



IRC
International Reference Centre
for Community Water Supply
and Sanitation

WHO Collaborating Centre

The Hague, The Netherlands

ANNUAL REPORT 1983

Prinses Margrietplantsoen 20
The Hague

Postal Address:
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The Netherlands

INTERNATIONAL REFERENCE CENTRE FOR COMMUNITY WATER SUPPLY AND SANITATION

IRC is an internationally-operating organization dealing with information and technology support for water and sanitation improvements.

With its partners in developing countries and with United Nations agencies, donor organizations, and Non-Governmental Organizations, IRC assists in the generation, transfer and application of relevant knowledge. The focus of this cooperation is on the rural and urban-fringe areas where the need for technical assistance is greatest.

IRC's information-oriented programmes include: 1. Information Support and Services; 2. Technology Development and Transfer; 3. Manpower Development and Training; 4. Community Education and Participation; and 5. Programme Evaluation and Planning.

Support is provided by means of publications and training material, seminars and courses, research and demonstration projects, as well as by advisory support to the development of national facilities.

Requests for information on IRC should be addressed to IRC, P.O. Box 93190, 2509 AD The Hague, The Netherlands.

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LIST OF ABBREVIATIONS

AWWA	American Water Works Association, U.S.A.
CEFIGRE	Centre de Formation Internationale à la Gestion des Ressources en Eau, France
CEP	Community Education and Participation
CEPIS	Centro Panamericano de Ingeniería y Ciencias del Ambiente, Peru
CIEH	Centre Interafricain d'Etudes Hydrauliques, Upper Volta
DANIDA	Danish International Development Agency, Denmark
DGEP	Directorate General for Environmental Protection, The Netherlands
DGIS	Directorate General for Development Cooperation, The Netherlands
ENSIC	Environmental Sanitation Information Centre, Thailand
FINNIDA	Finnish International Development Agency, Finland
HRD	Human Resources Development
IDRC	International Development and Research Centre, Canada
IDWSSD	International Drinking Water Supply and Sanitation Decade
INS	Instituto Nacional de Salud, Colombia
IRC	International Reference Centre for Community Water Supply and Sanitation, The Netherlands
KIP	Kampong Improvement Programme, Indonesia
MAJI	Ministry of Water and Energy, Tanzania
MDP	Manpower Development Programme
NEERI	National Environmental Engineering Research Institute, India
NORAD	Norwegian Agency for International Development, Norway
PAHO	Pan American Health Organization, U.S.A.
PEEM	Panel of Experts on Environment Management for Vector Control
PEP	Programme Evaluation and Planning
POETRI	Programme on Exchange and Transfer of Information
PSWS	Public Standpost Water Supplies
PWA	Provincial Waterworks Authority, Thailand
REPIDISCA	Red Panamericana de Información y Documentación en Ingeniería Sanitaria y Ciencias Afines, Peru
SSF	Slow Sand Filtration
TCDC	Technical Cooperation among Developing Countries
UN	United Nations
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNICEF	United Nations Children's Fund, U.S.A.
USAID	United States Agency for International Development, U.S.A.
WASH	Water and Sanitation for Health Project, U.S.A.
WEDC	Water and Waste Engineering for Developing Countries, U.K.
WHO	World Health Organization, Switzerland
WRC	Water Research Centre, U.K.



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I. IRC IN 1983

In the third year of the International Drinking Water Supply and Sanitation Decade, feedback from the field and international agencies indicates an increasing appreciation for the information support work of IRC. A clearer focus, a more streamlined organization, additional emphasis on IRC's service-orientation, and last but not least, a carefully considered programme orientation has made it possible for IRC to extend its role in generating, popularizing and transferring knowledge and experience on the key issues for action emerging from the Decade.

IRC aims to make information on water supply and sanitation available and accessible through various mechanisms to government and other organizations in developing countries to support them in planning and implementing water supply and sanitation programmes. In addition, IRC gives information support to UN agencies, financial donors, and other organizations. Its official task is the generation and transfer of information, on all aspects of water supply and sanitation regarding rural and urban fringe areas in developing countries.

For the externally funded demonstration projects 1983 has been a year of encouraging results. The project on Slow Sand Filtration (SSF) is in its third and final phase, the active promotion of knowledge and experience gained in the first two phases. During the year, six countries, Kenya, Sudan, India, Thailand, Colombia, and Jamaica, held seminars for this purpose. This project has not only been successful in demonstrating the suitability for and effectiveness of SSF in rural areas, but also in demonstrating the need for community involvement in water supply programmes. The Netherlands Minister for Development Cooperation has provided funds to extend the project for a further six months, until June 1984.

The experience gained with the SSF project has been invaluable for IRC's second demonstration project on Public Standpost Water Supply Systems. In 1983, the first full year of operation, good progress was made with a range of activities at the selected demonstration sites in Indonesia and Sri Lanka. In Malawi and Zambia, sites have been identified and local project management committees set up.

Considerable progress was made in the IRC supported project in Tanzania on development of a national policy for community participation in its rural water supply programme. An inter-ministerial meeting with donor agencies resulted in policy recommendations to the Tanzanian Government and an agreement that the Ministry of Water and Energy (MAJI) and the Prime Minister's Office would prepare a cabinet paper in support of community participation. Donor agencies are considering ways of integrating community participation in their ongoing projects.

In the second phase of the Decade-linked Programme on Exchange and Transfer of

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In the second phase of the Decade-linked Programme on Exchange and Transfer of

Information (POETRI) much attention was given in 1983 to the development of proposals for external support for focal point development in specific countries. The concept of POETRI was endorsed at the Second Task Force Meeting on Information Exchange held at WHO, Geneva in March 1983. It was also agreed that as funding for this project, apart from the central POETRI budget provided by the Dutch Government, has not materialized as envisaged, support is required from the UN Steering Committee for the Decade and its member organizations, and also bilateral funding for country programmes and regional activities.

During 1983, IRC produced a considerable number of new publications and received a record number of requests; a total of 5,200 copies of these publications were distributed during the year. The Documentation Unit completed the reclassification of 7,000 specialized documents, thus making IRC's specialized holding on community water supply and sanitation in developing countries more accessible.

In spite of the unfavourable economic climate in 1983, IRC was able to develop several new projects with funding from outside sources. UNICEF provided funds for a summer course on the evaluation of community water supply and sanitation held in Amsterdam in June/July 1983 and the follow-up production of 11 course modules. An evaluation study in Togo, to advise on the development of community education and participation in relation to decentralized maintenance systems, was carried out with financial support from the European Economic Community through the European Development Fund. A Technical Services Agreement was concluded with WHO for the preparation of a guidance document for the training of community motivators. The Netherlands Ministry for Housing, Physical Planning and Environment granted funds for the preparation of a publication on alternative energy source utilization in drinking water supply application, which commenced in the last quarter of 1983.

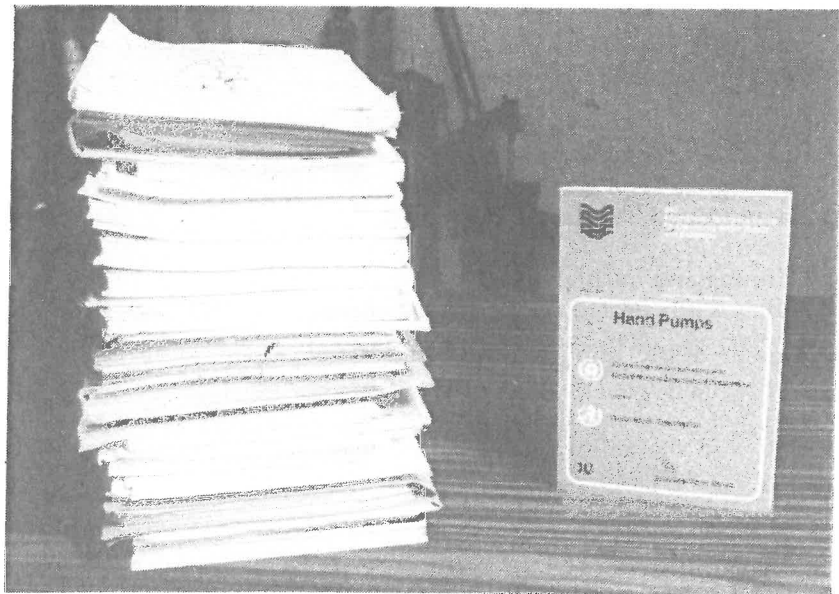
In Chapter II, detailed information is given on the various projects and activities for information generation and transfer. Additional proposals for projects, for which the preparatory work has been carried out and for which additional funding is required, are outlined in Chapter III. Organizational aspects of IRC are reported in Chapter IV, and the Programme Plan 1984, as approved by Governing Board October 1983, is outlined in Chapter V.

