

Newsletter No. 214, January/February 1993

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HYDROFRACTURING EFFECTIVE IN REHABILITATING DRY BOREWELLS

In 1988 hydrofracturing technology was introduced in India to convert dry borewells into successful wells. Results have been very encouraging, reports Colin Davis, drilling coordinator for UNICEF India, in the February 1992 issue of Waterfront. In India there are approximately 150,000 borewells drilled each year, of which 86% or about 129,000 are successful. While this is a good success rate, at a cost of Rs. 200,000 (US\$770) per bore the total cost of unsuccessful bores still amounts to US\$ 16 million per year.

In hydrofracturing a dry or low-yielding borewell is subjected to high water pressure which acts on the rock strata in several ways: it cracks the rock to form additional inlets for aquifers to enter the bore; it opens up existing cracks, thereby allowing water to enter the bore at a faster rate; and it cleans out aquifers that became blocked during the drilling process.

Under reimbursable procurement actions on behalf of the State Governments of Maharashtra, Madhya Pradesh, Rajasthan and Gujarat UNICEF procured 10 hydrofracturing units in 1988. During 1992 four additional units were acquired in Andhra Pradesh, Tamil Nadu, Uttar Pradesh and Karnataka, and three more units are planned for 1993. The most recent figures, dating from September 1992, indicate that 1,721 previously unsuccessful bores have been treated with the hydrofracturing system, of which 1158 have been successfully converted - a success rate of nearly 68%. The cost of hydrofracturing a bore is approximately US\$ 267, which is significantly less than the cost of drilling a new bore.

Since 1990 UNICEF has organized a number of training and orientation programmes for the states using the system, and in November 1992 the Public Health Engineering Department of Rajasthan organized an All-India Seminar on Hydrofracturing at Jaipur, which was attended by ten states, hydrofracturing experts from Sweden, and a number of UNICEF staff. The seminar did much to promote the cause of hydrofracturing and to share experiences among the four states which have been using the system since 1989, as well as those who will receive equipment from UNICEF in the near future.

UNICEF has chosen a strategy of local production of the equipment. The four units which arrived in 1992 will be equipped with Indian-made engines and pump test equipment, and it is envisaged that future units will include a larger number of Indian components. UNICEF is providing feedback to the local manufacturers on the field performance of the first ten units and assisting them in the design and local production of the components. So far good progress has been made in this respect, and one of the manufacturers has already produced the hydraulic packer unit. Further expansion of this technology is expected to provide valuable support to the water well drilling programme in India.

DIARRHOEAL DISEASES: A STRATEGY FOR THE '90s

Ten years ago diarrhoeal disease was the biggest killer of the world's children, claiming almost 4 million young lives each year. Most of the victims died of dehydration. And although a cheap and simple method of preventing and treating dehydration has been available for many years, it was known to few outside the scientific community.

Today, thanks to a decade of promotion, some form of oral rehydration therapy (ORT) is known and used by approximately one family in three in the developing world. The result is the saving of approximately 1 million lives each year and the demotion of diarrhoeal disease to second place among the causes of child death.

This success in the last decade has reshaped the challenge for the next. ORT still needs to be promoted: a majority of the developing world's families still do not use the technique; and dehydration still causes over 1.5 million deaths a year. But it is becoming more and more clear that the campaign against diarrhoeal diseases must now be broadened.

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The rapid reduction in dehydration deaths brought about by ORT means that an increasing proportion of the remaining deaths are caused by dysentery and persistent diarrhoea, which normally require appropriate antibiotic treatment in addition to ORT. Ten years ago, two thirds of all diarrhoea-related deaths were caused by dehydration; today that proportion has fallen to less than half. At the same time there is a growing realization that diarrhoeal disease is also a major cause - perhaps even the major cause - of malnutrition among the developing world's children. Study after study has shown that frequent diarrhoeal disease stunts the child's normal growth by reducing the appetite, inhibiting the absorption of food, burning up calories in fever, and draining away nutrients from the body.

A strategy for the 1990s must therefore give new priority to clean water and safe sanitation and to educating parents about preventing diarrhoeal diseases and minimizing the impact on their children's health and growth. Today's knowledge makes prevention possible on a large scale and at a low cost. The principle means are: breastfeeding; immunizing against measles; using a latrine; keeping food and water clean; and washing hands before touching food. The main ways of preventing diarrhoea from causing malnutrition are continued feeding throughout the illness (especially breastfeeding) and giving the child an extra meal a day for at least a week after the illness is over. In addition to knowing about the importance of food and fluids, all parents should know that trained help is needed if there is blood in the child's stool or if the diarrhoea persists or is more serious than usual.

Reducing child deaths by one third and child malnutrition by half were two of the most important targets agreed on by the world's leaders at the 1990 World Summit for Children. Neither target can be achieved without a widening of the battle against diarrhoeal diseases and a reduction in the toll they take on both the lives and the normal growth of many of the world's children.

Source: State of the World's Children 1993, UNICEF



For example, even if a project results in time savings, it cannot be assumed that women will use this time for additional income-generating activities unless they have access to the necessary resources and a favourable economic environment. Evaluating and designing for economic benefits in water projects is most likely to get results in specific areas:

- in survival areas where reduced water collection and more water can be combined with other resources to allow women to grow more food and undertake income generating activities;
- in livestock areas where better water combined with other resources such as fodder, erosion control, organization, extension and marketing allows women to develop their already existing economic roles in animal raising and milk production;
- in high potential areas where lack of water and sanitation increase domestic work to such an extent that it impedes women's undertaking of economic activities.

The editors of this journal, Eveline Bolt and Christine van Wijk, note that in order to be successful, drinking water supply, sanitation and hygiene education projects need to involve both men and women. This explains why 'roles of women' is gradually being replaced by the broader dynamic concept of 'gender'. Gender refers to the different areas of responsibilities held by men and women and the impact these have on their lives and position.

The five-page state-of-the-art review in the journal is based on abstracts of 56 documents. One-third of these have been published in developing countries. Countries from which experiences or strategies on women involvement are covered include: Bangladesh, Bolivia, Burkina Faso, Colombia, Ethiopia, Grand Cayman Islands, Honduras, India,

WOMEN INVOLVEMENT IN PRACTICE

Emphasizing the roles of women in water supply and sanitation has generally become the rule rather than the exception. A recent literature overview and field review show that management by women at the domestic level and in family health is generally acknowledged. But at project level there is still an emphasis on their physical contributions to construction and caretaking. Women's tasks in management and economic production get far too little attention.

This is one of the findings from the recently published second edition of the annual abstract journal *Woman, Water, Sanitation*, a joint publication from PROWESS, NORAD and IRC. Central themes of this edition are economic benefits and gender. Economic impacts of water projects on women can be complicated to assess and vary from setting to setting.

Indonesia, Kenya, Lesotho, Malaysia, Mexico, Namibia, Niger, Peru, Philippines, Rwanda, Sierra Leone, Sri Lanka, Swaziland, Tanzania, Thailand, Togo and Yemen. Northern European donors and UN agencies take a great interest in the women involvement and have financed fieldwork and studies on the subject.

Users of the existing publications and training materials on women involvement in water supply and sanitation appreciate these materials, but they have also expressed the wish to have a more guide-type document which covers the key points of current experiences and studies and which they can use for training and in project implementation.

With co-funding from the Directorate General for International Cooperation (DGIS) of the Netherlands IRC has started a project to develop this type of intermediate material.

Rather than producing one guide for global use it was felt that regional guides would be better to reflect varying local experiences and realities, and that women in implementation projects should be actively involved.

To realize this process, female staff with experience on women involvement from DGIS-supported projects will meet together for two weeks to prepare regional guides for Africa, Asia and Latin America. Between February and September workshops will take place in Kenya, Colombia and Sri Lanka. Participants will compare experiences and, together with a moderator from IRC and the regional host institutes (AMREF, CINARA and NGO Decade Service), prepare regional guides on the basis of their combined know-how. After six months of review and further testing in their own areas, IRC, in collaboration with the co-organizing institutes, will publish final versions of these guides.

Copies of the 1992 edition of the *Woman, Water, Sanitation* abstract journal (no. 2) can be ordered from IRC, preferably on subscription basis. For US\$ 35 you will receive the 1991 and 1992 editions, and late in this year the 1993 edition, which focuses on environment. For those working in the field: IRC welcomes documentation of experience from the field on women and environment and will offer related documentation in return.

IRC TRAINING COURSE PRODUCES PUBLICATION

In a poor country like Ethiopia the need to put significant effort at community level into creating a willingness to pay for water is much more obvious than in Botswana, a country with high public revenue. The need to go for deep well groundwater in a large part of Botswana and thus the need for high-tech solutions to the water resources problem also makes community participation a less obvious approach. For a country like Kenya, with scarce water and financial resources, community participation is felt to be a crucial factor in the sector so approaches to community participation, in particular the participation of women, are investigated.

These are some of the facts that came to light during a recent exchange of experiences among the participants of the course "Management for Sustainability in Water Supply and Sanitation Programmes" held in Buea, Cameroon in October 1992.

Sixteen participants took part in the course, which was organized by the Pan-African Institute for Development/West Africa in collaboration with IRC. The participants represented seven African countries and included project engineers, health staff and staff with administrative functions. A general problem analysis, which was done as a group exercise, resulted in a broad spectrum of issues related to sustainability of water supply and sanitation projects and their interrelation. Participants further studied one major problem experienced in their own jobs and drew up a plan of action to address it.

The diversity of disciplines as well as geographic regions stimulated interesting discussions. Community participation and water resources management in particular evoked extensive exchange of experiences due to the variety of situations countries experience and the ways in which those situations can be dealt with. An evaluation of the course revealed, among others, that participants appreciated the opportunity to exchange experiences with other colleagues from the region.

As a result of the course IRC is preparing an Occasional Paper in its Training Series describing the way the course is conducted, results of in-course workshops, and descriptions of the projects in which the participants are working. The book will be available from IRC in late spring.

The Management for Sustainability course will be offered again from July 19-August 6 in Cameroon. Additional information about IRC's training courses is available from:

Training Department
IRC
PO Box 93190
2509 AD The Hague
Phone: 31-70-3314133; Fax: 31-70-3814034

NEW PUBLICATIONS

Sanitation and Water Supply: Practical Lessons from The Decade. By Sandy Cairncross. Water and Sanitation Discussion Paper Series no. 9, UNDP-World Bank Water and Sanitation Program. 63 pp.

This Discussion Paper contains the personal perspective and analysis of the author's experience gained during the International Drinking Water Supply and Sanitation Decade. Its principal lesson is that progress and continuing success depend most on responding to consumer demand. A programme's designers and managers must understand that they are selling a product, not providing a service. Where

sufficient demand exists, the facilities and services offered must be tailored to that demand; where demand is not strong, it must be stimulated. The publication can be obtained from:
The World Bank
 Water and Sanitation Division
 1818 H Street NW, Washington, DC 20433 USA

Gender and Irrigation: a manual for consultants. Lisette van der Wel, 38 pp.

This manual provides a practical tool for project development officers, technical project staff, assessors and evaluators dealing with irrigation and those attempting to integrate the gender issue into small-scale irrigation projects in a systematic manner. It is an aid to finding an answer to the methodological problems of project implementation on the subject.

The manual summarizes recent literature, linking farming systems and users' characteristics with issues of irrigation technology and gender. It focuses on the main points of interest when integrating gender aspects in the different stages of an irrigation project, and distinguishes between the stages of identification and formulation, design, implementation, and consolidation of the project. The manual also provides a checklist of gender aspects to be considered when assessing an irrigation project.

The manual costs NLG 15, is free of charge for organizations in developing countries, and can be obtained from: SAWA, Consultants for Development
 Beukenlaan 2b
 7611 NH Ede, THE NETHERLANDS

EVENTS

SECOND INTERNATIONAL MEETING ON WATER SUPPLY AND SANITATION DEVELOPMENT FOR LUSOPHONE AFRICAN COUNTRIES, 26-28 May 1993, Lisbon, Portugal

A special initiative by the Water Supply and Sanitation Collaborative Council for Lusophone African Countries' sector development is well under way. This meeting will be attended by bilateral and multilateral external support agencies and representatives of Brazil and Portugal and the five Lusophone African countries. The agenda will include presentation of an inventory of sources of information for the water supply and sanitation sector in Portuguese, an assessment and draft work plan of the information management situation in Lusophone countries, and an assessment of the education and training facilities and needs in the sector, with draft work plans. African Lusophone countries will present overviews of the sector situation in their countries emphasizing priority projects, as well as the overall major investment areas for the country over the coming years.

SECOND MEETING OF THE WATER SUPPLY AND SANITATION COLLABORATIVE COUNCIL, 7-10 September 1993, Rabat, Morocco

During its second meeting the Council will promote the information exchange of experiences and views on the development of water supply and sanitation services. Working groups established at the Council's first meeting in Oslo in 1991 will present their findings on seven issues critical for the improvement of water supply and sanitation services. Over 200 specialists active in the sector from developing countries and ESAs will attend and contribute to the development of the sector through their experience.

Information about the meeting can be obtained from:
 Collaborative Council Meeting
 National Office of Potable Water (ONEP)
 28, Avenue Oqba
 Agdal, Rabat, MOROCCO
 Phone: 212-7-77-54-03; Fax: 212-7-77-54-08

ANNOUNCEMENTS

**MR. G. ARTHUR BROWN, Chairman Steering Committee
 1978-1993 Passed Away on 2 March.**

Just before going to print we were saddened by the news of the untimely death on March 2 of Mr. G. Arthur Brown, Chairman of the UN Interagency Steering Committee for Water Supply and Sanitation. Over the years the water and sanitation sector has greatly benefitted from Mr. Brown's broad perspective and pragmatic approach to sector concerns in the developing countries and his continued emphasis on the human aspect in these issues. Mr. Brown's contribution to water and sanitation development globally will be a continuous reminder of his dedication to this work as well as to his overall contribution to the cause of development.

