bank
1818 H. Street, N.W.
Washington D.C. 20433
U.S.A.

Mengesha, A. African Development Bank
P.O. Box 1387
Abidjan
Ivory Coast

Sanchez, H.

World Health Organization South East Asia Region
Office of the WHO Representative for Indonesia
P.O. Box 302
Jakarta
Indonesia

Secretariate

WHO International Reference Centre for Community Water Supply
Voorburg, The Netherlands

Damme, J.M.G. van
Haijken, J.
Kerkhoven, P.

assisted by: Hessing, E.L.P.
Hofkes, E.H.A.
Tjiok, T.K.

Administrative support

Broersma, M.L.
Heijgen, W.J.E.
Maters, P.J.E.
Putman, Y.E.