II. INFORMATION GENERATION AND TRANSFER

All information activities of IRC are a combination of generation and transfer of information on key community water supply and sanitation issues. This work is based on a dynamic process of acquiring, storing and making accessible, analysing and repackaging information from various sources. This information is transferred tailor-made to various user groups through four strategies: publications; training courses and seminars; demonstration projects; and advisory services (see Annex 5).

1. INFORMATION EXCHANGE AND DISSEMINATION

Increased but selective acquisition of documents, improved storage and retrieval techniques have contributed to better repackaging and condensing of information products in 1983. This in turn has led to wider dissemination of products, such as publications, the IRC Newsletter and bibliographies and reference lists to IRC's general network of 5,000 clients, including contacts in the POETRI-network. At the same time documentation tools, such as, a thesaurus of selected terms in water supply and sanitation and a glossary of terms as developed under POETRI, have increased access to IRC's present holding of 7,000 documents.



1.1. Information services

Information condensing and repackaging activities in 1983 resulted in an increase in the number of publications. (For a list of IRC publications, see Annex 1.) Additions in 1983 to the IRC Technical Paper Series include:

- * French translation of the POETRI Reference Manual Volume I TP16 (F) (500 copies)
- * Groundwater Primer, published jointly with the Netherlands National Institute for Water Supply, firstly as occasional paper (300 copies) and later as TP21 (1,000 copies)
- * Third reprint of Handpumps TP10 (600 copies)
- * Small Community Water Supplies TP18, enlarged edition, published jointly with John Wiley and Sons (1,000 hardback copies for John Wiley and 750 paperbacks for IRC) (This book is becoming a best seller; in two years the first printing of 3,000 copies has been distributed)
- * Alimentation en eau des petites collectivités, (1,000 copies), (TP18F), a French translation of TP18 by the Centre de Formation Internationale à la Gestion des Ressources en Eau (CEFIGRE).

Two joint publications were produced during the year:

- * The French version of the American Water Works Association (AWWA) manual: *Procédures Simplifiées par l'Examen de l'Eau*, a joint venture with WHO and AWWA (750 copies)
- * Experience from the Buba Tombali water project in Guinea-Bissau; published jointly with Netherlands Directorate General of Development Cooperation (1,000 copies).

One title was added to the Bulletin Series:

- * Proceedings of the Seminar on Slow Sand Filtration and Community Participation, Bulletin 18; produced in Spanish in collaboration with the Instituto Nacional de Salud in Colombia (750 copies).

Productions in the Occasional Paper series included:

- * Guidelines for Operation and Maintenance of Slow Sand Filters in Rural Areas of Developing Countries and an accompanying guide for trainers (350 copies).
- * An annotated translation of the manuals for community participation in use at the Instituto Nacional de Salud, Colombia, the Colombian Field Manuals (300 copies)
- * Planning and Evaluation for Community Water Supply and Sanitation: a literature review with selected and annotated bibliography (450 copies).

A number of IRC publications and selected "classic" publications donated by several agencies, have been put together to form the Standard Basic Library. This is a set of 40 of the most relevant books, manuals and monographs on key subject areas in water supply and sanitation, and is distributed through the POETRI channels to its focal points.

In 1983 an increased number of requests for publications, resulted in a record distribution of 5,400 IRC publications. An increased number of bulk orders was received from universities throughout the world for use in training courses for

students from developing countries. International agencies, such as, WHO, UNICEF, and US Peace Corps, have ordered bulk supplies at discount rates for their field offices in developing countries.

The IRC newsletter continued to offer information support to the Drinking Water and Sanitation Decade. In 1983, eleven IRC newsletters (4,000 copies per issue) in English and French were produced, with special coverage of the funding situation of major donor agencies in water supply and sanitation. Items from the newsletter appeared regularly in Spanish in "Noticias", the journal of Centro Panamericano de Ingenieria Sanitaria y Ciencias del Ambiente (CEPIS) in Latin America, items were also adopted by the Indian World Water Journal. The appearance of the IRC newsletter was improved with the addition of an illustration on the front page.

As a follow-up to the recommendations of the POETRI Technical meeting prior to the Task Force meeting on information exchange in March (see POETRI), IRC prepared a quantitative content analysis of nine periodicals relevant to developing countries and the Water Decade. Initial results indicated that the IRC Newsletter covers a wide range of subjects, giving more attention to software-oriented community participation and human resources development. In 1983, the panel of Experts on Environmental Management for Vector Control (PEEM) contracted IRC to produce four issues of their newsletter. This quarterly newsletter is distributed by the PEEM Secretariat at WHO, Geneva. During 1983, its circulation was doubled to 4,000.

In 1983, the last 2,500 of the total 7,000 documents in the Documentation Unit were reclassified, thus making the IRC specialized holdings on community water supply and sanitation in and for developing countries more accessible. Although this reclassification has been time-consuming it has facilitated access to the documents and enabled staff to provide better services, including improved request handling and preparation of bibliographies. During the year more than 1,400 publications and documents were added to the holding, many of which are "grey" literature with limited circulation.

The Documentation Unit produced a range of materials mainly for internal use but also for a selected external use:

- * A draft glossary of terms based on the IRC thesaurus was produced in the context of the POETRI programme and has been circulated for external review.
- * An inventory of the 240 periodicals held by IRC has been undertaken, and also reference lists for the 20 countries in which IRC-assisted projects are concentrated. During 1983, the Documentation Unit produced in total 37 reference lists, 40 current awareness bulletins, and 7 accession lists.
- * A draft bibliography on public standpost water supplies was prepared on the basis of earlier work done by WEDC Group, University of Technology, Loughborough UK for the Public Standpost Water Supply Project.

For public relation activities in 1983 a number of exhibitions were produced depicting the work of IRC. These included slide presentations on the Water Decade and the role of IRC and POETRI to audiences in India, in Bombay in January and Nagpur in June. IRC and WRC jointly presented a display on SSF at the World Water '83 Exhibition held in London in July. Material on SSF and handpumps was displayed at the Appropriate Technology Exhibition, held at the Royal Tropical Institute in Amsterdam for six weeks in May-June.

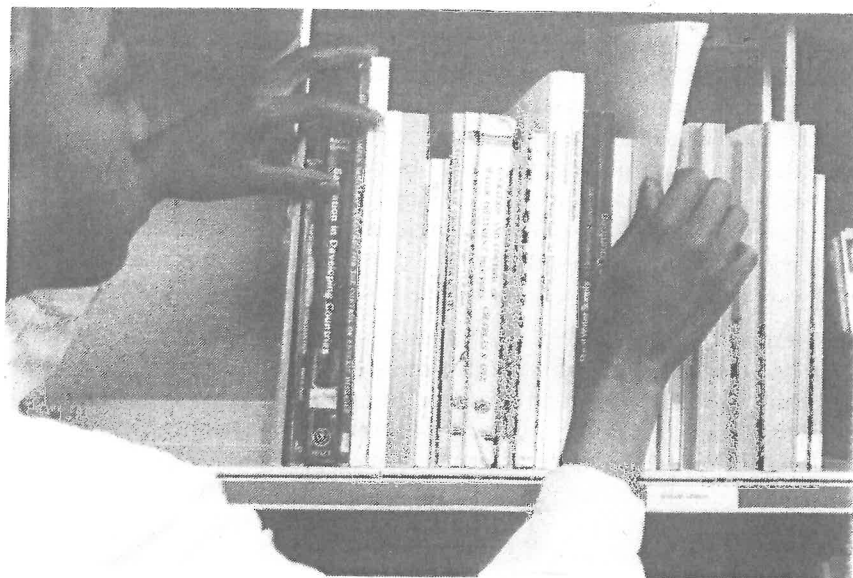
During his visit to IRC in October, The Netherlands Minister for Housing, Physical Planning and Environment Protection, Mr. Pieter Winsemius was presented with a mobile display of 15 enlarged black and white photographs on the challenge of the Water Decade and the role of IRC.

Other presentations on IRC activities included those at:

- The Annual Convention of Indian Water Works Association held in Bombay;
- Meeting of International Donors in Kinshasa, Zaire;
- Second Task Force Meeting on Information Exchange, held at WHO, Geneva;
- Water Decade Media Encounter in Copenhagen;
- Meeting of Committee on Developing Countries of the International Water Supply Association, Brussels;
- Panel on the Role of Hydrology in the Decade, The Hague;
- Seminar organized by Norwegian Committee for Hydrology, in Bolkesjo;
- Meeting of Finnida, University of Helsinki and Finish consultancy firms, in Helsinki;
- Fourth Asian Pacific Regional Water Supply Conference, Jakarta;
- Tampere Technical University, post-graduate course, Tampere, Finland;
- WHO International Course in Sanitary Engineering at the Institute for Hydraulic and Environmental Engineering, Delft, the Netherlands;
- Seminar on Electro-Chemical Engineering, held in Erlangen, Federal Republic of Germany.