WHO/PEPAS changes name to EHC

The WHO Regional Committee for the Western Pacific decided at its 43rd session in Hong Kong in September 1992 to change the name of the Western Pacific Regional Centre for the Promotion of Environmental Planning and Applied Studies (PEPAS) to Western Pacific Regional Environmental Health Care Centre (EHC). The name change went into effect on 1 October 1992.

Editor:	Nicolette Wildeboer
Lay-out:	Lauren Wolvers
with contributions from:	Dick de Jong Eveline Bolt

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UN WARNINGS AT FIRST CELEBRATION OF WORLD DAY FOR WATER

UN agencies in New York, Geneva and Santiago issued warnings about acute water problems on the occasion of the first *World Day for Water* on 22 March. UN Under-Secretary-General for Policy Coordination and Sustainable Development, Nitan Desai, told a group of non-governmental organizations at the United Nations that the problem "...has not received global attention, though it is very clear that it is a major issue for local groups and local environmental action in all countries of the world".

The Secretary-General of the World Meteorological Organization, Professor G.O.P. Obasi, issued the following message to mark the first global observance of a *World Day for Water* on 22 March in Geneva.

"At its forty-seventh session in November 1992 the United Nations General Assembly adopted a resolution designating 22 March of each year as the *World Day for Water*. This initiative stemmed from recommendations made by two important conferences held during 1992: the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, and the International Conference on Water and the Environment in Dublin. On this first *World Day for Water*, I wish to recall the warning which comes from the "Dublin Statement on Water and Sustainable Development" - the major input to UNCED's Agenda 21.

'Scarcity and misuse of fresh water pose a serious threat to sustainable development and protection of the environment. Human health and welfare, food security, industrial development and the ecosystems on which they depend are all at risk, unless water and land resources are managed more effectively in the present decade and beyond than they have been in the past.'

The rational utilization and protection of water resources is one of the most urgent problems facing the world today. Water occupies a special place amongst the natural resources of our planet. It is the most sensitive link in the global environmental system, and its quantity and quality are subject to fluctuations which may result from human activities as well as from variations in weather and climate. Mankind faces the challenge of how to ensure the rational use of these variable resources, while protecting them from pollution and depletion and conserving the habitats they provide.

The global investment in water, upon which all socio-economic activity depends, is colossal. The scale of the water infrastructure is ultimately determined by the amount of fresh water which must be mobilized to satisfy the needs of society.

With rapidly expanding populations, especially in megacities, in many parts of the world it is becoming increasingly difficult to supply adequate fresh drinking water at reasonable costs. The provision of sufficient water to meet the basic drinking and sanitation needs, which are essential to human health, is indeed a major challenge to the world community. The water needs for agriculture, industry and for renewable energy pose additional challenges."

In celebrating the first *World Day for Water*, the World Meteorological Organization is calling on governments, donor agencies, and other institutions in the water field to support a fundamental new approach which is needed for the assessment, development and management of the world's fresh water resources. This can only be brought about through political commitment and involvement from the highest levels of government to the smallest villages and communities and by making every man, woman and child on this planet concerned in the conservation of this most precious resource.

A Latin American Example

The UN Economic Commission for Latin America and the Pacific (CEPAL) concluded on the occasion of the World Day for Water that the water management in this region is in crisis. The rivers contain twice the amount of human waste pollution than elsewhere. Less than 2 percent of all wastewater is treated properly. Only 10 percent of the sewers function as they should. CEPAL urges the increase of water and sewerage charges so that maintenance of the existing network and its expansion can be paid.



This information was provided by the World Meteorological Organization (WMO), Geneva, Switzerland and the IPS International Press Service in Amsterdam.

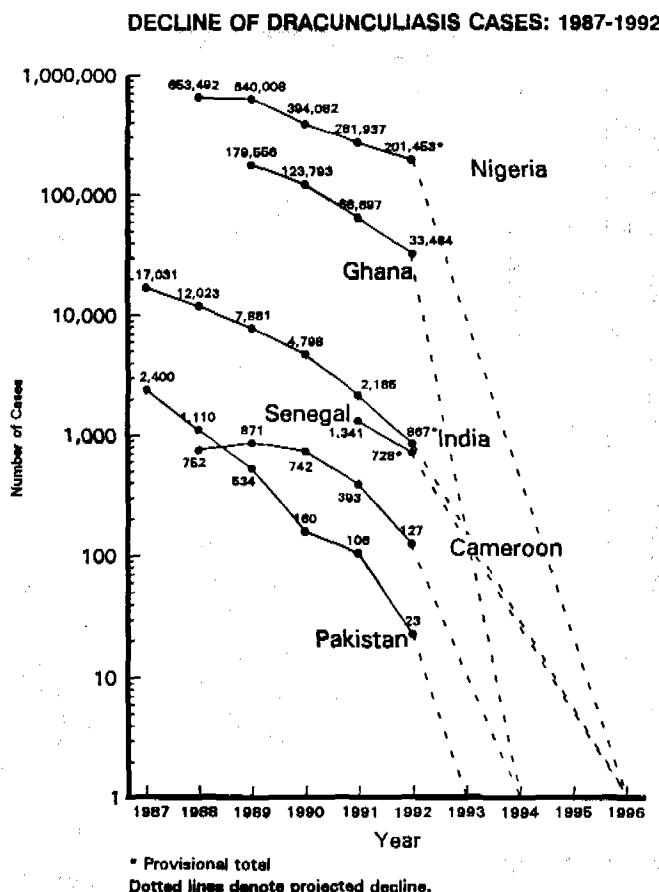
More information about the *World Day for Water* can be obtained from:

Information and Public Affairs Office
WMO
PO Box 3200
1211 Geneva 2
Switzerland
Tel: (+41 22) 730 8315/Fax: (+41 22) 734 2326

GUINEA WORM CAMPAIGN ON TARGET

The global campaign to eradicate guinea worm (dracunculiasis) by December 1995 is on target. Especially in Cameroon, Ghana, India, Nigeria and Pakistan the incidence of the disease has been 'significantly reduced', says *Guinea Worm Wrap-Up* no. 38.

The graph below shows the dramatic decline in formerly heavily-endemic Ghana. This country has set up a remarkable nationwide monthly reporting system.



Reassessing the state of the global campaign, *Guinea Worm Wrap-Up* lists a range of causes for satisfaction, which illustrate the package with which the battle against the disease is being fought:

- Nigeria's transition to a system of intervention and monthly reporting by trained, village-based health workers;
- Uganda's search for cases (now the second-most highly endemic country known);
- Former U.S. President Carter's promotional visit to five endemic Francophone countries;
- Additional support provided to some countries by UNICEF;
- Establishment of a new Interagency Technical Team by WHO and UNICEF at Ouagadougou;
- A new documentary film "Guinea Worm: the End of the Road";
- Manufacture of a special "Guinea Worm cloth" by the Burkinafirm Faso Fani.

Despite the successes so far, more than 23,000 endemic villages have not been engaged in control measures. Searches are still under way in Chad, Ethiopia, and Sudan. Kenya has still not yet begun to search its known and suspected endemic areas. Mali's programme is off to a particularly fast start, and Togo made significant progress in 1992.

For 1993 the *Guinea Worm Wrap-Up* identifies priority challenges. Village-based health education, community mobilization and monthly surveillance must be extended immediately to all endemic villages. For Burkina Faso, Chad, Mali, Mauritania and Niger this means before their next peak transmission season begins in May/June of 1993.

The second celebration of the Guinea Worm Eradication Day on April 30, 1993 in the African region will be a good opportunity to greatly increase public awareness about the campaign. Massive publicizing of national efforts are needed in all endemic countries, comparable to what has been done already in Ghana and Nigeria.

Pakistan should have seen its last case in 1992.

Cameroon, India and Senegal should be able to interrupt transmission in 1993. In these countries and in the lesser endemic parts of all other endemic countries, a 'case containment' approach to rapidly eliminate cases of the disease remaining in those areas is now indicated.

For more information contact:

Public Health Service Centres for Disease Control and Prevention (CDC)
F-03, 1600 Clifton Road, NE
Atlanta, GA 30333, USA.
Fax: (+1 404) 639-0277

Note from the Editor: It is worth mentioning that UNICEF and WHO as part of their Joint Monitoring Programme are developing a special monitoring module on guinea worm control. This module will form part of the Water Supply and Sanitation Monitoring System (WASAMS), which will be described in our next issue.

LOCALLY-PRODUCED ROPE PUMP IN DEMAND IN NICARAGUA

The rope handpump, also called the rope-and-washer pump, was introduced a long time ago as an appropriate technology for water lifting. It suffered many problems in gaining acceptance as a sustainable rural technology. Therefore this type of pump did not receive much appreciation or attention in the sector. According to information received from a project in Nicaragua, a local manufacturing firm there produces and sells the "Mecate Pump". Farmers interested in irrigation seem to form a major share of the customers. Since December 1990 1,500 of these pumps have been installed, at a price of US\$ 80 for the pump and US\$ 10 for the installation. It is claimed that almost no maintenance is needed.

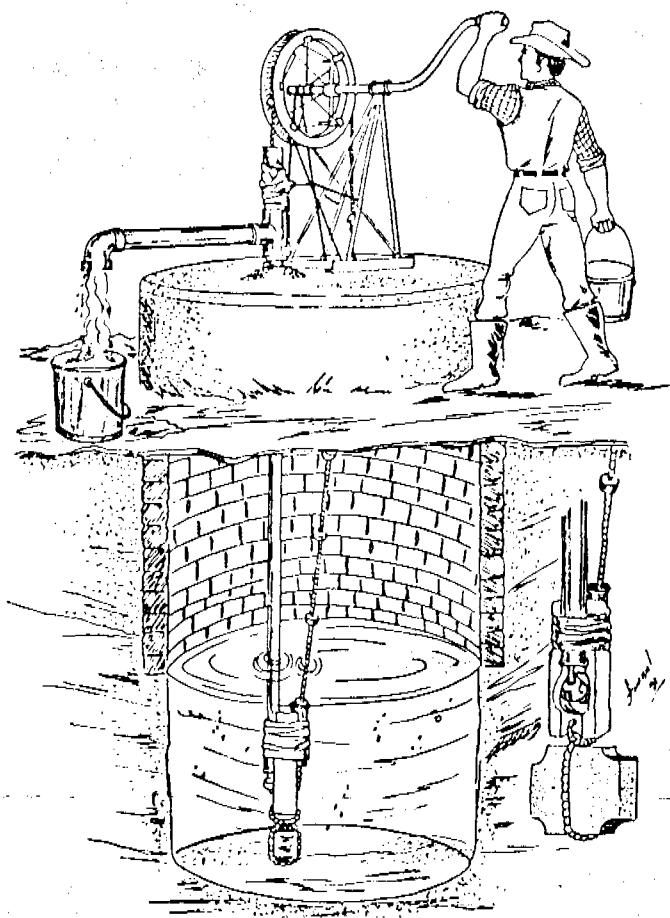
"In Nicaragua alone there are 200,000 mainly private wells, nine out of ten with a rope and bucket to draw water", says Henk Alberts, one of the four founding members of "Bombas de Mecate S.A.", a small firm with 10 employees, located near Managua. Alberts visited IRC and other agencies in Europe to try to organize an independent evaluation of the rope pump.

In his view the rope-and-washer pump has proven its efficiency in the last ten years in Nicaragua. The pump is used in wells up to 40 metres deep, has a low breakdown rate, low price and high social acceptance. According to Alberts the pump is twice as efficient as a Dempster or India Mark II pump: 100 joules energy results in 85 joules water. The rope is 5 millimetre locally available polypropylene, and the washers are also produced locally. The necessary PVC pipes are imported from Costa Rica. Other advantages are that water can be drawn while the well is being dug, and that through extra pipes and rope the pump can be made deeper when needed. The experience shows that after about one year farmers are buying new pipes and rope for new wells, to get an additional supply to another field or to the house.

Radio and newspaper advertisements and demonstrations at exhibitions and agricultural fairs helped spread awareness about the pump. Alberts: "Individual farmers and households were the first clients. In Nicaragua many of the Dempster and India Mark II pumps are not working properly. By word of mouth advertisement also helped. Our installation vans and crew do an average of nine pump installations a week. Increasingly CARE, UNICEF, WHO, the Germans and the Austrians are buying the pump for projects they support in Nicaragua."

With Peru, Paraguay and Chile contacts have been established about spreading the rope pump to projects in these countries. The next step planned is a sister company in El Salvador. Because Alberts and his colleagues are convinced that this rope-and-washer pump has potential for wider application, also outside of the Latin American region, the group is trying to get an independent evaluation done on a random sample of the 1500 pumps installed to date. The

British Overseas Development Agency (ODA) is already sponsoring research to check 30 pumps for one year on water quality.



For more information about the pump or license arrangements contact:
Bombas de Mecate S.A.
Apartado Postal 3352
Managua, Nicaragua

SANITATION WORK NOT INTERESTING TO STUDENTS IN ETHIOPIA

A survey conducted at the beginning of the second semester for final year civil engineering students at Addis Ababa University revealed that only 1% wanted to work in sanitation. However, when the same students were asked which field would bring about the biggest improvement in quality of life in Addis Ababa, over 90% indicated that improvements in sanitation would. So reports Dr. Assefa Desta of the University's Civil Engineering Department.

This survey reveals that the attitude of student to sanitation needs to be changed if the future generations of engineers are to tackle sanitation problems facing many developing countries.

A change in attitude was manifested in the student group which undertook a final year project entitled "Appropriate Sanitation for High Density Urban Areas in Developing Countries". A case study was done at Merkato, a densely populated area which is said to be the biggest market in East Africa.

The students realized that provision of latrines is a small aspect of the problems compared to the socio-economic, maintenance and desludging problems. The students recommended an integral approach to the problems which consider the need for income generation, house improvement and health education in addition to the construction of new latrines.

New sanitation facilities must be appropriate, affordable, acceptable, and easy to maintain to have long-term impact on the community. At the end of the project the students were motivated and expressed their willingness to work in the field of sanitation.

Source: NETWAS/AMREF Water and Sanitation News, Vol. 1, no. 7, Aug. 1992, Nairobi, Kenya

NEW PUBLICATIONS

Handpumps: Toward a Sustainable Technology. Research and Development During the Water Supply and Sanitation Decade. by John Reynolds. *Water and Sanitation Report no. 5, UNDP-World Bank Water and Sanitation Program.* 153 pp.

This report deals with research and development coordinated by the UNDP-World Bank Handpumps Project on the conventional reciprocating pump based on a cylinder and piston, with two nonreturn valves to direct the flow and a rod connecting the piston to an operating handle. According to the research, this technique offers significant advantages and none of the drawbacks of other pumping systems. The research aimed at developing designs that take advantage of up-to-date materials and appropriate manufacturing techniques to produce sturdy and reliable pumps that can be manufactured in the countries of use and can be maintained with the limited human and financial resources of user communities.

The report deals with research subsequent to 1985. Research and development prior to that time is summarized in *Community Water Supply: The Handpump Option*, published in 1987.

Actions Speak. The study of hygiene behaviour in water and sanitation projects. Marieke T. Boot and Sandy Cairncross, Editors. *IRC International Water and Sanitation Centre and London School of Hygiene and Tropical Medicine.* ISBN 90-6687-023-0, 152 pp.

Actions Speak is the outcome of a Workshop on the Measurement of Hygiene Behaviour held in Oxford, England in April 1991. Papers and discussions from that workshop form the basis for a comprehensive analysis of the ways that hygiene behaviour can best be studied and interpreted so as to provide the information needed to get the best out of water supply and hygiene education projects. Practical examples and advice together with anecdotes provide the reader with tips for gathering and analyzing data, and for planning and pretesting of hygiene behaviour studies, including the involvement of community members in study design and information-gathering.

Among its conclusions is an emphasis on the importance of understanding the local socio-economic and cultural influences of people's behaviour as a key input to subsequent project initiatives.

EVENTS

WATER AND ENVIRONMENT: KEY TO AFRICA'S DEVELOPMENT, Delft, The Netherlands, 3-4 June 1993

The aim of this conference is to draw up guidelines and lines of action in the fields of institutional development, research, and education to strengthen Sub-Saharan Africa's capacity for sustainable management of its natural resources. The conference is a follow-up to the UN Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992. The conference will be hosted by the International Institute for Infrastructural, Hydraulic and Environmental Engineering (IHE) in Delft.

Over 60 African and international experts have been invited to the conference, which will pay particular attention to the relation between water and the environment and their importance for sustaining and developing the continent. The two days will comprise keynote addresses, four workshop sessions, plenaries, and a panel presentation and discussion. One of the keynote speakers will be Mr. Maurice Strong, Chairman of UNCED.

More information can be obtained from:
Conference Secretariat, Water and Environment - Key to Africa's Development
c/o IHE, PO Box 3015
2601 DA Delft, The Netherlands
Tel: (+31 15) 151701/151710/Fax (+31 15) 122921

Editor: Lay-out: with contributions from:	Nicolette Wildeboer Lauren Wolvers Dick de Jong
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This newsletter is printed on chlorine-free paper

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WATER AND SANITATION MONITORING SYSTEM ENABLES ACTIVE MONITORING**Need for increased and enhanced monitoring**

In response to a recognized need for improved management of the sector after the 1970s and 1980s, a call for enhanced monitoring has come from recent global international fora including the New Delhi Consultation, The World Conference for Children, and the International Conference on Water and Environment. Recommendations coming out of these fora called on sector managers to seek long-term country-level goals with annual targets. Selection of a core set of progress indicators aimed at measuring key areas of sector performance was also recommended, to allow comparisons of progress to be shared across sub-national, national and international programmes. The need for an increase in the frequency of monitoring, and an enhancement of the capacity for monitoring at national, sub-national and community levels was also recognized.

As part of the International Water Supply and Sanitation Decade review process, WHO and others identified the need to strengthen monitoring at country level in recognition of the fact that past monitoring was a passive process which was not used to influence sector development. It was recognized that during the 1990s monitoring should be used actively as a management tool.

JMP/WASAMS Launched by UNICEF and WHO

Effective management of water supply and sanitation development requires a continuous flow of high quality information specific to the operational needs of the programmes concerned. Information of this type is provided

by systems which monitor, or periodically assess, certain important parameters as a means of determining progress towards defined goals, managing current operational activities, and planning future actions.

The Joint Monitoring Programme (JMP) launched by UNICEF and WHO in 1990 responded to the need to strengthen and expand monitoring in the water and sanitation sector. Three 'core indicators' (coverage, management and funding) have been identified and proposed as the basis for enhancing sector monitoring in the 1990s. The Water and Sanitation Monitoring System (WASAMS) software, developed by WHO and UNICEF, incorporates these indicators into a computer monitoring programme which can be adopted quickly and easily by developing countries. The programme also caters for future expansion beyond the core indicators. WASAMS can improve the monitoring of water and sanitation activities at each level that they occur, and can track the progress of the water and sanitation sector towards sub-national, national and global targets.

Through the JMP, WHO and UNICEF aim to strengthen sector monitoring capacity at country level through, among others, the organization of national and regional monitoring workshops, inter-ministerial meetings to strengthen sector coordination, establishment of national monitoring units within appropriate government structures, determination of realistic sector goals, and establishment of effective frameworks for sector monitoring. Governments are also being urged to build upon and optimize existing data collection systems rather than create new ones.

They are further being encouraged to simultaneously support monitoring initiatives from the grass roots level upwards with resources and training.

1990 forms the baseline year for WASAMS, and the analysis of the data collected in 1990 will form the benchmark for monitoring sector performance during the 1990s towards 'universal access' to water supply and sanitation. The *Water Supply and Sanitation Sector Monitoring Report 1990* is the first in a series of yearly reports to be made throughout the 1990s, in which 70 countries used the WASAMS format to assess the status of the sector.

Analysis of Baseline Year Results

A considerable disparity exists in the access to services between high-income and marginal urban populations, and there are clear disparities in resource allocations. The latter indicates that despite the aggressive promotion of low-cost



options for the unserved during the 1980s, these have yet to be seriously considered by governments and ESAs.

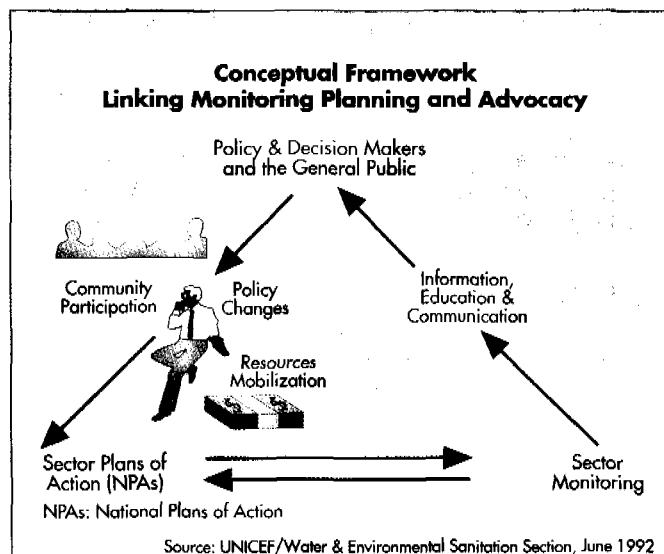
Inadequate policies on cost recovery have led to large capital outlays for rehabilitation of high-cost systems, to the benefit of the better-off. Governments' sector investments tend to concentrate on new systems and on the rehabilitation of existing systems in urban areas, with a bias towards high-cost systems.

Preliminary data indicate that governments are subsidizing services to high-income populations by as much as 70% of the operation and maintenance costs. Urban communities, meanwhile, seem to be very willing to contribute to operation and maintenance costs.

An alternative approach for the efficient utilization of scarce resources is urgently needed. Governments and ESAs must see resource allocation to the sector in the context of economic investments for development, rather than social expenditures. Such an approach would require the restructuring and reallocation of sector resources and the forging of government and community partnerships for: capacity building at community level for management of services; the promotion and use of appropriate low-cost technologies; and the establishment of affordable backup support systems for spare parts and maintenance to ensure sustainability of services, particularly in marginal urban and rural areas where most of the unserved reside.

Link Between Monitoring, Planning and Advocacy

A strong, synergistic effect between sector monitoring, planning and advocacy has been recognized as the basis to accelerate water and sanitation service coverage in the 1990s. A key ingredient is the catalytic relationship between sector monitoring and planning: the former usually feeds into the latter, which can in turn be adjusted as goals and annual targets undergo changes. However, planning can also feed back into monitoring. Monitoring feedback can also be used to 'prime' public information channels and advocacy initiatives directed towards policy and decision makers.



Monitoring also contributes to the information, education and communication (IEC) process which aims to exploit all available communication channels and strategies to disseminate relevant information.

The effectiveness of IEC is largely dependent on its generation of political will and public support, which must then be translated into actions, including the revision of sector policies, the provision of additional resources and the promotion of active community participation.

(Source: *Water Supply and Sanitation Sector Monitoring Report 1990 (Baseline Year)*, prepared by WHO and UNICEF)

INTERNATIONAL EXPERTS: BETTER ACCESS AND USE OF QUALITY INFORMATION NEEDED IN THE WATER SECTOR

The Water Supply and Sanitation Collaborative Council has identified lack of access and use of information as one of the major constraints to the development of sustainable water supply and sanitation services. To improve the availability and use of information as a vital resource to the water sector, the Council established the Working Group on Information Management in its last global conference held in Oslo in September 1991.

Over 20 experts on water and information management gathered in Amman from 20 - 22 April to discuss ways of improving water supply and sanitation programmes by applying lessons learned in the country, or from regional and global knowledge and experience.

Based on an earlier analysis of constraints in information management, the Amman meeting formulated a strategy which at different levels can effectively integrate information into water supply and sanitation development activities and water resources management.

The main recommendations include:

- Water sector institutions should formulate information policies based on the mandate of the institution and the needs of information users.
- Water sector institutions should define clear objectives for information management in harmony with the general objectives of the institution.
- Overall responsibility for information management should be located at a senior level within the institution.
- Information products and services should be tailored to the needs of users and modified or developed as required in response to feedback from users.
- The benefits to users of information products and services should be emphasized.
- Information managers in water sector institutions should take steps to identify the main target groups which the information system will aim to serve, in agreement with the mandate of the institution.

- Adequate resources should be allocated for collection of information and data, especially at the field level, and using well-defined selection criteria.
- Information systems in water sector institutions should be provided with adequate numbers of appropriately-trained staff, including both subject specialists and information professionals.
- The budget of a water sector institution should include a line item for information management to guarantee continuity.

The meeting in Amman was the second one of this Working Group. Information specialists and sector professionals from governments, NGOs, UN agencies and support agencies participated from Bangladesh, Egypt, France, Ghana, Guinea Bissau, Jordan, Kenya, the Netherlands, Pakistan, Philippines, Slovakia, Switzerland, Thailand and Uganda. The meeting was jointly organized by the WHO Regional Centre for Environmental Health Activities (CEHA), Amman, and the IRC - International Water and Sanitation Centre, which is the convenor of the Working Group.

The outcome of the various meetings will be reported to the second meeting of the Water Supply and Sanitation Collaborative Council scheduled to take place from 6 - 8 September 1993 in Rabat, Morocco see *News from the Collaborative Council* below).



NEWS FROM THE COLLABORATIVE COUNCIL

Note from the Editor: This issue is the first in which regular contributions from the Water Supply and Sanitation Collaborative Council will appear. This first article will serve to introduce the current activities of the Council's seven working groups.

At the meeting of the Water Supply and Sanitation Collaborative Council in Oslo in September of 1990, the seven working groups mobilized membership, established their terms of reference and work plans, and arranged for the resources to be made available to permit their operations. With less than five months to go before the second meeting of the Collaborative Council in Rabat, Morocco from 7-10 September 1993, the working groups have been actively preparing their contributions.

1. Country-Level Collaboration

Recommendations of an analysis of the CLC situation in member countries resulted in the recommendation of country-specific case studies. Ten were prepared and conclusions with suggested guidelines will be prepared for discussion, consideration and endorsement at Rabat.

2. Urbanization

A strategy is being considered for urbanization, as well as guidelines to improve WSS accomplishments in the urban sector, with emphasis on the urban poor. These will be presented at Rabat.

3. Operation and Maintenance

Guidelines and manuals being prepared as tools to address this issue are being prepared for consideration at Rabat.

4. Applied Research

After formulating terms of reference and a work plan, papers on the applied research process in WSS, improvement of the quality of research proposals, problems and issues related to funding of research, priority areas for applied research in the WSS sector and a review of GARNET (Global Applied Research Network) were considered by the Group in preparation of Rabat.

5. Information Management

To enhance access and utilization of information - an essential resource to improved sector performance - a user-oriented information management strategy is under preparation, to be presented for consideration at the Rabat meeting.

6. Information, Education and Communication (IEC)

Communication strategies formulated prior to 1992 are to be tested in Nigeria and Guinea Bissau. Group members from these countries have agreed to host country pilot projects, so a regional workshop in West Africa is proposed to sensitize countries to the strategies and approaches, before carrying out these pilot projects. Funding arrangements are being negotiated. The experiences are expected to be documented for the Rabat meeting.

7. Gender Issues

At a 1992 meeting of the WSSCC Secretariat and the coordinators of the working groups, it was decided to have members of the Working Group on Gender Issues participate in the work of the other groups, to ensure that gender issues are adequately addressed, and their products are gender-sensitive. The Group is preparing guidelines on an approach to gender issues in the WSS sector, as well as a source book on women having experience in the sector.

HIGHLIGHTS CURRENT AWARENESS BULLETIN

IRC's current awareness bulletin has been providing key people in the sector with the most up-to-date news since 1990. For each issue over 250 periodicals are scanned by IRC specialists. As of 1993 *Highlights* has a new cover design, bringing it more in line with the IRC house-style.