1.2. POETRI

Using IRC's information base and network of contacts the Programme on Exchange and Transfer of Information (POETRI) supports institutions in developing countries to collect, process and distribute technological information on water and sanitation to meet the needs of professional staff in the field. This programme is an initiative developed in cooperation with WHO within the context of the International Drinking Water Supply and Sanitation Decade. It is also designed to provide a framework within which institutions in developing countries, international agencies and non-governmental agencies, can pool resources for effective information exchange and dissemination to improve water supply and sanitation programmes. In 1983, IRC's role as a central clearing house was developed further, through the active dissemination of information products and the provision of professional tools for the methodology of information dissemination. Special attention was given to further development of a



network of selected country-based institutions to serve as focal points. Funds for the second phase of POETRI (Dfl. 825,000)*, from March 1983 to February 1985, were made available by the Netherlands Minister for Development Cooperation. Together with IRC's contribution in kind, this covers almost 50% of required funding for the central management and clearing house functions of IRC and activities to establish the network of cooperating institutions at field level.

The dissemination of information products in POETRI included distribution of the Standard Basic Library to 20 participating institutions and a wider distribution of the POETRI Reference Manual in an English and also French translation. From the general information service POETRI was supported by the IRC Newsletter which carried special features on a number of occasions.

Limited request handling services were provided to POETRI users. A general brochure explaining what POETRI can do for users in the field (in English and French) was mailed to a wide audience, including the Newsletter readers.

The further development of information tools in 1983, included the French translation of the POETRI Reference Manual which was completed and distributed, and the first draft of the Glossary of Terms to go with the Intermediate Thesaurus of Selected Terms in Water Supply and Sanitation. These tools provide the basic vocabulary for indexing, storage and retrieval of documents in small information centres and facilitates cooperation between these centres. The Thesaurus of Selected Terms was improved

*) 1 US dollar = Dfl. 2,85 (average exchange rate 1983)

and a draft of a companion glossary of about 900 terms was prepared, and distributed for review. Another tool which facilitates cooperation is the Directory of Sources of Information on Water Supply and Sanitation. In August, work began to update and revise this Directory. Questionnaires together with copies of the Directory were sent to approximately 200 institutions listed in the Directory and a further 130 not listed. The first draft of a training manual for professional staff in national focal points was prepared. This manual includes training components for conducting inventories, assessment of user needs, ways to plan programmes to solve identified problems. The draft is now being reviewed externally and will then be revised and tested in the field at one of the focal points.

Assistance to institutions in developing countries in the preparation of project proposals for the establishment of national focal points was an essential part of POETRI activities in 1983. In spite of slowed down progress, due to prolonged sick leave of the project manager, support was, nevertheless given to the preparation of 13 proposals for national information systems and services, IRC also assisted efforts by institutions concerned to attract external funding. These countries include: Argentina, Colombia, Costa Rica, Guatemala, India, Indonesia, Jamaica, Kenya, Niger, Peru, Sri Lanka, Thailand and Upper Volta.

At the combined National Seminar on Slow Sand Filtration, Health Education and Information Support held in Nagpur in June, POETRI was presented to a broad audience of Chief Public Health Engineers of the Indian States. It was agreed that the draft proposal presented for the introduction of POETRI should be adapted to the needs of the individual states of India.

As follow-up to the 1982 regional workshop in Ouagadougou Upper Volta, POETRI funded and participated in an identification mission to eight selected countries in the West and Central Africa, which was conducted by Centre Inter Africain d'Etudes Hydrauliques (CIEH). For Benin, Cameroon, Congo, Ivory Coast, Niger, Senegal, Togo, and Upper Volta, this resulted in pre-proposal reports, setting out the actual situation in the envisaged national focal points for information service centres in each country and also requirements and budgets for the information dissemination. As a result, Niger and Upper Volta prepared detailed proposals for the establishment of focal points in their countries.

An agreement was made with CEPIS to use their well-established REPIDISCA-network to continue the introduction of POETRI into Latin-America, thus offering an additional community water supply component. Arrangements were worked out to send POETRI materials, such as, the standard basic library, the thesaurus, and brochures in bulk to CEPIS for distribution throughout the Latin American region. Proposals for further development of combined REPIDISCA/POETRI focal points in Argentina, Colombia, Costa Rica, Guatemala and Peru are now being considered for funding. In addition, a new proposal for the establishment of POETRI in Jamaica has been prepared.

In March 1983, IRC organized and hosted a technical meeting of specialists from information institutions participating in POETRI to discuss a number of technical information exchange issues in preparation for the Second Task Force Meeting on technical information exchange held in Geneva. Participants in the IRC meeting included representatives from: CIEH in Ouagadougou, Upper Volta; CEPIS in Lima, Peru; the Environmental Sanitation Information Centre (ENSIC) in Bangkok, Thailand; the Water Research Centre (WRC), in London; and the Water and Sanitation for Health Project (WASH), at Arlington, USA. As a result, a set of conclusions and recommendations on cooperation was submitted to the Geneva Task Force Meeting. Apart from general recommendations on journals, the standard basic library, and cost recovery of information exchange, IRC was requested specifically:

- * to take the initiative in carrying out an analysis of the subject coverage of existing periodicals and clientele needs (see Section 1.2.);
- * to take the lead in facilitating compatibility in cataloging;
- * to facilitate data base sharing and expansion;
- * to monitor the development of microcomputer technology.

Agreement was also reached on the need to integrate the IRC thesaurus with other such works to produce a multilingual, English, French, and Spanish thesaurus for community water supply and sanitation.

The value of POETRI was endorsed at the Geneva Task Force Meeting. The role of existing national action committees in developing countries in determining information needs and analysing of information was stressed and close cooperation with POETRI was encouraged. However, it became clear that without further support from the Steering Committee for Cooperative Action for the International Drinking Water Supply and Sanitation Decade (IDWSSD) and its member organizations, POETRI would only be able to operate in a limited number of countries. Since funding for the project had not materialized as expected, and central funds to build up dissemination activities at country level are limited, the meeting felt that country proposals for POETRI should attract bilateral funding.

2. TECHNOLOGY

2.1. Slow Sand Filtration

This project, which was initiated in 1976, continued through 1983 in its third phase, focusing on the dissemination of knowledge and experience gained in the first two phases. In the first phase, research was carried out on the slow sand filtration (SSF) process and in the second, SSF was tested at the village level in five developing countries. Demonstration plants have shown that the process is simple and reliable, very suitable for application in rural areas, and often cheaper than other treatment systems. In the demonstration villages, an integrated approach was followed involving the community in implementing the scheme and in health education programmes to increase both the community commitment to and the impact of the water supply. During 1983, six seminars were organized in the five participating countries: Kenya, Sudan, India, Thailand, and Jamaica.

India

In April, a workshop in preparation for the June seminar recommended greater interaction between engineering and health departments. Economic analysis carried out by the National Environmental Engineering Research Institute (NEERI) has shown that SSF plants are cost effective in India for communities of up to 120,000 people. A combined SSF and community education and participation and information support seminar was held in Nagpur in June. These meetings did much to stimulate interest in and to promote the use of SSF in this vast country, which has at least 20,000 villages relying on surface water supply.

Thailand

The seminar held in Kon Kaen, which was organized by the Provincial Waterworks Authority (PWA), was attended by 80 people. An evaluation of 41 SSF plants prior to the seminar showed that most are operational, however, improvements are required, particularly in the training of caretakers. Equipment for safety chlorination of water in the distribution system was not operating in all of these plants. This makes the application of SSF even more important as it still provides a safety barrier against disease carrying organisms, which other treatment methods do not.