For people who do not have the time and/or money to read a range of water and sanitation-related periodicals this current awareness service not only provides country project and sector policy news, but also news on six subject categories (environment, water technology, sanitation, health and hygiene, communication and training, and women), all in one bi-monthly publication. Each issue of *Highlights* also contains constantly updated overviews of new publications, training opportunities and forthcoming events. An additional service is the inclusion of the content pages of 10-12 major water and sanitation periodicals, from which the subscribers can order copies of five articles of their choice free of charge. Subscription rates for six issues per annum:

Surface mail Dfl 135/US\$ 79, Air Mail DFL 189/US\$ 111. For university departments and students, government departments, and local voluntary agencies from the least developed countries reduced rates apply: US\$ 55 surface mail and US\$ 78 airmail.

For a sample copy of *Highlights* write to:

IRC Documentation Unit
PO Box 93190
2509 AD The Hague
The Netherlands

NEW PUBLICATION ON INFORMATION MANAGEMENT

Information Management in the Water and Sanitation Sector. Lessons learned from field assignments in Africa and Asia by Stephen Parker. IRC International Water and Sanitation Centre. OP 19, 84pp.

This Occasional Paper was prepared on the basis of field assignments carried out by IRC in 1990 and 1991 on information management in institutions in the water and sanitation sector in Africa and Asia. The assignments were carried out with the aim of identifying and analyzing problems in delivering information effectively to users and, where possible, suggesting solutions. The paper aims to bring together the main lessons learned from these assignments in an attempt to help managers in sector institutions in other countries identify and solve common information management problems. The book deals with categories of information provision; information systems and networks; essential preconditions for information development; providing information to users; information on technical operations and on resources; and organization and management of information systems and networks. Appendices include a sample project proposal for the development of information management within an institution, and for the establishment of a water information and documentation centre.

This newsletter is printed on chlorine-free paper

UPCOMING EVENTS

EXPERT CONSULTATION ON WATER HARVESTING FOR IMPROVED AGRICULTURAL PRODUCTION

Cairo, Egypt, 21-25 November 1993

This consultation, organized by FAO, will focus on the exchange of information and experiences among countries in the Near East and Maghreb by means of case studies, with the objective to identify the major aspects (technical, institutional, socio-economic) which have to be considered for successful planning, design and management of water harvesting projects, particularly when implemented by the beneficiaries with minimum government support. Secondary objectives will be the formulation of realistic recommendations for follow-up activities to promote the development of water harvesting in the region, and the formulation of a regional research project for water harvesting.

Additional information can be obtained from:

Dr. K. Siegert
Technical Officer
Water Resources, Development and Management Service
Land and Water Development Division
Food and Agriculture Organization of the United Nations
(FAO)
Viale delle Terme di Caracalla
00100 Rome, ITALY
Tel: (+39 6) 57971/Fax: (+39 6) 57937152

INTERNATIONAL CONFERENCE ON FUTURE GROUNDWATER RESOURCES AT RISK

Helsinki, Finland, 13 June 1994

This conference will deal with the specific needs of developing countries: risks for groundwater, subsurface system inventories, groundwater monitoring, physical and chemical processes, rehabilitation of polluted aquifers, regulatory issues and case studies.

Additional information can be obtained from:

Ms. Tuulikki Suokko
FGR 94
National Board of Waters and the Environment
PO Box 250
Helsinki SF 00101, FINLAND
Tel:(+358 0) 4028 258, 4028 345

Editor:	Nicolette Wildeboer
Lay-out:	Lauren Wolvers
with contributions from:	Dick de Jong

Newsletter No. 217, May/June 1993

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BANKS URGE MEGA-CITIES TO SAVE WATER

The World Bank and the Asian Development Bank have launched initiatives that are aimed to get developing world cities to save water. Every day these rapidly growing cities waste large amounts of water that could be used for drinking, farming or industrial production. Leaks in pipes, inefficient metering systems, cheap prices for water and wasteful practices often send half a city's water supply down the drain, worsening already badly polluted waterways.

Bangkok, Beijing, New Delhi, Dhaka, Karachi, Manila and Seoul are the mega-cities in which consultants are preparing case studies on the water resources situation. The Asian Development Bank has appointed these consultants to assist its recently launched "Managing Water Resources to Meet Mega-City Needs" technical assistance programme.

The ADB project is to prepare strategies for the sustainable supply of affordable and safe water to these large cities in Asia. Initial studies are to highlight common problems and their solutions. The project must take into account the present and long-term needs for water, including those of the urban poor and users outside the city limits. ADB and World Bank officials will meet with the consultants to discuss proposals for action at a workshop in Manila at the end of August.

The World Bank-UNDP Water and Sanitation Programme recently concluded the first international conference on urban water conservation in Dalian, China. More than 120 participants from major cities in China and other parts of the world agreed to focus more attention on the growing water crisis in developing world cities and the need to conserve water. This meeting emphasized that urban water conservation is becoming an essential policy and strategy

issue, which unless integrated into government programmes, threatens to hamper economic growth in many regions.

In a recent interview in *World Bank News* Saul Arlosoroff, project manager of the Programme, spelled out the few options cities have and measures to be undertaken to tackle the problems. One option for cities that want to have enough water to drink is to bring more water into the city. Cities then have to go to a new source of water, possibly build a dam, divert water, treat it and pump it. "Often that involves serious environmental, economic, and administrative challenges", says Arlosoroff.

The second option is much cheaper. That is to start managing the demand and reduce water consumption in industry, commercial enterprises and households, while at the same time reducing supply losses. "If you introduce policies and the regulatory framework to better manage water use, you can reduce water consumption by up to 20 to 40 percent". Singapore and some cities in the United States have done this.

To tackle the problems the World Bank suggests three measures.

First, water must be priced according to its cost and value. If water is undervalued, industry, people and local governments do not pay attention to how much water they use. Second, cities must reduce the losses of so-called 'un-accounted for' water. Third, many industries and commercial enterprises still waste water despite paying the full price. Many businesses and employees need to be educated about how to stop wasting water, reduce pollution and decrease environmental hazards.

The meeting in Dalian is part of the Bank's global effort to promote the issue of urban water conservation. It was also the first of a planned series of conferences to transfer knowledge and experiences with officials from developing world cities. Urbanization and water supply and sanitation is also one of the subjects to be discussed at the second meeting of the Water Supply and Sanitation Collaborative Council in Rabat, Morocco from 7 - 10 September 1993.

For information on the ADB Mega-City project contact:
Asian Development Bank.

P.O. Box 789, 1099 Manila, Philippines

For the World Bank's programme in urban water management contact:

UNDP/World Bank Water and Sanitation Programme,
Saul Arlosoroff,
1818 H Street NW, Washington, DC. 20433, USA.



STRUCTURAL ADJUSTMENT POLICIES AND THE WSS SECTOR

Structural adjustment policies (SAPs) were introduced in the early 1980s as a result of the growing debt crisis and the economic difficulties of many developing countries. Their main philosophy lies in an efficient management of demand and a stimulus of supply in order to restore a dynamic market economy and promote growth. Monetary and fiscal instruments are used on a short-term basis in order to stabilize or stimulate national economies. On a medium- and long-term basis, structural reforms are undergone in order to create an optimum market economy. SAPs are therefore not only tools for economic stabilization and growth, but in some way they have become a tool for development.

In the late '80s it became clear that these policies were not adapted to local conditions and realities, taking for granted that an African farmer would react the same way as the famous western *homo economicus*. SAPs have had a negative impact on the most vulnerable groups of society and also in the water supply and sanitation sector. Some examples follow.

- Reductions in public expenditure as a means to overcome national budget deficits have slowed down government investment programmes, and often have induced cuts in recurrent expenditures, resulting mainly in cuts in operation and maintenance activities. This trend has put some pressure on local communities to be more financially responsible for the recovery of O&M costs.
- Reduction in public expenditure has also resulted in cuts in subsidies and therefore increases in costs of parts, putting more pressure on communities.
- Budget rationalization implies better management of resources. Choices often fall on high priority projects yielding high returns, which could lead to favouring large projects rather than small marginal projects, such as many water supply and sanitation projects in peri-urban and rural areas in particular.
- Credit squeeze, aiming at stabilizing demand and reducing inflation, has a direct effect on investment potentials, discouraging projects requiring bank loans.
- Currency devaluation, as a means of stimulating exports, has caused the increase of the price of imported components of water supply schemes. Since a great deal of parts are imported, this could lead to the decrease of the implementation of projects as well as to problems in buying spare parts for minor and major repairs.
- In general, currency devaluation and liberalization of prices and financial markets have a strong influence on the level of prices. Increased prices are favoured in order to stimulate production, but at the same time the cost of basic needs becomes more difficult to bear, especially for the vulnerable groups in peri-urban and rural areas. The percentage of income available for water spending is hence lower, while communities are increasingly

frequently asked to take financial responsibility for the maintenance of their water supply facilities.

The international community is aware of the side effects of the impact of SAPs and institutions like UNICEF, the EEC and also the World Bank have started to react. The main idea is to adapt SAPs to the real local situations while protecting vulnerable groups. This means having to foresee possible consequences and create compensation programmes, such as aid to local organizations or associations; health and nutritional support; aid to small, labour-intensive projects, etc. However, the real compensation programmes would still rely on a proper set of structural reforms, which leads us back to square one. Should structural reforms adapt themselves to the needs and potentials of a nation, or should a nation adapt itself to structural reforms? That is the question.

O & M WORKING GROUP PRODUCES TRAINING PACKAGE

The training course package called "Management of Operation and Maintenance in Rural Water Supply and Sanitation" is to date one of the most significant achievements of the Working Group on Operation and Maintenance, which was designated by the Water Supply and Sanitation Collaborative Council in September 1991 to deal specifically with operation and maintenance (O&M) issues. The course package has been prepared jointly by WHO and IRC under the guidance of the Working Group.

The package is aimed at working level managers, and is designed to be a guide for facilitators who will conduct O&M training courses. The general objective of the course is to contribute to improved management of programmes by enhancing participants' understanding of sustainability issues as well as to increase their ability to sustain adequate O&M activities. The duration of the course is 80 hours, or two weeks. Its structure is flexible enough to be adapted to local circumstances and needs.

The training package was tested in Namibia in May 1993. The tests concluded that the course was addressing O&M issues in a pertinent way and that it was indeed properly designed for an audience of a managerial level, using participatory techniques. It was also concluded that the package needed to be more comprehensive as far as the facilitator is concerned, and it has now been agreed to adjust the package into a final version planned for September 1993.

The present version of the package is currently being translated into Arabic, and it would be of interest to translate it into French and Spanish once the final version is ready.

Working Group meets in Geneva

The Working Group is also involved in many other activities, which were discussed during its most recent meeting from

1-4 June at WHO Headquarters in Geneva, and in which 32 professionals from 24 countries participated.

The Group's main scope of work is :

- to improve the profile of O&M in the sector and promote optimum management of existing assets;
- to consolidate work carried to date by various agencies on guidelines, manuals and training packages on optimizing O&M of water supply and sanitation facilities;
- to promote and facilitate the exchange of information on O&M.

The Group reviewed the activities undertaken so far and proposed actions to be taken in order to make the tools produced thus far available, as well as to develop new tools.

Activities to date

To date the group has developed tools for assessment of O&M status in urban and rural water supply and sanitation; prepared guidelines on models of management of O&M in rural areas and another one for urban areas; prepared a guideline on optimization of drinking water treatment plants; prepared a training course package on leakage control; selected case studies; and developed the training course package on Management of O&M in rural water supply and sanitation.

Issues to be considered for the future

The Working Group's first priority is to consolidate and promote all the tools produced so far so that they can reach the intended users in the best way possible.

The Group spent some time formulating and prioritizing issues to be considered for the future: optimization of resources; O&M in peri-urban areas; a legal framework for O&M; private sector involvement; operationalization of community management and of urban and rural sanitation; and promotion of information on technology choice and design. All of these issues are part of a global objective of poverty alleviation, and of sustainable water supply and sanitation systems.

DEVELOPMENT KNOWLEDGE SHOULD BE SEEN AND HEARD

"Knowledge and ideas are critical to development. We need reliable data to inform us about how we are doing and analysis to determine which policies succeed..." With these words World Bank President Lewis Preston kicked off the fifth annual international conference on development economics sponsored by the World Bank in Washington, DC from 3-4 May.

Development economics, which plays a key role in the process, has contributed greatly to achieving broader development goals through the contribution of important research and ideas. A few examples include: the recognition that investment in people is the strongest foundation for lasting economic and social progress, influences all thinking on development; and that evidence in favour of a market-friendly approach to development has helped trigger a virtual economic revolution from the poorest countries of Africa to - hopefully - the new states of the former Soviet Union.

As we are challenged by the changes in the global economy, we must constantly replenish and sharpen our knowledge base. Many developing countries look towards the **developed world** as primary sources of development knowledge, and the latter therefore has a responsibility to ensure that knowledge and information reaches policymakers and practitioners. To be successful, more innovative research and good ideas are needed, and these must be put to work.

COMPUTERIZED SLIDE SHOW ON CHOLERA

The WASH Project has prepared a computerized slide show entitled *Assessing the Options in Water, Sanitation and Hygiene Education for Cholera Prevention and Control*. The show describes a method for conducting rapid assessment of cholera vulnerability in countries faced with the threat or the reality of cholera.

The show seeks to provide a broad framework for thinking about cholera. Five free-standing parts contain background information on how cholera is spread and prevented. Both direct causes and indirect factors, such as weak sector institutions or the absence of laws and regulations, are covered.

In addition, the show reminds the viewer that cholera is only one of a number of faecal-oral diseases which kill millions every year. It stresses that prevention through provision of water and sanitation is the cheapest cure in the long term.

The show may be presented on an IBM-compatible personal computer (386x or higher) with a VGA colour monitor and 10 MB memory. A set of presenter's notes accompanies the show.

WASH is not distributing the sets of diskettes to anyone that requests them just like that. Instead, WASH asks interested people to register their needs and to provide WASH with a bit more information.

For more information contact:

WASH

1611 N. Kent Street, Room 1001,

Arlington, Virginia 22209-2111

USA.

NEW PUBLICATIONS

Application of Geographic Information Systems in Hydrology and Water Resources Management, edited by K. Kovar & H.P. Nachtnebel, IAHS Publication no. 211, ISBN 0-947571-48-5, 694 pp., US\$ 80.