Jamaica

In September, the regional SSF seminar held in Jamaica attracted the Ministers of Health and Public Utilities and 60 professional staff from both ministries, the Pan American Health Organization (PAHO), UNICEF, World Bank, Caribbean Development Bank, and the Inter-American Development Bank. The large number of participants and observers underlined the increasing interest in SSF. As a follow-up, UNICEF Country Programme in Haiti has undertaken to explore the feasibility of constructing a SSF pilot plant using gravity flow. Evaluation of the four existing plants in Jamaica has

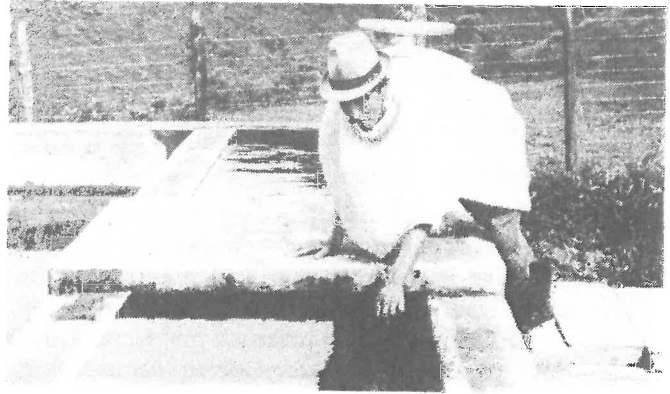
revealed that the need to train caretakers is urgent.

Sudan

In October, a five-day seminar was organized and attended by 35 professional staff, at least half of whom came from the region. Eleven existing SSF plants were evaluated and most were found not to be operating well because of high seasonal turbidity, inadequate operation and maintenance procedures, and untrained caretakers.

Kenya

The three-day seminar held in Nairobi was organized by the Ministry of Health and attended by 50 participants, including representatives from various ministries, firms of consulting engineers and non-governmental organizations. The need for a SSF plant in the vicinity of Nairobi was recognized and it was agreed to investigate the feasibility of rehabilitating an existing plant for demonstration purposes.



Colombia

As follow-up to the SSF seminar held in Colombia in 1982, staff of the Universidad de la Valle have designed a SSF plant for Chorro del Plata, a small suburb of the city of Cali. The University has expressed interest in IRC support to develop a monitoring programme for this plant which is planned to serve a community of 1,200. Information on SSF has now been incorporated in the training programmes of the Universidad de los Andes and the Universidad de la Valle. The Instituto Nacional de Salud (INAS) and IRC jointly evaluated the Alto de los Idolos demonstration projects and the data obtained are being used to complete the health impact study. Preliminary data from a study carried out in Alto de los Idolos indicate that downflow filtration is more effective than upflow filtration.

Publications

Early in 1983, guidelines for operation and maintenance of SSF plants were produced, and distributed together with a manual for trainers. Draft translations in Spanish, Thai

and Arabic have been prepared by participating institutions in the project countries. In collaboration with the Instituto Nacional de Salud, the proceedings of the 1982 seminar in Neiva were produced and printed as IRC Bulletin 18. Operation and maintenance experience, including a special WHO review, will be incorporated in the revision of the SSF Design and Construction Manual, the ground work for which was carried out in 1983.

Other activities

Preliminary drafts have been completed of a literature survey of pretreatment methods and simple field tests for turbidity and filterability. A start has been made on simple methods to calculate the cost of SSF plants.

2.2. Public Standpost Water Supplies

IRC's newest integrated demonstration project on public standpost water supplies (PSWS) was well established in 1983. For many people in developing countries, public standpost will be the most feasible water supply for some time to come. This is especially so in rural areas where scattered population makes house connections particularly expensive, and in poorer urban areas where little revenue is generated to pay for public services. In general, water supply via public standposts is appropriate where funds for investment are severely limited.

IRC has been granted funds (just over Dfl. 2 million *) from the Netherlands Ministry of Development Cooperation for a demonstration project to run until the end of 1985. The project includes demonstration activities by national organizations in Indonesia, Malawi, Sri Lanka, and Zambia. The aim of the project is to develop strategies, methods, and techniques to improve planning, implementation, and management of community water supply systems which include standposts. The methodology promotes the active participation of the local community in all stages of the project and application of the knowledge generated in future large-scale investment projects. Demonstration projects are being set up by national counterpart staff at selected sites in rural and urban fringe areas in the participating countries, with special attention being given to the integration of technical, organizational, economic and socio-cultural aspects. During 1983, the rate of progress and orientation of the project varied in the four participating countries.

Indonesia

Good progress is being made, demonstration sites have been selected at Cikijing/Jagasiri, Playangan and Kesenden/Kampung Melati in West Java, and a further two sites are to be selected. At the workshop in March to evaluate experience on PSWS in Indonesia, recommendations were made on basic sanitation education and commu-

*) 1 US dollar = Dfl. 2,85 (average exchange rate 1983)

nity participation, and also socio-economic and technical aspects. These have been submitted to Cipta Karya and may be taken up in the national water supply programme.

Within the project, reports were produced on the selected demonstration sites, the proposed participatory approach and the health education and training methodology to be used.

Sri Lanka

In 1983, preparatory work was undertaken for the first two demonstration schemes in the villages of Haldumullah and Padaviya. Additional sites are being sought, three in rural areas and two in urban resettlement areas. The proposed participatory approach is being developed for Haldumullah village in the wet zone. Action committees have been set up for health education and for water supply and sanitation, and a suitable contribution from each household for operation and maintenance costs has been agreed. With assistance from WHO, construction of 30 water-seal pit latrines has commenced at Haldumullah and the community has already dug 2,200 metres of trenches. An action committee has also been set up and preparatory work within the community begun. Construction costs are being met from local funding and a core fund from UNICEF for materials.

Malawi

Establishment of the project in Malawi has taken some time. Agreement has been reached to set up an interministerial working group for the project, to recruit a project officer, and the basis for a work plan and budget. UNDP/UNCDF/WHO assisted Urban Water Point Project is prepared to permit three or four of its sites to be used for the activities of public standpost water supply project.

Zambia

Progress has been made in getting the project underway. A full-time project manager has been appointed, and part-time technical support is planned. Demonstration sites have been confirmed at Mwachisompolaa, Chibombo, and Chongwe, and additional sites are being sought. The management committee meets regularly to promote the development of the project.

Other activities

During the year, IRC contracted consultants to prepare support material for the country projects, including:

- * Guidelines for Hygiene Education in Community Water Supply and Sanitation with emphasis on public standposts;
- * Guidelines on Community-Based Financial Management;
- * Update of Selected and Annotated Bibliography on Public Standpost Water Supplies.

2.3. Hand pumps

During 1983, IRC concentrated activities in its internally funded hand pump project on:

- information support to government agencies and international organizations in selection of suitable handpumps for rural water supply programmes;
- making available selected and practical information to improve design, testing, manufacture, installation and maintenance of handpumps.

Early in 1983 the Programme Officer, responsible for the project, completed a consultancy for USAID to evaluate handpump projects in Honduras, Dominican Republic, Sri Lanka, the Philippines, and Indonesia. Throughout the year, IRC continued to provide information support and advisory services to the UNDP/World Bank Project for Testing and Technology Development of Rural Water Supply Handpumps (INT/81/026).

The Hand Pumps Technical Paper no. 10 which was published under the sponsorship of UNEP and WHO in 1977, was reprinted for the third time in 1983. To date more than 3,200 copies in English, 2,000 in Spanish, and 600 in French have found their way to users, as a handbook for project staff in developing countries and field officers of international agencies, or as material for training courses. This basic publication covers mainly technological aspects of the handpumps. During 1983, an extensive study was carried out of the organization of maintenance systems; and the results consolidated in the draft document entitled: A Practical Hand pump Maintenance System. The draft was externally reviewed, and with special input from WHO was in the final stage of publication by the end of the year.

During the year, IRC processed approximately 100 specialized information requests from project staff and field officers working on handpump programmes throughout the world.

2.4. Modular Designs

As standard designs and modular learning materials are valuable tools in the training of technicians and community workers, IRC has been involved in a project to stimulate their use in the construction of simple water supplies for rural communities. Following an earlier IRC study in cooperation with the Government of Indonesia to design a water purification plant for standard use, prototype plants were constructed in Bekasi from concrete and Rengasdengklok from steel. Comparative performance studies of these plants, which were put into operation in 1983, have shown that they are operating effectively. Additional plants will be constructed in Indonesia. An external evaluation study of a scaled down version for the national subdistrict towns programme, however, has recommended that training of local operators be improved.

The Indonesian experience using a modular approach in planning water supply schemes was promoted by IRC at the Fourth Asia Pacific Regional Water Supply

Conference in Jakarta in November. As a result of this meeting the theme of which was "Mass Provision of Water Supply Facilities in Developing Countries", Peru and Colombia have expressed a need for tested material used in other parts of the world.