This book contains the proceedings of the Conference on the Application of Geographic Information Systems in Hydrology and Water Resources Management (HydroGIS 93) held in Vienna in April 1993. The objectives of the conference were to exchange experiences in the application of GIS and to identify research needs with respect to the specific requirements of hydrology and water resources-related management. The 69 papers included in this volume are grouped under, among others, the following topics: decision support and expert systems; coupling GIS with hydrological models; application of GIS in water and environmental management; and application of GIS in surface and groundwater systems.

The volume is a contribution to the evaluation of the benefits and drawbacks of the application of GIS in hydrological sciences, and identifies specific requirements to achieve successful application of GIS in hydrology and water resources management.

For more information contact:

IAHS Press, Institute of Hydrology
Wallingford, Oxfordshire, OX10 8BB, UK
tel: (+44) 491 838800 / fax: (+44) 491 832256

UPCOMING EVENTS

GENDER AND WATER RESOURCES MANAGEMENT : LESSONS LEARNED AND STRATEGIES FOR THE FUTURE, Stockholm, Sweden, 26-28 August 1993.

The workshop, organized by SIDA, aims to gather expertise on gender and water resources management. Although it will include a strong focus on domestic water supplies (rural and urban), environmental aspects and water as a productive resource (e.g. for irrigation) will also be dealt with. Further attention will be given to sanitation and environmental hygiene. One of the outcomes will be recommendations for the 1994 meeting of the OECD Development Assistance Committee. Participants will be invited from donor agencies from Nordic countries, Italy and the Netherlands, as well as from UN agencies and Swedish research institutes.

For more information contact: Margareta Sundgren, Water Dept. or Carolyn Hannan-Andersson, Gender Office, Infrastructure Division Swedish International Development Authority
61 Birger Jarlsgatan
S-105 25 Stockholm, SWEDEN,
tel: (+46) 8 728 5458 (direct) / fax: (+46) 8 612 0889

1ST LATIN AMERICAN CONFERENCE ON HEALTH EDUCATION, Havana, Cuba, 27 September-1 October 1993

The conference theme is "Health as Life Expression". Focus will be on: professional training in health education; school as a focal point for health education; community participation in health promotion; the importance of health education in the family setting; contribution of social sciences to health education; impact of mass media; and education aspects of STD control.

The conference is organized by the Regional Office for Latin America of the International Union for Health Education and sponsored by PAHO, UNICEF, UNESCO, and UNFPA. **Registration fee:** US\$ 150

For more information contact: Conferência Latino-Americana de Educação em Saúde - UIES/ORLA
Centro de Ciências da Saúde
Bloco A, Sala 26 NUTES/URFJ - Ilha do Fundão
21949-900 Rio de Janeiro-RJ, BRAZIL
tel: (+55)-21-270 3944/220 5089
fax: (+55)-21-270 5449/240 4299

TWO-DAY WORKSHOP: CURRENT DEVELOPMENTS IN HANDPUMP TECHNOLOGY AND MANAGEMENT, Silsoe College, Cranfield Institute of Technology, Silsoe, Bedford, UK, 13-14 October 1993

The aim of the workshop is to familiarize and update participants on the state of the art of handpump technology and the issues surrounding pump maintenance and management. The emphasis will be on the latest experience and thinking, and on practical implications of design and management choices. The first day of the workshop will consist of presentations and discussions on key current issues and the second day will involve hands-on experience of handpump installation and maintenance, utilizing Silsoe's modern purpose-built handpump training facility.

Workshop fee: £ 270 / person.

For more information contact:

Short Course Executive
Silsoe College
Cranfield Institute of Technology
Silsoe, Bedford MK45 4DT, UK
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This newsletter is printed on chlorine-free paper

Newsletter No. 218/219, July/August 1993

SPECIAL ISSUE

WARMING UP FOR THE RABAT FORUM

Note from the Editor: This is a special issue devoted to the upcoming meeting of the Water Supply and Sanitation Collaborative Council in Rabat, Morocco from 7-10 September 1993



MAKING THE MOST OF RESOURCES VIA THE COLLABORATIVE COUNCIL

Note from the Executive Secretary

The Water Supply and Sanitation Collaborative Council came into being at the end of the International Drinking Water Supply and Sanitation Decade (1981-1990) to meet a greatly felt need for a forum for sector professionals from both the North and the South to meet on equal terms to deliberate on issues of common concern and reach collective understanding towards their resolution.

The next meeting of the Council will be in Rabat, Morocco from 7 to 10 September 1993. The *Rabat Forum* is being made possible through the graciousness of the Government of Morocco in offering to host the meeting and the dedicated efforts of the National Office of Potable Water (ONEP), which was delegated by the Government to attend to the concomitant formalities and tasks.

The Council as constituted defies classification due to its uniqueness. It is a 'mechanism' that involves and engages all existing agencies concerned (North and South, governmental and non-governmental, multi- and bilateral, research, information and professional organizations, the public and private sector) in carrying forward and enhancing the momentum of the Decade in dealing with issues and needs of the future. The essence of the arrangement is its informality in structure and operations, and the opportunity it provides sector professionals to work collectively and objectively without concern for agency or country sensitivities to help remove barriers to sector progress.

The effectiveness of the Council depends on the quality and acceptability of its 'collective wisdom'; the conscious non-identification with big and strong agencies or regional or political loci; and recognition by countries and agencies on account of the credibility of the participants to Council activities. It is an attractive mechanism because it is small,

consultative, makes the most of existing institutions and available resources, and is free of bureaucratic inertia.

The Council concerns itself with the major messages for the sector from the experience gained and lessons learned during the Decade, which were articulated through the Global Forum *Safewater 2000* (New Delhi, September 1990) and subsequent conferences such as *Water and Environment* (Dublin, January 1992), and the *Earth Summit* (Rio de Janeiro, June 1992).

The work of the Council is enumerated elsewhere in this issue. It is expected that about 200 participants (resource persons) equally from the North and South and adequately representing the various interest groups, will participate at the Rabat Forum. We expect the Forum to be stimulating and of practical value. Three keynote presentations will also be made, the first on "Making the Most of Resources" in the context of imaginative and successful approaches which have been adopted in a city, the second on "Making Better Use of Resources - the Moroccan Experience", and the third "Coming Down from the Earth Summit" in the context of the implementation of Agenda 21.

I wish all participants a productive Forum and an enjoyable stay in Morocco.

Ranjith Wirasinha
Executive Secretary
Water Supply and Sanitation Collaborative Council

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WORKING GROUPS IN A NUTSHELL

The following are excerpts from the Executive Summaries prepared by each of the seven Collaborative Council Working Groups, for the meeting in Rabat.

Country Level Collaboration

Coordinator: Mr Brian Grover, Canadian International Development Agency

The CLC Working Group initiated a total of ten case studies: three in Asia (Indonesia, Pakistan and Sri Lanka); six in Africa (Burkina Faso, The Gambia, Ghana, Mali, Nigeria and Zimbabwe); and one in Latin America (Paraguay). Part of the group's mandate was to seek out CLC success stories, and the case studies revealed quite a number.

Among the successes cited in the Executive Summary is Zimbabwe's National Action Committee. Unlike many other NACs formed in the early years of the International Drinking Water Supply and Sanitation Decade (IDWSSD), Zimbabwe's has flourished since being reorganized to coordinate implementation of the country's Master Plan for Rural Water Supply and Sanitation. One reason given for the NAC's effectiveness and high profile is that it has a permanent secretariat -- the National Coordination Unit.

Regular donor consultations in Sri Lanka are another positive example of effective CLC. Follow-up is assured by guaranteed funding for periodic consultations provided through an Asian Development Bank loan for sector development. This overcomes the common criticism of donor consultations that there is rarely any follow-up on the part of donor agencies.

From the case studies and experiences of Working Group members the CLC group has prepared a set of Guiding Principles for CLC activities and is recommending that they should be issued by the Council as a tool for any members seeking to implement CLC activities in their own countries. The group also recommends the publication and dissemination of a CLC advocacy flyer, and the initiation and monitoring of specific CLC demonstration projects, particularly in relation to enhanced community involvement and government/NGO collaboration.

Urbanization

Coordinator: Mr Ivo Imparato, Ministry of Foreign Affairs, Italy

The Urbanization Working Group focused on two key areas of concern requiring urgent action:

- the need for a better understanding of the peri-urban sector; and
 - the need for sector institutions to recover capital and operating costs and to gain access to capital markets.
- From its detailed consideration of these key concerns, the

Group developed a basis for action and guidelines for immediate action on six strategic elements:

* *Security of tenure*

Full legal regularization of land tenure should not be considered a prerequisite for water and sanitation service provision. The group suggests ways in which the extension of basic services can be based on mutual recognition between authorities and peri-urban settlement communities.

* *People's participation*

Partnerships involving government agencies, utilities, banks, NGOs, grassroots organizations and consumer groups are seen as essential to guarantee adequate project design and efficient service management. The guidelines include the establishment of specialized cadres to deal with peri-urban communities, with staff skilled in encouraging people's participation.

* *Cost recovery and resource mobilization*

The need for sound financial management of utilities seeking access to capital markets requires changes in tariffs and cost-recovery policies. Special methodologies are needed to assess willingness and ability to pay in peri-urban communities. Women often hold the key to their families' willingness to pay, and the guidelines include specific recommendations for improving women's access to credit and enhancing their influence on payment systems.

* *Appropriate technologies*

In today's peri-urban areas, appropriate technology is not simply low-cost technology. The difficult physical and socio-economic conditions demand a high level of engineering skills. Again, the influence of women is seen as important in determining the features that any new service needs to have.

* *Institutional reform and capacity building*

Improved financial and administrative efficiency need to be accompanied by effective mechanisms for institutions to collaborate in providing services in peri-urban areas. Guidelines in this sphere include measures to train and retain staff, involvement of the private sector and NGOs, and inter-disciplinary working groups.

* *Water resources conservation and management*

Springing from the recommendations of international gatherings in 1992 (International Conference on Water and the Environment - Dublin; United Nations Conference on Environment and Development - Rio), the group emphasizes the need for an integrated approach, mentioning specifically the role of peri-urban sanitation improvements in the protection of water resources. Economic and regulatory incentives are seen as important tools.

Operation and Maintenance

Coordinator: Mr José Hueb, World Health Organization

The overall objective of the O&M Working Group is to contribute to the improvement of the performance of operation and maintenance in the water supply and sanitation sector through the fostering of the optimum management of existing assets, mobilizing of international and national resources for improved operation and maintenance and development of tools to support action in this regard.

The Working Group differs from the others in that the Collaborative Council adopted an existing inter-agency Working Group initiated by WHO. The group therefore had a strong base to build on, including a number of 'tools' developed from the earlier group's initiatives. A key part of the group's recommendations for Rabat will be the use of these tools and their widespread promotion by ESAs and national agencies. Specific O&M tools commended by the group are:

- Guidelines for the Management of Operation and Maintenance of Urban Water Supply and Sanitation Systems (WHO)
- Training Course Package on Leakage Control (UK Water Research Centre)
- Guidance Materials on Optimization of Drinking Water Treatment Plants (WHO, under development)
- Training Course Package on Management of Operation and Maintenance of Rural Water Supply and Sanitation (prepared by IRC and tested by GTZ in Namibia)
- Models of Management Systems for the Operation and Maintenance of Rural Water Supply and Sanitation Facilities (WASH)
- Tools for Assessment of Operation and Maintenance Status of Urban and Rural Water Supply and Sanitation (WEDC and IWSA, under development).

The Group's recommendations also include future efforts to develop new tools, to monitor O&M costs and performance and to develop indicators which reflect O&M requirements.

Applied Research

Coordinator: Mr Roland Schertenleib, International Reference Centre for Wastes Disposal, Switzerland

The AR Working Group has developed recommendations for improving the quantity, quality, focus and application of applied research. To help initiate more research, the group directs recommendations towards external support agencies (ESAs), urging them to assess whether their contributions to applied research are a fair proportion of their total investments in the sector, and to make it easier for developing countries to prepare research proposals.

To improve the quality of research, the recommendations include development of guidelines for research proposals, capacity building components to strengthen researchers and research institutions in developing countries, and more

collaboration among researchers in developing and industrialized countries.

In the past, the focus of research has been too much towards the needs of research institutions rather than those of users in developing countries. The group sees a need for more emphasis on non-technical issues, though it also emphasizes the need for more research on technologies relating to liquid and solid waste management.

Better application of applied research findings will depend on ESAs supporting both the dissemination of the results of research and application of those results in the field. The group wants to see a greater proportion of programme funds invested in projects using the low-cost technologies that have already been developed.

In evaluating the performance of GARNET (The Global Applied Research Network, which began as an initiative of the former ESA Collaborative Council), the AR Working Group suggests that the network's activities should be reassessed and probably reduced to the most important ones, and that the target group should not be confined to researchers but also include professionals and ESAs.

Information Management

Coordinator: Mr Han Heijnen, IRC International Water and Sanitation Centre

Raising the status of information management in the sector is one of the key changes sought by the IM Working Group. Sector agencies are urged to ensure that responsibility for information management is assigned to a senior manager and that the tasks of collecting, validating and disseminating information are undertaken by professionals with appropriate training. The group points to examples from Peru, Uganda, Burkina Faso, and Namibia to illustrate the way in which access to the right kind of information can produce dramatic improvements in the planning, design and implementation of water and sanitation programmes.

It is important that information is tailored to the needs of specific users and that full use is made of all available information resources. The group therefore emphasizes that information policies and strategies should be linked to analysis of sector needs and resources and that sector institutions establish an adequate and separate budget for information management which includes both capital and recurrent expenditure.

Specific tools are suggested for managing the different categories of information - project and sector information, monitoring information, operational and administrative information, and technical information. A guiding list of actions is provided to build capacities for information management at institutional and sector level within a country. Furthering of an enabling environment of policy, people and national sector institutions thus shows the way to improve information management for optimizing sector performance.

IEC -Information, Education and Communication

Coordinator: Mr Hans van Damme, IRC International Water and Sanitation Centre

IEC needs introduction in the sector to ensure that policymakers, the water and sanitation sector and users work towards common goals. It is directed towards achieving a communication culture, leading to heightened participation of all potential partners, increase of efficiency and effectiveness of programmes and a raising of the awareness among key decision-makers of the importance of water supply and sanitation to the economic, social and physical well-being of communities.