2.5. Drinking Water Quality

In February 1983, IRC started an internally funded project to promote local preparation of disinfectant for small-scale water supplies. On-site hypochlorite generation in developing countries can assist in maintaining the microbiological quality of drinking water at an acceptable level. The US-based National Sanitation Foundation is collaborating in this study. On the basis of reactions of manufacturers of hypochlorite generators a preliminary inventory of processes, techniques and equipment has been prepared. To date, Thailand, Indonesia, Malaysia, Costa Rica, Colombia and Sudan have indicated interest in participation. The UN Financing System for Science and Technology for Development has indicated interest in providing funds for the IRC proposal for a programme to monitor and test hypochlorite generators with the ultimate aim of producing guidelines for local manufacture.

Presentations on the study were given in Lima, Peru and also in Erlangen, Federal Republic of Germany. At a regional seminar on disinfection held at CEPIS in Lima in July 1983, on-site preparation of hypochlorite was introduced. The inter-university project at the Bandung Institute of Technology in Indonesia, which was supported by IRC and funded by the Netherlands Government, resulted in 1983 in a prototype of a simplified unit for hypochlorite generation. A number of units will be produced for field testing under local conditions. Contracts have been signed for preparation of supporting documents for use within the project: one on a laboratory set-up for electrolytic hypochlorite generation by Bandung Institute of Technology in Indonesia, and the other on the state-of-the-art on electrodes and electrode materials for on-site generation of disinfectants by Technical University, Munich. Work on review and expansion of the draft Disinfection Manual continued.

Preliminary work on simple disinfection equipment was started in collaboration with the Delft University of Technology.

2.6. Kampong Improvement Programme

The Kampong Improvement Programme (KIP) for the cities of Bogor, Tangerang, Bekasi and Cirebon in West Java, Indonesia resulted from an agreement made in 1977 between the governments of Indonesia and the Netherlands. The Netherlands Government agreed to provide a low interest loan and also technical assistance. The project which started in 1979 will terminate in 1984. It aims to improve the physical environment of low-income, high-density urban areas (kampongs), in particular, it aims to improve access, mainly footpaths and footbridges; drainage; water supply; and sanitation, disposal of human waste and garbage.

In 1983, attention was given to the construction of a large number of small multipurpose sanitary units, each to serve five to seven households. These units consist of a latrine, provision for bathing, either a tap or a handpump, and a paved area for washing clothes and kitchen utensils. The Indonesian and Dutch consultants cooperating within the Technical Assistance Team have finalized planning and design manuals for use by Indonesian municipal engineers for kampong improvement in other cities.

Since the start of the project, a member of IRC staff has acted as evaluator/supervisor. His duties include formal reporting on progress to the Netherlands Ministry of Foreign Affairs and also advising on matters concerning implementation, selection of appropriate technologies, funding, and transfer of knowledge.

2.7. Rain-water Harvesting

IRC-involvement in the UNDP-sponsored project on rain-water harvesting included the development of a consolidated information base on rain-water harvesting for drinking water supply. Joint work with a consultant resulted in an improved design methodology for rain-water harvesting systems for drinking water supply.

2.8. Alternative Energy Sources for Water Pumping

In October IRC began a short-term project on Alternative Energy Source Utilization in Drinking Water Supply Application, focusing on pumping of water in rural water supply schemes. Funds for this project have been granted by the Netherlands Ministry for Housing, Physical Planning and Environmental Protection. The project aims to collect available information on alternative energy sources for water pumping systems, for example, solar energy, windpower, hydropower, and biogas. Consultants have been engaged to produce source materials, and by the end of 1983, this material had been compiled in a draft manual which is now being reviewed externally.

Information exchange arrangements have been made to strengthen the IRC information base on this topic with the Tata Energy Research Institute in Bombay, India, the Renewable Energy Resources Information Centre in Bangkok, Thailand, IT Power Ltd., United Kingdom and various development and appropriate technology groups in the Netherlands.

3. HUMAN RESOURCES DEVELOPMENT

For the Human Resources Development (HRD) programme, 1983 was a year of transition. The Manpower Development Programme in Indonesia came to an end, and the team of water supply specialists, which evaluated the National Training Delivery Systems project in Sri Lanka recommended that support to training activities in Sri Lanka and Tanzania be continued.

3.1. Manpower Development Programme Indonesia

Since 1980, the IRC Advisory Team in Indonesia has provided assistance for the development of a Manpower Development Unit within the Directorate of Sanitary Engineering in the Ministry of Public Works, and for the establishment of regional training centres for water supply and sanitation in six provincial capitals. The team has also provided advisory support and training for the staff of these centres, and in February 1983, it issued a forecast for manpower and training requirements up until 1990.

IRC's involvement in MDP in Indonesia has provided the impetus intended. It has helped to introduce new approaches. It has contributed to the promotion of greater awareness of the need to include manpower development in the manager's responsibilities. As the programme is moving from the pioneering stage to a period of mass production involving the training of thousands of water agency personnel, IRC's involvement ended formally on 30 April 1983.



3.2. Development of National Training Delivery Systems

This multicountry project, which was started in 1979, aimed to support the development of sectoral training and delivery systems in the eastern Caribbean, Tanzania, and Sri Lanka. This included assistance in accessing manpower and training needs, in training of training staff, in developing curricula and training materials, in evaluating and in exchanging experience gained.

During 1983, the project was evaluated, and it was recommended that it be continued and that the remaining funds be used to support decentralized training programmes in Sri Lanka and Tanzania. It was also recommended that a technical paper be prepared on training of trainers in water supply and sanitation. On the basis of the project manager's visit to Sri Lanka in March and the report of the Decade meeting held in Colombo in November, a proposal for decentralized training programmes, with emphasis on rural water supply in Sri Lanka has been prepared and submitted to the Netherlands minister for Development Corporation for funding.

During 1983, a number of countries were selected as most likely locations for NTDS projects. A project proposal has been prepared in which Niger and Upper Volta have shown interest.

IRC decided to allocate internal funds for the preparation of a training manual for trainers. In December, a visiting consultant prepared an outline of the manual for target groups, which include supervisors, overseers, and foremen.

As a follow-up to the first phase of the NTDS project, two consultants have been appointed to prepare a number of case histories to illustrate aspects of human resources development. These will be made available as material for workshops on HRD and will also serve as a supplement to handbooks on human resources development.

4. COMMUNITY EDUCATION AND PARTICIPATION

Community participation can help to overcome problems of maintenance and break-down, and improper use of facilities, and also to ensure facilities meet community needs. Promotion and development of a CEP component in rural water supply programmes in a number of countries was given priority in 1983.

4.1: CEP-Tanzania

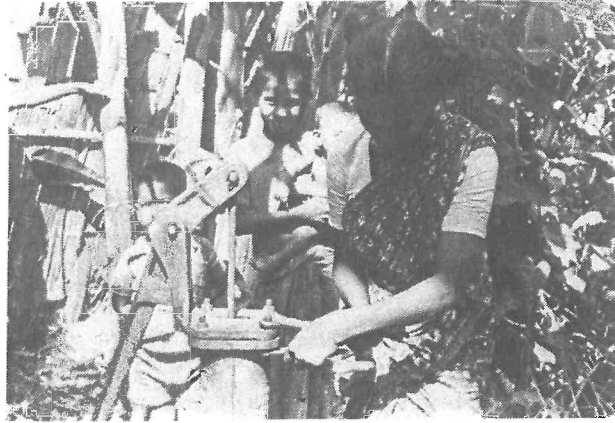
In Tanzania, IRC is supporting the Prime Minister's Office (PMO) and the national water supply agency MAJI in developing a CEP component in the national rural water supply programme.

A preliminary report has been produced by PMO/IRC identifying problems and making recommendations to counter them. As part of this project a range of materials on CEP has been developed and field-tested including a draft manual on participation procedures in handpump well projects in cooperation with DANIDA in development of a manual for piped water supplies. In addition, a training manual for village caretakers on understanding and improving village hygiene has been produced in English and Kiswahili. The Tanzanian project manager assigned to PMO prepared a cabinet paper on the potential role of community participation in the rural water supply and sanitation programme.

In December 1983, an interministerial meeting organized by PMO resulted in a recommendation that PMO and MAJI together prepare guidelines for a policy announcement on community participation in rural water supply by the Tanzanian Government. At the meeting, specific recommendations were made on project allocation, community involvement in planning, construction and maintenance, ownership of supply systems, local management and government support at district and regional levels, participatory health education and sanitation. Representatives from NORAD, DANIDA, FINNIDA, UNICEF, DGIS, and Australian Regional Projects participated in the meeting. Efforts are being made to reach agreement on cost sharing for the development of the CEP support programme, its integration into various regional projects, and also for the coordination and evaluation of these programmes. This may also serve as a push towards greater standardization of material and equipment in domestic water supply in Tanzania. DANIDA has reacted favourably to the PMO proposal for a short and specific training project to enable community development staff to organize community participation and health education.

4.2. CEP-Multicountry

After consultation with the Division of Development of the European Economic Community, project proposals have been prepared for eight countries in Africa. In 1983, implementation of these projects was discussed with national authorities in



Cameroun, Kenya, Malawi, Zambia and Zimbabwe. Various donors have shown interest in supporting this vital component of national water supply and sanitation programmes. To date, the project has been funded from IRC core budget.

4.3. Other activities and publications

In the last quarter of 1983, a Technical Services Agreement was signed between WHO and IRC (US \$ 10,000) to prepare the "Guidance Document for the Training of Community Motivators". Consultants have been contracted to prepare a draft document, which will be reviewed in close cooperation with WHO.

During 1983, a start has been made with the preparation of a literature review and a selected and annotated bibliography on the role of women in community water supply and sanitation. This is being done at the request of UNDP in the context of its project on "Promotion and Support for Women's Participation in the IDWSS Decade" (INT/83/003). A mail survey has been organized to obtain material.

A third document initiated in 1983 was de draft guidelines for a publication on hygiene. Although primarily to serve PSWS Demonstration Project, it will also be used in the CEP projects after it has been field tested.

IRC and Water and Sanitation for Health Project (WASH) have produced the Directory of Organizations involved in Community Education and Participation in Water Supply and Sanitation, comprising data on 124 organizations in 56 countries. Distribution of 2,000 copies of the directory is the first step in the establishment of an active information exchange network on CEP related activities. Another community participation publication which appeared in the IRC Occasional Paper Series is the Colombian Field Manual. The English translation of this manual has made this interesting experience in Latin America available elsewhere in the world. At the end of the year the responsibility for the further development of CEP programme was transferred from Mr Enric Hessing to Mr Jan Teun Visscher.

5. PROGRAMME EVALUATION AND PLANNING

Evaluation of experience has been identified as being essential for improved performance in water supply and sanitation projects. During 1983, IRC provided information support input in various evaluation missions workshops, using the evaluation methodology developed during the year. Major elements included pre-mission reports, selection of indicators, drafting of protocol, selecting of evaluators, corrective action alternatives, direct feedback to project and follow-up.

Three missions were organized during 1983. Early in the year, IRC evaluated the water supply project "Volta Noire" being sponsored by the Netherlands Government. The mission recommended that the CEP component be strengthened, further improvement be made to handpump design, the feasibility of local manufacture be investigated, and project implementation be centralized.

IRC was involved in a joint mission to Colombia to evaluate water and sanitation and also CEP components of the integrated rural development project Convenio Colombo-Hollandes, being funded by the Netherlands Government. It was concluded that the project is carrying out very successfully experimental and demonstration work, particularly in appropriate water technology. It was also recommended that experiments in sanitation be developed.

In the last six weeks of 1983, an IRC mission went to Togo for the Commission of European Communities to evaluate the maintenance system and the methods applied to promote users involvement in the "Programme d'Hydraulique Villageoise". The mission recommended that a decentralized maintenance system be developed, specific CEP programme be incorporated, and a coherent training programme be developed.

IRC made considerable input into the preparation, organization, and follow-up of the three-week summer course on Evaluation of Drinking Water and Sanitation Projects, held in Amsterdam. This course was organized jointly by IRC, Royal Tropical Institute, WHO, UNICEF, and the Ross Institute of Tropical Hygiene, London School of Hygiene and Tropical Medicine. More than 40 participants from developing countries prepared protocols for evaluation studies in selected countries, based on the Minimal Evaluation Procedures developed by WHO. As a follow-up, the Royal Tropical Institute and IRC have prepared a draft set of 12 course modules for use in future workshops. After review, UNICEF will use these course materials for training field staff on evaluation.

The revised selected and annotated Bibliography, "Planning and Evaluation for Community Water Supply and Sanitation" was published as an IRC Occasional Paper. It contains a systematic review of selected literature.

The specialized information base on evaluation and planning at IRC was further

developed in 1983 with a list of key words and a draft glossary of terms. At the request of WHO, the draft Minimal Evaluation Procedures has been reviewed and included in IRC information-support supplied in bulk to the National Decade Workshops in Ethiopia and Somalia.

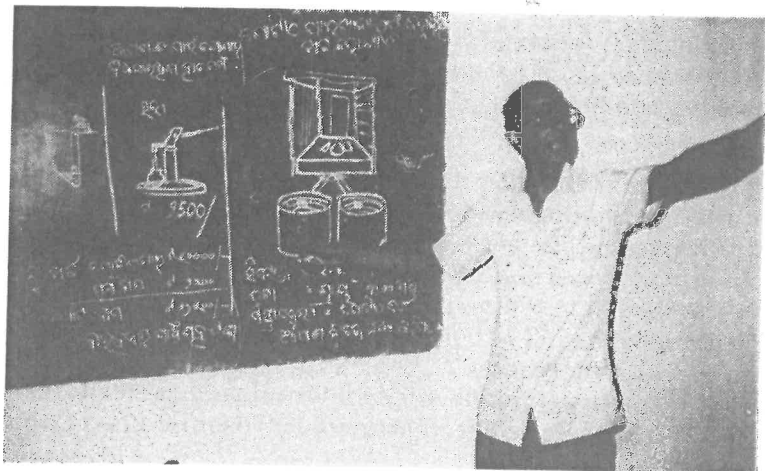
III. ADDITIONAL PROPOSALS FOR INFORMATION GENERATION AND TRANSFER

During 1983, internal funds were used for the development of various project proposals on the basis of which external support will be sought for the generation and transfer of information on additional key issues, especially on non-technical issues.

A proposal was submitted to the Netherlands Ministry for Housing, Physical Planning and Environmental Protection for the project entitled "Technical Information Support to Village Health Workers". Following the acceptance of the proposal a consultant has started to collect and condense information on simple options for village drinking water supply and sanitations at household level. This information will also be used in the revision of the earlier Occasional Paper "Low-Cost Sanitation Options" which began towards the end of the year. Internal IRC funding has been allocated for further improvement of the information in this manual in 1984.

Development of handpump maintenance systems was another area on which IRC concentrated its information support work. Project proposals for applied research to assist bilateral projects in Zambia, Kenya, Tanzania, Upper Volta, India, and Sri Lanka were developed.

Consultations continued with World Bank on possible involvement of IRC in the UNDP/World Bank project "Information and Training in low-Cost Water and Sanitation".



As follow-up to its SSF project, at the end of 1983 IRC began to develop a project on the basis of recommendations made at the various seminars on SSF held earlier in the year. training of caretakers, community involvement and health education programmes have been identified as aspects requiring follow-up. In Colombia and India, national institutions involved in the SSF project and also the Health Ministry in each country have expressed interest in participating in this project, when funds have been obtained.

On the basis of internal funding, development of an information base on community financial management has commenced, including charging policies, cross subsidies tariff structure, revenue collection, revolving funds and local administration. A mail survey has been organized to obtain material for a literature review and selected and annotated bibliography, and a start has been made to analyse "grey" literature on the subject.

IV. ORGANIZATION

1. Status and institutional arrangements

On the basis of an agreement made between WHO and the Netherlands Government, IRC was established on 19 December 1968. Consequently, to mark the 15th Anniversary of its establishment, it was decided in 1983 to hold a symposium on local community participation in support of the activities of the IDWSSD. This symposium, which will take place in 1984, is to give special emphasis to the role of the women.

In 1981, the beginning of the Decade, IRC was given the status of an independent non-profit organization. This allows for impartial and effective expenditure of project funds, and flexibility in executing projects. The international character of IRC is reflected in its Governing Board which comprises members from international organizations (UNDP, UNICEF, and World Bank, with an observer status of the WHO representative) and of representatives of the sponsoring Ministries of the Netherlands Government (Housing, Physical Planning and Environmental Protection, and Foreign Affairs/Development Cooperation). The members of the Governing Board are listed in Annex 2.

2. IRC's strategy

IRC is an information-oriented organization. Its main objective is to support the establishment, maintenance and use of water supply and sanitation facilities in developing countries. Its strategy is best defined as the generation and transfer of information: knowledge and experience; technology and methodology. Its activities are directed to programmes for water supply and sanitation in rural and urban fringe areas in developing countries. Primary target groups are government organizations in developing countries responsible for planning and implementation of water supply and sanitation programmes. They also include UN agencies, donor and non-government organizations, active in this area.