With support from UNICEF, the UNDP/World Bank Water and Sanitation Programme and IRC, The IEC Working group has developed three new 'tools' to assist agencies seeking to implement communication initiatives:

Towards a Communication Culture is a 6-page advocacy leaflet setting out the principles and benefits of improved communication in a concise and persuasive way.

The Resource Booklet for Communication in Water Supply and Sanitation provides comprehensive guidelines on the steps needed to establish a communication strategy for the sector in a developing country.

A Volume of Case Studies contains seven examples of successful national communication programmes in water and sanitation and related sectors (Guinea worm campaigns in Nigeria and Ghana, Rural sanitation programme in India, Diarrhoeal disease programmes in Egypt, Swaziland, Honduras and Nicaragua, Water and health in northern Ghana, Bringing facts for life to the Philippines, Rural sanitation in Lesotho, and a Rural communication programme in a Mexican agricultural programme).

As well as commending these tools for use by Collaborative Council members, the IEC Working Group has helped national agencies in Nigeria and Guinea Bissau to formulate proposals for a pilot IEC project. That project is presently under positive consideration for funding by the Netherlands Government, and is expected to get under way before the end of the year. It includes a West African regional workshop in Nigeria and a national workshop in Guinea Bissau, and is linked with IEC initiatives in these two countries sponsored by UNICEF.

The Rabat meeting will be asked to begin the process of developing a Common Vision for the sector, which can help in the coordination of sector promotion activities for such opportunities as World Water Day (March 22 every year).

Gender Issues

Coordinator: Ms Wendy Wakeman, UNDP/World Bank Water and Sanitation Programme

The Gender Issues Working Group worked differently from the other Council Working Groups. Because of the

cross-cutting nature of its topic, the group decided that its members would join the other Working Groups and help them to address gender issues. In addition, the group has prepared a comprehensive Gender Issues Sourcebook for the Water and Sanitation Sector.

The sourcebook is a compilation of tools and other resources for use in gender-sensitive programming. It includes guidelines, checklists, terms of reference, charts and community level tools. Two 'tool selection matrices' help users to find the right tools for each stage of the project cycle and for training, personnel and budgets. The resources section contains a list of bibliographies and agencies with particular expertise in gender issues in the sector.

The Working Group's Summary Report for Rabat provides strong advocacy for wider consideration of gender issues, citing numerous authoritative documents to demonstrate the benefits which may accrue as a result. A separate report reviews the findings of the other Council Working Groups and notes with satisfaction that gender issues have been considered and included in the reports.

In its recommendations for future activities, the Gender Issues Working Group urges agencies to endeavour to increase the numbers of women sector professionals, managers and project participants and to ensure that women are involved in the full range of sector activities.

COLLABORATIVE COUNCIL INITIATIVES

Aside from the seven Working Groups, the Collaborative Council also supports three initiatives in specific regions. Their activities are described below.

Small Island Nations and their Specific Needs

Coordinator: Mr Somsey Norindr, UNDP Resident Representative on behalf of the United Nations (Water Resources Unit of the Department for Sustainable Development) as executing agency, and the implementing agencies (Public Works Departments) of the Governments of the South Pacific Island Countries, as well as the regional organizations involved such as the South Pacific Applied Geoscience Commission (SOPAC), the South Pacific Commission (SPC), the University of the South Pacific (USP) and the South Pacific Regional Environmental Programme (SPREP).

Fresh water is a finite and vulnerable resource in the Pacific Island Countries (PICs). Increased demands are being placed on their limited water resources due to population growth, changes in living standards, urbanization and use by agriculture and industries. Increasingly, pollution by effluent and solid waste disposal is becoming a problem.

During the latter half of the 1980s UNDP funded a regional project for water resources assessment and planning in the Pacific Islands. That project investigated the water resource situation in each of the fifteen countries of the region, and followed up through collaborating in drawing up project activities for most of the countries. The experiences

of the programme were brought to the attention of the members of the Collaborative Council at the Regional Consultation *Water Supply and Sanitation - Beyond the Decade* hosted by the Asian Development Bank in June 1990. The Council's association with this current initiative on the special case of Small Island Nations was established at that meeting.

To identify the main constraints and priority needs in the PICs at the beginning of the 1990s, in 1992 a UNDP team prepared an overall programme outline of the situation in the islands and recommendations for specific actions. A document for a regional technical cooperation programme has since been prepared and become operational.

The programme is developing solutions to some of the problems affecting the water and sanitation sector through:

- development of sector strategy action plans
- revision of water and sanitation legislation
- consumer education in water conservation
- improvement of rural water supply systems to include hygiene and sanitation measures
- establishment of an International Training Network for the region
- improved solid waste management strategies and procedures
- provision of training and equipment for water resource assessment and water quality monitoring
- development of activities which incorporate the project activities into existing regional institution(s).

The programme would also coordinate and collaborate with the large number of other bilateral (including Australia and Japan) and multilateral donors active in the sector in the region.

As the progress on the implementation of the activities involving several cooperating agencies would be clearly of interest and use to members of the Collaborative Council, a status report will be made available at the meeting in Rabat in September.

Managing Water Resources to meet Megacity Needs

Coordinator: Mr Arthur McIntosh, Senior Project Engineer, Asian Development Bank (AsDB)

In the year 2000 half of the world's megacities (over 10 million people) will be in Asia. They generate about two-thirds of the gross national product and raise about three-quarters of the national taxes in most countries of the region. However, water stress situations are developing in the megacities of Asia, and the consequences of inaction could be profound.

During the Regional Consultation *Water Supply and Sanitation - Beyond the Decade* in June 1990 at the request of the Collaborative Council, the issues relating to urbanization in Asia were identified as critical and requiring urgent attention. Following further consultation between the Council, AsDB and others, particularly HABITAT, AsDB

agreed to host a Regional Consultation *Managing Water Resources to Meet Megacity Needs*.

The objective of the consultation is to develop, through sharing the relevant experiences of a number of megacities, appropriate strategies and actions for managing water resources in a manner that will ensure the sustained supply of affordable and safe water to large cities of Asia. The outcome is expected to be specific recommendations for time-framed actions linked to future investments in the megacities. In addition a set of general guidelines will be produced for the development and management of water resources in all large cities.

This Regional Consultation is being held from 24-27 August at AsDB in Manila. Preparations are well under way, case studies of the experiences in eight selected Asian megacities have been completed, and pertinent theme papers on Economic Pricing of Water and Demand Management, Wastewater, Pollution and Recycling, and Comprehensive Water Resource Management, are nearly completed.

The recommendations and outcome of this Regional Consultation will be part of the material considered by members during their consideration of the findings of the Working Group on Urbanization of the Collaborative Council Meeting in September in Rabat.

The Lusophone Initiative

Coordinating Agency: The Secretariat of the Water Supply and Sanitation Collaborative Council

The First International Meeting on the Status of the Water Supply and Sanitation Sector in the Lusophone African Countries was held in Lisbon, Portugal in April 1988. Representatives of Portuguese-speaking African countries expressed their needs for enhanced collaboration concerning capacity building for the water supply and sanitation sector. A lack of access to relevant information and expertise was identified as a major bottleneck to progress in water supply and sanitation.

In September of 1991, during the Global Forum of the Water Supply and Sanitation Collaborative Council in Oslo, discussions were held in an informal meeting of governmental, non-governmental, technical and financing agents. The need for concrete measures for capacity building in the Lusophone African Countries (LACs) was emphasized, and the "Lusophone Initiative" was born. Participants formulated the basic needs for a collaborative project with the Portuguese-speaking African countries: the need for information exchange, for development of human resources, the need for effective support from multi- and bilateral agencies, and the necessity of a triangular cooperation including Portugal, Brazil and the LACs.

With support from the Council, a series of activities were initiated aimed at the development of basic capacity in the African Portuguese-speaking countries, enabling them to meet their basic demand for information in the water and sanitation sector.

In May 1993 the Second International Round Table was organized by the Portuguese Government in Lisbon, under the aegis of the Collaborative Council.

The meeting had three principal objectives:

- exchange of information on the latest sector developments in each of the Lusophone African Countries, based on updates of a sector assessment carried out by WHO in 1988;
- consideration of the assessments made in each country by the Portuguese health authorities on education and training facilities and needs;
- consideration of the assessment made of the information management situation in each country by the IRC International Water and Sanitation Centre, as well as acceptance of its *Inventory of the Main Sources of Information in Portuguese for the Water Supply and Sanitation Sector*.

At the meeting, IRC was asked to continue as the coordinating institution for the information management component of the Initiative. The Portuguese health authorities will act as the coordinator for the training and human resources development activities.

The Italian Government has supported the assessment and inventory phase of the Initiative and has allocated some start-up funds for the implementation of country-level activities.

COUNCIL EMBRACES NEW ISSUES

Besides the issues presently dealt with by the Collaborative Council, there are other emerging issues and options which need focused attention in the coming period. Discussion/Issue Papers will be presented on these topics and discussed in group sessions at the meeting in Rabat for consideration by the Council on follow-up action.

The new issues/options identified are:

1. Water - a Limit to Growth?

Economic Importance of and Urgency for Pollution Control

2. Water Demand Management and Conservation

Urgency and Options

3. Promotion of Sanitation

A Role for the Community backed by Environmental Hygiene/Education

4. Institutional and Management Options

For the Formal as well as Informal Sectors

5. Future Options for Official Development Assistance in the Sector

A Round Table

6. More Partners

The Roles of Consumers, Non-Governmental Organizations, Professional Associations and the Private Sector

NETHERLANDS GOVERNMENT TO HOST INTERNATIONAL MINISTERS' CONFERENCE

The Netherlands Minister of Housing, Physical Planning and Environment, Mr. G.J.M. Alders, will be hosting a Ministerial Conference *Implementing Agenda 21 - focusing on drinking water supply and environmental sanitation*, tentatively scheduled to begin on the celebration of the second annual World Water Day, 22 March 1994.

In June of last year the United Nations Conference on Environment and Development (UNCED) was held in Rio de Janeiro. Chapter 18, the Freshwater Chapter of Agenda 21, UNCED's guiding document, proposed a programme of work by the international community addressing major environment and development priorities for the water sector for the period 1993-2000, and leading into the 21st century. It is believed that UNCED can only be deemed effective if the recommendations made there are followed up. The purpose of the Ministers' Conference therefore is to give water a higher place on the political agenda and to mobilize the interest of ministers and trigger their active support for follow-up action at policy level to the recommendations contained in Chapter 18.

Ministers from approximately 70 developing and industrialized countries will be invited to attend, as will several international agencies. In order to adequately prepare for the conference, an International Steering Committee has been appointed. This Committee had its first meeting on 1-2 July 1993, and will meet again in November 1993 and immediately prior to the conference in March 1994.

For further information please contact:

Mr. G.W. Ardon or Mr. P. Kendall

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COUNTRY PROJECTS TO ILLUMINATE LEGAL ASPECTS OF WATER RESOURCES: Report from FAO/WHO Working Group

What are the legal frameworks under which private organizations have participated in water supply management in Central America, the Andean countries, Mexico and Chile? What laws, regulations, and other legal provisions have been necessary to create contractual relations between public or semi-public agencies and private firms? These are among the questions which will be researched in a 6-9 month project evaluating South and Central American experience with private participation in management of water supplies.

This is one of the priority projects being picked up by the GTZ (German Agency for Technical Cooperation) from the work of the FAO/WHO Working Group on Legal Aspects of Water Resources, Water Supply, and Wastewater Management.

Another pilot project in Africa is proposed to look at the establishment of an appropriate legal framework for water resources management. This framework has to accommodate existing laws and regulations as well as traditional and customary practices, and match these with current trends to declare all water to become either public property or to be controlled by government. The legislative and administrative framework is to identify and compile suitable mechanisms for the sustainable and environmentally sound management (including research development, allocation, control and monitoring) of water resources as well as for the protection from pollution of those water resources.

These pilot projects are expected to become operational later in 1993 and 1994. The documented results of these projects are expected to create interest from other countries as well as donors.

Two other pilot project proposals concern the issues of improving surveillance of urban potable water systems and one on evaluation of experiences with wastewater reuse in cities of over 1 million inhabitants in India.

To date UNDP, and bilateral donors from France, Germany and Italy have participated in this working group. Developing country participants involved so far come from Costa Rica, Ecuador, India, Maldives, Morocco, Namibia, Nepal, and Sudan.

The Working Group on Legal Aspects of Water Resources, Water Supply, and Wastewater Management is not a working group of the Water Supply and Sanitation Collaborative Council, but was set up by FAO and WHO because the importance of water resources administration and legislation is being increasingly recognized by managers, technicians and economists as an essential part of the planning, operation and maintenance of projects concerned with water resources development and conservation.

Specialists consider present inadequacies in the laws in this field as constraints. As water resources become scarcer competition among water dependent sectors of economic and social activities grows. Consequently, the likelihood of conflicts increases, and the need for conflict prevention by governments arises. The current trend is to replace the settlements of conflicts in courts by government regulations adopting systems of water use concessions, permits, authorizations and licenses. In this process existing customary practices or court rulings have to be taken into account.

Also the use of waste water may generate increasing conflict between the users of wastewater and the users of other water sources and the public. The working group feels that modern legislation should provide mechanisms to settle these conflicts on the basis of government policies and criteria of general applicability, rather than court cases.

There are a few books available on these complicated issues. A very recent title has been written by a member consultant of the FAO/WHO working group, Mr. Dante A. Caponera: Principles of Water Law and Administration, published by A.A. Balkema, P.O. Box 1675, 3000 BR Rotterdam, The Netherlands, or Balkema Publishers, Old Post Road, Brookfield, VT 05036, USA. It costs Dfl 185.00 or US\$ 105.00, ISBN 90 5410 108 3. For more information about the FAO/WHO working group and to request reports of its meetings contact: Mr. Lawrence Christy, Chief Development Law Service, FAO, Viale delle Terme di Cracalla, 00100 Rome, Italy.



RABAT ACCORD SPEARHEADS SANITATION DRIVE FOR THE WORLD'S POOR

Following two years of analysis by leading experts, the Water Supply and Sanitation Collaborative Council is advocating some fundamental changes in the ways that developing country governments and external support agencies tackle the problem of providing water and sanitation services to 2.3 billion urban and rural poor who currently lack them.

At a meeting in Rabat, Morocco, from 7 to 10 September, the Council agreed on a range of activities at the global level and individual countries, designed to make politicians and the public aware of the economic, environmental, social and human imperatives behind the call for urgent action, and of the new approaches and technologies which make universal provision of hygienic sanitation an achievable goal.

The Council's dynamic Chair, Margaret Catley-Carlson, currently also President of the New York based Population Council is to head up a Rabat Action Programme. The experts' guidelines and action agendas will be packaged under this programme in ways which will have most impact on policy makers, and keep the water and sanitation issue in the public eye so that it obtains its rightful share of development resources.

The Collaborative Council's analysis include:

- * **Services for the urban poor.** Cost-effective water and sanitation services for the urban poor are fruitful ways of both stimulating economic activity and combating the increasing squalor of today's peri-urban environment. Full security of tenure need not be a prerequisite for obtaining sanitary services, as the mutual benefits can actually help to promote stable and sustainable development.
- * **Better operation and maintenance.** In many Third World cities, more than half of the water produced is "unaccounted for" or wasted; in rural areas 30-60% of facilities are out of use at any one time, with dire consequences for the health and living standards of affected populations. A whole range of training packages and guidelines have been produced by a Council Working Group on Operation and Maintenance, to assist countries in making better use of existing and new water and sanitation facilities.
- * **Improved information and communication.** In the past, the sector has suffered due to the need of good information for planning and management. Also, water and sanitation specialists have not been good at sharing information, either among themselves or with policy makers and the public. Work by specialists on information management and IEC (Information, Education and Communication) has identified ways to transform that situation. Simple and effective information management systems are at the heart of a new strategy, which enables developing countries to keep track of their own data and to link into a comprehensive international network of information centres. The development of a communication culture is part of a major advocacy campaign now being mounted by the Collaborative Council and by individual members. Guideline and tool packages are available.
- * **Country-level collaboration.** A major focus of the Council's programme is the stimulation of cooperative activities involving all the agencies involved in water, sanitation and related sectors in developing countries. Ten case studies commissioned during the last two years have yielded dozens of helpful examples of how agencies can combine resources and avoid wasteful duplication of efforts. The Council now has guiding principles to enable countries to coordinate inputs from different national agencies, communities, external support agencies, NGOs and the private sector, to make the most of all resources available.
- * **Key role for women.** Family hygiene and the provision of drinking water are predominantly responsibilities of women. Yet the planning, siting, design and operation of water and sanitation facilities remain almost exclusively in the hands of men. Where women have been able to influence the planning and management of services, projects have been much more successful, beneficiaries have been more willing to pay for the more reliable services, and greater benefits have been achieved. Guidelines have been developed through the Council on ways of involving women in all phases of water and sanitation programmes, without increasing their already heavy workload.
- * **Applied Research.** Some \$ 10 billion a year is invested in providing new or improved water and sanitation services in developing countries. Only a tiny proportion of the amount is spent on the research needed to develop new approaches and technologies to match Third World needs. The Council will promote countries to build up their own research capabilities, and to prepare more appropriate research proposals for consideration by donor agencies.

The way ahead

The Water Supply and Sanitation Collaborative Council is now pressing governments, donors and communities to modify their approaches in the provision of new and improved water and sanitation services and to take account of new approaches. At the same time, Council-mandated activities will continue under the direction of designated agencies, with the aim of enhancing the newly developed guidelines and helping countries to implement appropriate activities. Countries or agencies seeking to benefit from, or participate in, these continuing activities, should contact the designated agencies:

Services for the urban poor - The Italian Ministry of Foreign Affairs

Operations and Maintenance - The World Health Organization

Information and Communication - The IRC International Water and Sanitation Centre

Gender Issues - The UNDP-World Bank Water and Sanitation Programme

Applied Research - The Water, Engineering and Development Centre

Water Pollution Control - The World Health Organization

Through these activities the Council's current advice will be turned into practical application in developing countries. Meanwhile two new Working Groups will be helping to set the agenda for future initiatives. Two new working groups have been established under the umbrella of the Collaborative Council: one dealing with the Promotion of Sanitation and Hygiene Education, headed by WHO, and one on Institutional and Management Options (including Water Conservation and Demand Management), which UNDP has agreed to coordinate. These working groups will report its findings to the Council in two years time.

For details on the Rabat meeting or to obtain the addresses of mandated agencies, please contact IRC or the Executive Secretary WSS Collaborative Council c/o WHO Avenue Appia 20 CH-1211 Geneva 27, Switzerland Tel: (+41) 22 - 791 3685; Fax: (+41) 22 - 788 0054

BARRIERS TO CHANGE DISCUSSED IN NEPAL

Early September, 34 senior staff members of the Nepal Water Supply Corporation participated in a workshop in Kathmandu discussing barriers to change and producing important issues for consideration in a Mission Statement of the Corporation.

The workshop on introducing corporate planning into NWSC was organized by water specialists from South Staffordshire Water Services (UK), with assistance of ENSIC/ADB Project Coordinator Mrs K. Aryal. The UK group provides management support to the Corporation.

In working groups and plenary sessions participants discussed priority issues for the mission statement, as well as barriers with and outside NWSC. Factors promoting change for the better were also addressed.

At the end of the workshop each manager prepared a personal action plan, which includes a time frame when the actions specified are to be completed. For further information please contact: Mr. J.E. Thackray
Management Support Team Leader NWSC
P.O. Box 5349, Kathmandu, Nepal
Fax: - 977-1-223484

WASH EXPANDED TO ENVIRONMENTAL HEALTH

After nearly 800 individual technical assistance assignments to the U.S. Agency for International Development in 85 countries in the last 13 years, WASH will end and its activities will be taken up without interruption by the new Environmental Health Project (EHP).

The end of WASH and launching of the EHP this month does not signal any lessening of interest in water and sanitation on the part of A.I.D. Rather it is A.I.D.'s attempt to extent the scope of its efforts. It is a recognition that the principle health problem of the developing world are environmental.

The new EHP will closely resemble the WASH Project in how it operates -- its main job is to provide technical assistance to A.I.D. missions and bureaus. It will produce synthesis and how-to reports, and it will have an information centre. Apart from water and sanitation EHP's scope of work encompasses eight other sub-sectors: tropical diseases, solid waste, wastewater, air pollution, food hygiene, hazardous materials, occupational health and injury.

Information on water and sanitation will continue to be available under the EHP. To mark the end of the project WASH will publish shortly a revised edition of the popular 1990 pamphlet "Lessons Learned from the WASH Project." To get a copy and find out more about EHP contact: Dennis Carrol, Office of Health # 1234 Bureau of Research and Development, A.I.D. Washington DC 20523-1817 Phone: (1) 703 875 4480; Fax: (1) 703 875 4686

COURSES IN AFRICA

There are still a few places open for the French course on Management for Sustainability in Water Supply and Sanitation Programmes, which starts in Burkina Faso on 22 November 1993. The Pan African Institute for Development (IPD-AOS) and IRC is organizing this popular, three-week course for the second time. People interested contact by fax: L'IPD-AOS Ougadougou, Burkina Faso Fax (226) 30 03 90.

The next English version of the course will run from 31 January to 18 February 1994, in Buea at PAID Cameroon. IRC is assisting PAID staff to gradually take over the organization of this course in Africa.

PAID maintains 4 regional centres in Cameroon, Burkina Faso and Zambia. It specializes in training of trainers, applied research, consultancy services and assistance in the field of rural development, with emphasis on self-help initiatives and community participation.

Similarly, IRC is supporting AMREF in Nairobi to develop this course for East Africa. There, the course is scheduled to run for the first time in September 1994. AMREF's NETWAS, the Network for Water and Sanitation announced this course in its August newsletter with a

reference to the internationally recommended change of governments' role from provider to promoter of services. "This policy recommendation was not swiftly embraced by governments for socio-political reasons". But with dwindling financial resources, "a new formula has to be sought to keep the WSS sector alive".

From September 20 - 24, NETWAS is organizing in Ethiopia an introductory regional workshop on management for sustainability in water and sanitation projects.

Contact IRC's Training Section for participation or more information as well as for a copy of the 1994 Briefing and Training Courses programme.

For more information about NETWAS and its interesting regional newsletter contact: AMREF/NETWAS
P.O. Box 30125, Nairobi, Kenya, fax: 506112

HEALTH THROUGH SANITATION AND WATER A study from a village perspective

**By Jo Smet, Phil Evans, Mary Boesveld and François Brikké (IRC), Isaack Oenga and Daniel Makerere, (AMREF). SIDA Evaluation Report 1993/1.
ISBN 91-586-7149-8, 159 pp.**

The report describes an evaluation of the HESAWA (Health Through Sanitation and Water) Programme in the Lake Regions of Tanzania. The evaluation was carried out from May-September 1992 by IRC International Water and Sanitation Centre and the African Medical Research Foundation (AMREF) on request of the Swedish International Development Authority (SIDA). The programme began in 1985 and has the overall aim of improving the welfare of rural people through improved health education, environmental sanitation, drinking water supply, community participation, and capacity building at village and district levels.

The five focal points of the evaluation were: the relevance of the HESAWA approach in meeting programme goals; the level of goal attainment reached by the programme to date; the efficiency and effectiveness of the investment made so far; the long-term sustainability of programme impacts and approach; and the lessons learned from programme implementation.

The evaluation report attempts to provide a broad background for the detailed planning of the next phase of activities, indicating key issues to be addressed. It includes an explanation of the evaluation mission's approach, a description of the various aspects of the HESAWA Programme, impacts of the programme at village level, organizational and institutional issues, approaches towards building capacity through human resources development, financial and economic aspects, lessons learned, and a series of appendices, tables and figures.

Copies of the evaluation report are available from IRC.

NEW IRC REFERENCE SERIES PUBLICATION

IRC International Water Supply and Sanitation Centre is pleased to announce the publication of **A Guide to Secondary Sources of Information on Low-cost Rural and Urban Water Supply and Sanitation for Developing Countries**. The document has been published as number 8 in IRC's Reference Series and endeavours to enable better access to existing sources of information in the Water Supply and Sanitation Sector in developing countries.

The guide will help:

- a. those interested in setting up small libraries in developing countries;
- b. people wishing to know **how** and **where** to find specific subject related information.

Part One of the Guide on **subject definition** indicates a number of useful tools (dictionaries, glossaries, thesauri) which can be used when looking for information on specific subjects.

Part Two on **document identification** lists various formal means of finding out what has been written on specific fields or subjects. Part Three on **organizations** is concerned with both identifying organizations involved in relevant areas of work for the purpose of cultivating further professional contacts and also, in the context of libraries, for possible document acquisition.

The following categories of secondary sources of information are covered: bibliographies, literature reviews, abstract journals, current awareness bulletins, data bases, directories, (international) organizations, and information networks.

The Guide also includes a short list of useful documents for resource centres, a brief explanation of the Water Supply and Sanitation Collaborative Council's Lusophone Initiative, and a comparison of relevant CD-ROMs.

Order details:

A guide to secondary sources of information on low-cost rural and urban water supply and sanitation for developing countries. Prepared by Nigel Browne (1993)

RS8 **Price: US\$17.50 Dfl. 32,00 108 pages

** Price includes surface mail. Surface Mail Airlifted (SAL) and Airmail will add 20% and 30%, respectively, to the cost of the order.

For copies contact: IRC, Information Section,
P.O. Box 93190, 2509 AD The Hague, The Netherlands,
fax: +31-70-38 140 34.

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Newsletter No. 221/222, December 1993

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MALAWI VLOM PROJECT PROVIDES VALUABLE LESSONS

The Karonga Lakeshore Integrated Rural Groundwater Supply Project in Malawi draws a lot of interest from neighbouring countries. Since 1991 the Water Department of the Ministry of Works has been putting a village level operated and maintained system in place in an area of 2000 Square Kilometres. The project (assisted by the Danish Government) suggests a change in the traditional sequence of project development, from preparation - mobilization - construction - handover to users - operation and maintenance to one which allows community involvement in preparation and technical and social mobilization. Only after this a VLOM system should be established, followed by construction and handover of the water points to the users.

The project manager Claus Jespersen acknowledges that this slows down construction activities. But it contributes to sustainability of the facilities. The construction phase finished in 1990. So far, 301 boreholes have been constructed, 295 of these were fitted with the Afridev Deep Well handpump. The longest serving pumps have been in operation since 1988. At least 95% of the pumps are in operation at any given time, according to data obtained through monthly monitoring. 40% of the village water health committee members and 42 % of pump attendants are women. After having received training, pump attendants can do all repairs, except the cracks in the raising mains.

Pump Committees function around each of the 295 pumps. Seven out of ten water points have a Maintenance Fund, with an average amount of 32 KW (8.- US\$). So far the average expense needed for maintenance has been 28 KW. Since March 1993, two shops in Karonga district of the country's largest wholesale chain "Chipiku" are stocked with one year supply of Afridev Handpump spare parts. They sell fast running spares through 15 local shops. This brings these spares within a 5 kilometre distance of 95% of the pump committees.

Longer term: Latrines

One of the longer term project goals is to introduce Sanplat latrines in 50% of all the households in the project area by March 1995. To assist this a health education and sanitation play has been performed by four groups in 100 villages reaching over 6000 spectators. The sanplat casting is done by 50 trained village contractors, who are connected to the Health Centres. So far, nearly 3000 of these latrines have been locally produced, 85% of those have been installed. This means that three out of ten households have an improved pit latrine fitted with a sanplat, for which they had to contribute sand, stones and gravel.

Training at all levels and regular monitoring are important elements in the project. Training in 1991 concentrated on the VLOM concept. In 1992 thousands were trained not only on VLOM, but also on health and sanitation. A social monitoring system was created and tested. Technical monitoring was also introduced and the project developed a computer programme for treating monthly technical data as a management tool.