During 1983, IRC further expanded its information base, making knowledge and information accessible and available on a wide range of subjects in rural and urban fringe water supply and sanitation in developing countries. This concerns target and action-oriented information on technical, social, organizational and economic aspects, with special emphasis on innovative know-how. It is envisaged that in the years to come a full coverage will be built up. This information is tested by IRC and its partners in the field and repackaged so that it can be readily used. Where required, IRC refers requests for information available at other institutions. The information assembled is made available to the target groups through four information transfer strategies:

- exchange and dissemination of (written) information;
- training and education;
- advice and consultancy;
- demonstration.

The activities are carried out as projects. As much as possible activities are carried out and supported by staff in the countries concerned. In the spirit of Technical Cooperation among Developing Countries (TCDC), IRC aims to establish links between the countries with which it works. It also works closely with the UN-agencies involved in the Decade, it is a collaborating centre for WHO and works with UNDP and UNICEF, and also the World Bank. The support role of IRC to improve water supply and sanitation in developing countries, and a project matrix, are presented in Annexes 4 and 5.

3. Governing Board

The Governing Board met twice during the year, in April and in October. At the April meeting, discussion focussed on IRC's support role and projects and its applications for funds. At the October meeting, the Governing Board approved the proposed Medium-Term Plan 1984-1986, and the Annual Plan for 1984, which consists of 26 information generation and transfer projects activities (see Chapter V). The meeting decided to contact the Steering Committee for Cooperative Action of the International Drinking Water Supply and Sanitation Decade. This led to the decision to investigate means of maximizing IRC's contribution to the Decade. Further, it was decided that consideration should be given to changing the name of IRC so that it can be identified more readily with the activities of the Decade. During 1983, a dialogue was also started with WHO to define the relationship between WHO and IRC more clearly.

In October the Board met with the minister for Housing, Physical Planning and Environmental Protection of the Netherlands, Dr. P. Winsemius who paid a working visit to IRC.

Development of the IRC Advisory Council has not yet taken place. It is planned that it be international in membership with the major representation from developing countries; it is envisaged that the Council will assist IRC in the planning of its work.

4. Budget, Internal Organization and Staff

4.1. Budget

IRC operates with a core budget from the Netherlands Government. This is intended to be a generating budget which, through agreement with developing countries and the development and submission of project proposals to multilateral and bilateral donors should lead to extra-budgetary resources for specific information projects. In 1983, the core budget was Dfl. 1.5 million. IRC had an additional turnover of Dfl. 3,5 million which, in spite of the unfavourable economic situation worldwide and the increasing value of the US dollar against other currencies, was the same amount as in the preceding year.



It is envisaged that IRC, as an information-oriented agency of international scope and identity will gradually increase its funding from international sources. Since this direction was established only recently, this amounted to 3% of the total budget in 1983. Efforts will be made to increase this percentage in the coming years.

In total, six new project proposals were approved and submitted, three of which received funding from international donors and three from the Netherlands Government from bilateral funds.

4.2. Organizational Development

The organizational development survey which commenced at the time of the establishment of IRC as an independent foundation, was finalized in 1983. A clearly defined strategy, a more businesslike approach, development into a project organization, and establishment of a policy team, were the key recommendations, and have been implemented during the year.

The new strategy implied a gradual focusing of the work on the line as indicated in annex 5. This included systematic development of the IRC information base, which should lead ultimately to a complete coverage of issues relating to water supply and sanitation in rural and urban fringe areas. The new strategy has been favourably received. Further developments introduced to support the strategy were system planning and project generation, budget control and quality monitoring procedures. A three-year plan cycle through indicative medium-term plans, on which more specific annual plans are to be based, was initiated. Time registration and quarterly reports have contributed to improved operation, internally and externally.

Strengthening of project organization, refinement of internal coordination, communication and staff policy commenced. Other support tools, such as, files on country, institutions, donors and consultants have been improved. Within IRC, analysis of automation requirements has been finalized, and, at the end of the year a Philips multifunctional microcomputer for financial and project administration, documentation, address system and word processing was brought into operation. The financial administration and documentation units have made preparations for the transfer of their operations to the computer.

The policy team, which came into operation during the first quarter of 1983, has a coordinating role in policy preparation, planning and proposal development and is also responsible for quality control of IRC activities. Other activities in 1983 included new job descriptions for IRC staff, drafts of which were finalized at the end of the year.

4.3. Staff

In 1983, the total number of staff was 29, including 13 professional staff in sanitary engineering, social sciences, and human resources development; 6 information and documentation system specialists and 10 administrative staff (see Annex 3). External specialists were employed for specific assignments, as required.

V. PROGRAMME PLAN 1984

The expressed needs and requests of developing countries will continue to guide the activities of IRC in 1984. Priorities for action emerging from the Decade to which IRC contributes include:

- application of low-cost and maintainable technology;
- involvement of the community and the individual;
- the development of human resources at all levels;
- accessibility of existing knowledge and experience.

IRC will endeavour in 1984 to play its role in these areas in developing, popularizing, and transferring practical knowledge and experience to reduce present constraints to rural water supply and sanitation in developing countries. Two vital issues for IRC will be, what can be learned from experience gained in various countries to improve maintenance of water supply systems, and how can women be actively involved in the planning, execution, operation, maintenance and use of water supply and sanitation systems.

In cooperation with the Tanzanian government, alternative approaches and methods for community participation in the operation and maintenance of rural water supplies will be tested in the field in 1984. This will contribute to the development of a community participation component for the national rural water supply programme.

The Tanzanian experience will be of particular relevance to the IRC projects on the development of guidelines on community education and participation for general use. Publication of a guidance document for the training of community motivators in conjunction with WHO is planned in 1984. In the National Training Delivery Systems Project, publications are planned on training for trainers and also case studies on human resources development.

In 1984 IRC will pursue the combination of "software" and "hardware" components in its two village-level integrated demonstration projects. The SSF project has generated useful experience on design, construction, and operation and maintenance and also on community education and participation. In 1984 through various publications this experience will be shared with many. A complete revision of the Design and Construction Manual on SSF is planned. For the ongoing PSWS project, guidelines on organizational, economic, technical and socio-cultural aspects of public standpost supplies will be prepared in 1984.

In the Appropriate Technology area Information Exchange on Handpumps, one of IRC's longstanding interests, will be stepped up. A publication is planned for early 1984 on organization of handpump maintenance systems based on 11 case studies and a joint publication with International Development and Research Centre (IDRC) Canada, on handpumps is being planned for later in the year.

The output of these projects will also support POETRI. In 1984, POETRI will deliver information products and continue its work on information exchange guidance documents.

In the Programme Evaluation and Planning Project, an evaluation mission to Yemen for the Netherlands Government is being planned.

Other plans for information generation and transfer include environmental sanitation management, human resources development, and training materials. However, the extent to which IRC will be able to develop and share relevant knowledge on these activities in 1984 will depend on the availability of additional extra-budgetary resources. This is an area to which increased priority will be given in 1984.

ANNEX 1

LIST OF PUBLICATIONS

Technical papers

- Handpumps for Use in Drinking Water Supplies in Developing Countries, 1978 (TP 10)* **)
- Slow Sand Filtration for Community Water Supply in Developing Countries, A Design and Construction Manual, 1978 (TP11)* **)
- Participation and Education in Community Water Supply and Sanitation Programmes, A Literature Review, 2nd revised edition 1981 (TP12)
- Public Standpost Water Supplies, 1980 (TP13**)
- Public Standpost Water Supplies, A Design and Construction Manual, 1980 (TP14**)
- Evaluation for Village Water Supply Planning, 1980 (TP15)
- POETRI Reference Manual, Volume I, 1981 (TP16)*
- Community Participation in Water Supply and Sanitation Concepts, Strategies and Methods, 1981 (TP17)
- Small Community Water Supplies in Developing Countries, Technology of Small Water Supply Systems in Developing Countries, 1981 (TP18)*
- Guidelines on Health Aspects of Plumbing, 1981 (TP19)
- Practical Solutions in Drinking Water Supply and Wastes Disposal for Developing Countries, 1982 (TP20)
- A Groundwater Primer, 1983 (TP21)

Bulletins

- Global Workshop on Appropriate Water and Waste Water Technology for Developing Countries, Voorburg, The Netherlands, Report of Proceedings, 1973 (B7)
- Slow Sand Filtration for Community Water Supply in Developing Countries, a Selected and Annotated Bibliography, 1977 (B9)
- Public Standposts for Developing Countries, Proceedings of an International Expert Meeting, Achimota (Accra), Ghana, 1978 (B11)
- Participation and Education in Community Water Supply and Sanitation Programmes, a Selected and Annotated Bibliography, 1979 (B13)
- Community Education and Participation in the IRC Slow Sand Filtration Project, Voorburg, The Netherlands, Report of Proceedings, 1979 (B14)
- Slow Sand Filtration for Community Water Supply in Developing Countries, Report of an International Appraisal Meeting, Nagpur, India, 1981 (B16)
- Report of a Global Seminar on a Modular Approach in Small Water Supply Systems Design, Jakarta, Indonesia, 1981 (B17)
- Informe del Seminario Internacional sobre Filtración Lenta de Arena para Abastecimiento Público de Agua en Países en Desarrollo, 1983 (B18)

*) also available in French

**) also available in Spanish from: CEPIS, Casilla Postal 4337, Lima 100, Peru.

ANNEX 2

GOVERNING BOARD

Mr. P. Santema (chairman)	Director National Institute for Water Supply, Netherlands Ministry of Housing, Physical Planning and Environment.
Mr. P.J. Verkerk (secretary)	Director Drinking and Industrial Water Supply, Directorate- General for Environmental Protection, Netherlands Ministry of Housing, Physical Planning and Environment.
Mr. D.J. de Geer *) (treasurer)	Former Head International Affairs, Netherlands Ministry of Public Health and Environmental Protection.
Mr. H. Gajentaan	Deputy-Director, Directorate International Organizations Department, Netherlands Ministry of Foreign Affairs.
Mr. L.P.J. Mazairac	Director, Development Cooperation Africa Department, Netherlands Ministry of Foreign Affairs.
Dr. P.D. Lowes	UNDP/WHO Coordinator for the Water and Sanitation Decade, United Nations Development Programme/World Health Or- ganization.
Dr. M.G. Beyer	Senior Policy Specialist Water and Environmental Sanitation Team, United Nations Childrens' Fund.
Mr. J. Freedman	Rural Water Supply and Sanitation Adviser, Water Supply and Urban Development Department, The World Bank.
Mr. S. Unakul (observer)	Division of Environmental Health, World Health Organization.

*) On the 1st of March 1983 replaced by Mr. W.J. Kakebeeke.

ANNEX 3

IRC STAFF IN 1983

Director:

Hans M.G. van Damme

Programme Officers:

T. Kien Tjiook

Water Quality and Treatment; Modular Designs;

Ebbo H. Hofkes

Water Supply Technology;

Eric L.P. Hessing

Programme Evaluation and Planning; Community Education and Participation; Demonstration Projects;

Robert E.A.L.E. Brasseur

Human Resources Development; Education and Training;

Project Managers:

Toon A. van Dam

POETRI;

Jan Teun Visscher

Slow Sand Filtration;

Michael Seager

Public Standpost Water Supplies;

Consultants:

Ms. Christine van Wijk-Sijbesma

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Alastair T. White

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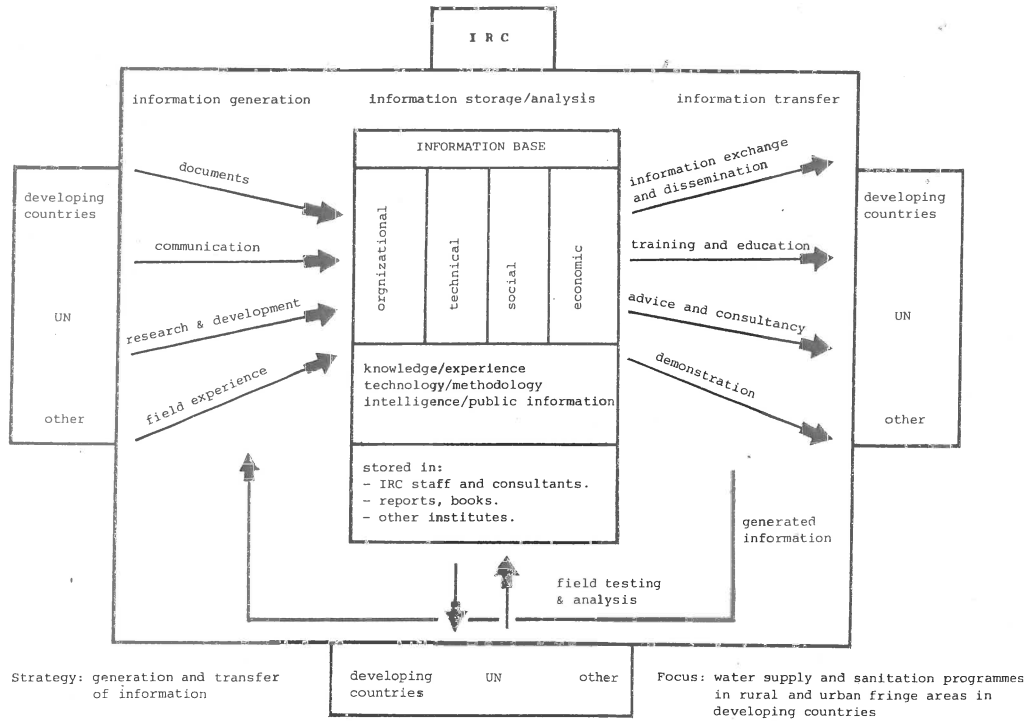
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ANNEX 4

SUPPORT ROLE OF IRC



ANNEX 5

PROJECTS IN 1983

Project	Work Status per 31/12/83	Funding	TRANSFER STRATEGIES			
			Information Exchange and Dissemination	Training and Education	Advice and Consultancy	Demonstration
POETRI ¹⁾	o	DGIS				
NL/IRC	o	IRC	x			
NL/PEEM	c	PEEM	x			
EIS	o	IRC	x			
SSF	o	DGIS				x
PSWS	o	DGIS				x
HPS	o	IRC/USAID	x		x	
MD	o	IRC	x			
DWQ	o	IRC	x			
KIP	o	DGIS			x	
TDC	*	IRC				
RWH	*	IRC	x			
ALTES	o	DGE	x			
NTDS/HRD	o	DGIS			x	
MDP INDONESIA	c	DGIS			x	
CEP GENERAL	o	IRC	x			
CEP TANZANIA	o	IRC/DGIS			x	
HRD/TT	s	IRC	x			
ROW	s	UNDP	x			
CEP/DIR	c	IRC/WASH	x			
GDTCM	s	WHO	x			
PEP	o	IRC	x			
EVA/RTI	c	IRC/UNICEF/RTI		x		
EVA/UV	c	DGIS			x	
TIS/VHW	p	DGE	x			

Work Status Key S = started o = completed * = cancelled p = planned

N.B.: x = main emphasis, but may also include elements from other strategies.

1) See list of abbreviations next page.

LIST OF ABBREVIATIONS - PROJECTS

ALTES	Alternative Energy Sources for Water Pumping
CEP/DIR	Community Education and Participation/Directory
CEP/GENERAL	Community Education and Participation
CEP/TANZANIA	Community Education and Participation/Tanzania
DWQ	Drinking Water Quality
EIS	External Information Services
EVA/RTI	Evaluation/Royal Tropical Institute
EVA/UV	Evaluation/Upper Volta
GDTCM	Guidance Document for the Training of Community Motivators
HPS	Handpumps
HRD/TT	Human Resources Development/Training of Trainers
KIP	Kampong Improvement Programme
MD	Modular Designs
MDP/Indonesia	Manpower Development Programme/Indonesia
NL/IRC	Newsletter/International Reference Centre for Community Water Supply and Sanitation
NL/PEEM	Newsletter/Panel of Experts on Environment Management for Vector Control
NTDS/HRD	National Training Delivery Systems/Human Resources Development
PEP	Programme Evaluation and Planning
POETRI	Programme on Exchange and Transfer of Information
PSWS	Public Standpost Water Supplies
ROW	Role of Women
RWH	Rainwater Harvesting
SSF	Slow Sand Filtration
TDC	Technology Development Centres
TIS/VHW	Technical Information Support for Village Health Workers

ANNEX 6

IRC PROJECT/COUNTRY MATRIX

Projects Countries	Slow Sand Filtration	Public Standpost Water Supplies	Human Resources Development	POETRI	CEP	KIP	Programme Evaluation
	AFRICA						
Burkina Faso				•			•
Kenya	•			•			
Malawi		•					
Niger				•			
Sudan	•						
Tanzania				•	•		
Togo					•		
Zambia		•					
ASIA							
India	•			•			
Indonesia		•	•	•		•	
Sri Lanka		•	•	•			
Thailand	•			•			
LATIN AMERICA							
Argentina				•			
Columbia	•			•	•		
Costa Rica				•			
Guatemala				•			
Jamaica		•		•			
Peru				•			