Note from the Editor

As of January 1994 the name, layout and presentation of this newsletter will change slightly. "Water Newsletter" will be the new title, "Developments in water, sanitation and environment" the subtitle. This change is needed to better reflect the widening scope of sector news coverage in the newsletter that IRC has been publishing since 1969. For a long time, this newsletter has published much more than only news from IRC.

The decision in 1993 of the Water Supply and Sanitation Collaborating Council to use this newsletter as a vehicle for distribution of Council news illustrates that it is high time for the name change.

With this change we will also introduce improvements in the page layout and presentation. Most of these were suggested in an earlier readers' survey.



Future sociological monitoring is needed to determine the viability and sustainability of the initiatives and social institution developed by the project. Among the lessons learned from this project are that the donor must be more flexible on choice of technology, and allow more freedom in budgeting procedures to allow adjustments following monitoring results. DANIDA support of Danish Crown 2.97 million was allocated for the introduction of the Karonga VLOM project, while funding is also available on an declining scale for operation and maintenance. This will eventually phase out completely in 1995.

For more detailed information on the Karonga project contact:

Controller of Water Services

Water Department

Private Bag 390

Lilongwe 3, Malawi

or

Mr Claus B. Jespersen

Karonga Integrated Rural Groundwater Supply Project

P.O. Box 1087

Lilongwe, Malawi

PLANNING FOR HEALTH AND SOCIO-ECONOMIC BENEFITS FROM WATER AND ENVIRONMENTAL SANITATION PROGRAMMES

Universal access to safe drinking water and to sanitary means of excreta disposal by the year 2000 are among the goals set at the World Summit for Children in 1990. Although the primary responsibility of achieving these objectives rests with governments, UNICEF is fully committed to support programmes which specifically focus on these problems. As an interim measure and as a way to gauge progress, mid-term goals have been set for 1995 to reduce the 1990-2000 year water coverage gap by 25 percent, and similarly for sanitation, reduce the gap for the same period by 10 percent. The organization is also committed to assist in the achievement of other goals associated with human health and well-being.

Recognizing the association between water, sanitation and health, UNICEF is currently seeking cost-effective strategies to combine full water and sanitation coverage with maximum health and socio-economic benefits. Consequently, as a means to develop practical guidelines for a global water and sanitation strategy (which incorporates health benefit objectives) UNICEF organized a two-day workshop in April 1993 entitled "Planning for health and socio-economic benefits from water and sanitation programmes". This workshop brought together leaders from major organizations in the field of water, sanitation, hygiene education, health, nutrition, epidemiology and development planning.

Participants included representatives of the World Health Organization (WHO), The World Bank, United Nations Development Programme (UNDP), Water and Sanitation for

Health Project (WASH), United States Agency for International Development (USAID), the International Water and Sanitation Centre (IRC), McGill University, Harvard School of Public Health, All India Institute of Hygiene and Public Health and the Federal University of Pelotas. Similarly, a number of UNICEF regional directors, country representatives and section chiefs from New York and field offices also participated.

The objectives of the workshop were to provide inter-agency and inter-sectoral collaboration, to improve knowledge of how health and socio-economic benefits can best be achieved from water, sanitation and hygiene education programmes, and to develop and endorse guidelines for a global strategy which would focus on maximizing health and socio-economic impacts.

Presentations and discussions covered six major topics: the health and socio-economic impacts that can be expected from water, sanitation and hygiene education; state-of-the-art techniques for monitoring and measuring health and socio-economic impacts; procedures to measure behaviour change; nutritional impact of water, sanitation and hygiene education programmes; conceptual framework development for water, sanitation and hygiene education; and planning of programmes which have health and socio-economic impacts as their major focus.

Several discussion papers on key issues were debated in small consultative groups. These groups examined especially the application in the context of practical field experience. The findings were discussed in plenary and the final outcome of the plenary sessions was fed into the main recommendations on issues raised at the workshop for future action.

Consensus reached

A strong consensus was reached among the participants on the need for a strategy framework on water, sanitation and hygiene education to help better focus future activities in the sector for greater health and socio-economic impact. The extent of this consensus is indicated by the widespread acceptance of the need for changes within the sector and is reflected in the following twelve major areas of agreement and recommendations;

1. Water and environmental sanitation programmes must give increased attention to hygiene education as an integral component.
2. The approach to water, sanitation and hygiene education must be inter-sectoral and inter-disciplinary. The inclusion of professional social scientists within the water and environmental sanitation sector should be promoted.
3. Water and environmental sanitation programmes should be re-oriented to include goals and objectives which focus on health, behaviour change and socio-economic impacts. These objectives should be based on a thorough assessment of the household and community situation and appropriate indicators established for monitoring and evaluation.

- 4 Strategies for more cost-effective programmes should include improving the efficiency of least-cost and appropriate technologies, community management, community financing (where this is appropriate), standardization of equipment, greater utilization of the private sector, and improved sustainable monitoring.
- 5 Water and sanitation budgets should be restructured to reflect a greater focus on hygiene education and health-related impacts and cost-effectiveness.
- 6 Community participation in planning, design, management and evaluation should be fundamental to the water and sanitation approach. Particular attention should be given to include women and actions which lead to their empowerment at all levels. Guidelines should be provided to support this and a special strategy developed to cover community participation and women's involvement. Special efforts should be made to include more women in WES teams.
- 7 Capacity-building at district level should be an integral part of the strategy and an on-going activity in all programmes.
- 8 Practical guidelines must be established for integrating hygiene education processes into water and sanitation programme planning and implementation. These should be shared with all multi-national organizations working in water, sanitation and hygiene education.
- 9 A common set of practical guidelines for advocacy of water, sanitation and hygiene education programmes should be established for all multi-national organizations working in WES. Advocacy should be undertaken to increase global resource allocation for water, sanitation and hygiene education.
- 10 Future plans-of-action should focus on the unserved and on those with special requirements, including the peri-urban poor.
- 11 Greater attention should be given to WES as an effective entry point for other health and socio-economic developments.
- 12 Communication is essential. UNICEF must address the communication issue seriously and establish a set of procedures to guide country-level activities. Budget allocations will have to be made to cover communication and activities intended to lead to the empowerment of communities.

Participants considered the workshop to have been extremely valuable in providing a forum for discussion between the major international organizations concerned with water, sanitation and health, and in providing a clear focus for future actions. As a direct follow-up to the workshop, UNICEF is currently revising its strategies in order to better focus water and environmental sanitation programmes in the 1990's to maximize health and socio-economic benefits.

In closing the workshop, the UNICEF Executive Director, James P. Grant emphasized that if countries are to reach the goals they have set for children by the year 2000, water, sanitation and hygiene education will provide the basic

stepping stones. "We have come a long way in the last fifty years, but we will not meet the goals by the year 2000 unless we bring basic water supply and sanitation to everyone". Mr Grant presented a challenge to all planners, policy-makers and practitioners "We have a choice. We can continue with 'business as usual', neglecting the poor majority, or we can shift our focus to providing 'some for all, rather than more for some'. By opting for the latter, we can help shape a better and more just new world order and contribute to environmental sustainability into the 21st Century.

IRC contributions

IRC is collaborating with the joint UNICEF/WHO initiative on hygiene education. Recently, IRC staff prepared a background reader on school sanitation in English and Spanish in connection with a workshop on school sanitation which was held in Cali, Colombia in March 1993. Following the workshop, country case studies have started, which are currently being prepared for publication. In November 1993, UNICEF contracted IRC to prepare an overview paper on motivational factors for behavioural change and to do a case study on hygiene education in Bangladesh. IRC was also invited to participate in the UNICEF workshop on water, sanitation and hygiene education with regional UNICEF staff, which took place in Dhaka, Bangladesh.

The most recent IRC title on hygiene behaviour was "Actions Speak, the study of hygiene behaviour in water and sanitation projects", which was a joint venture with the London School of Hygiene & Tropical Medicine, WHO, UNDP and ODA. On practical involvement of communities in planning and implementation of water supply and sanitation projects, a 1993 IRC joint venture was a workshop and publication: "Community Management Today, The role of communities in the management of improved water supply systems". In this UNDP, UNDP-World Bank Water and Sanitation Programme, UNICEF and WHO participated.

On advocacy for water, sanitation and hygiene the Working Group on Information, Education and Communication of the Water Supply and Sanitation Collaborative Council has produced a guidance document entitled: "Communication in Water Supply and Sanitation - Resource Booklet", a must for hygiene educators.

Copies of these publications can be ordered from IRC. Readers who are interested in additional information or copies of the report on the UNICEF workshop in New York, please write to:

The Chief
Water and Environmental Sanitation
UNICEF, DH40-B
Three United Nations Plaza
New York, NY 10017
Fax Number: (212)702-7150

CHECKLIST ON GENDER SENSITIVITY

From 30 August to 17 September 1993, 15 water supply and sanitation professionals from 7 countries took part in the Management for Sustainability course at MDF and IRC. One of the course sessions was devoted to gender issues in water and sanitation projects, the reason being that these projects introduce community improvements which can only be a success when all, men and women, support, maintain, use and manage the facilities.

During the session the participants formed three groups to list how, on the basis of their own experiences, a project's implementation can become more gender-sensitive. The three

lists were subsequently combined with a list prepared earlier by IRC and published in the first issue of IRC and PROWESS's annual abstract journal 'Woman, Water, Sanitation'. This resulted in a 10-point general checklist, jointly produced by Mr. S. Saquib from Afghanistan, Mr. J. Rose working in Egypt, Ms. Mathew and Messrs. Bokepalli, Buch, Nadaf, Nagrecha and Thirubathaiah from India, Mr. S. de Jong based in Guinea Bissau, Ms. G.W. Gichuri and Messrs. K.C. Abdi and A. Chemonges from Kenya, Messrs. M. Al-Abiad and M. Hasson from Yemen and Mr. T. Zai from Liberia.

We are printing this checklist below as it may also be useful for many of our readers of the newsletter.

TEN MEASURES FOR A GENDER-SENSITIVE APPROACH IN DRINKING WATER SUPPLY AND SANITATION PROJECTS

It is recommended that the communities decide on these points after explanation and discussion on the roles of men and women.

- 1. Information.** Make sure, by using suitable communication channels and methods, that project information reaches men and women (Each group may need different channels). In data collection and analysis distinguish between information from men and women.
- 2. Gender division.** Assess with men and women what work and responsibilities they have in land and water use, care of traditional water sources, construction, care and upkeep of household/school latrines, family health and hygiene, communication with other men, women, and household finance.
- 3. Meetings.** Facilitate women's participation in meetings: time and place suitable for women, women informed and encouraged to attend, seating and language so all can hear and react, speaking out by women is facilitated (sit together, breaks for internal discussion, choose spokeswoman, etc.). Insist that women can react in a mixed or separate meeting as a condition for project continuation.
- 4. Planning.** Give men and women a say in and achieve acceptable solutions on: design and location of the facilities, choice of local maintenance and management system, choice of committee members, mechanics, caretakers, health promoters, local financing system.
- 5. Committees.** Determine [by law] that a minimal proportion of committees is female. Enable men and women to choose their own representatives on trust and suitability for tasks. Encourage that women are chosen as treasurers (have proved to be most trustworthy). Committees should account for their proper management to male and female users. Higher committees should include men as well as women.
- 6. Hygiene education.** Involve women as planners and change agents, not as passive audiences. Involve also men.
- 7. Training.** Make sure that men and women are trained for technical as well as managerial tasks. Adapt training provisions to the requirements of women (place, methods, literacy level). Train and reward women for new functions: waterpoint repair (they visit them daily), latrine masons (they can work in homes), treasurers (they are trustworthy and can easily visit households for home collection), monitoring (idem).
- 8. Means.** Ensure that credit, materials and skills are available to men and women to make their own improvements in water supply, sanitation and hygiene. Where feasible and relevant, undertake or link up with income generation projects.
- 9. Gender-sensitiveness.** Make project staff and management aware why gender is important and how a gender-sensitive approach is applied.
- 10. Staffing.** Employ female staff and equip them, as well as male staff, for dealing with gender issues. Work in case of shortage of female staff with gender-sensitive male staff and female intermediaries in the communities.

In case you have any comments on the list or interesting experiences to add, you can contact Ms. E. Bolt or Ms. C. van Wijk, both at IRC.

PREPARATIONS FOR MINISTERIAL CONFERENCE IN FULL SWING

Preparations for the Ministerial Conference "Implementing UNCED Agenda 21: Drinking Water Supply and Environmental Sanitation" scheduled to start on World Water Day in Noordwijk, the Netherlands are in full swing. From all over the world specialists have given inputs into the conference through participation in the International Steering Committee, or as resource persons.

The Minister of Housing, Physical Planning and Environment (VROM) of the Netherlands is organizing the conference in an attempt to take the work of the UNCED conference Agenda 21, a step further to implementation. It is timed to act as an intersessional preparation for the programme of the Commission on Sustainable Development.

Minister J.G.M. Alders, supported by the Minister for Development Co-operation has invited over 80 countries, a number of international agencies and organizations, and some non-governmental organizations. IRC has been assigned to contribute to the technical guidance of the conference preparations. Another assignment for IRC was to prepare a state-of-the-art document about the water supply and environmental sanitation.

The Conference will focus primarily upon the activity described in Chapter 18 Section D of Agenda 21: Drinking water supply and sanitation, and concentrate on instruments of implementation for world-wide application. In support of this the Conference aims to raise world political commitment and to support cooperation, collaboration and coordination at the local, national, and international level. It is hoped that, in addition to a Conference declaration, a specific action programme will be a major output, supported by some new and specific sustainable development related projects, as concrete manifestations of better things to come for the world's thirsty and disease-prone population.

For further information, please contact:
 Conference Secretariat
 c/o Ministry of Housing, Physical Planning and Environment
 P.O. Box 30945 / 630
 2500 GX Den Haag, The Netherlands
 Telephone/telefax:+31 79 317 213
 Telephone/telefax:+31 70 339 4254

WATER NEWS FROM THE NETHERLANDS

News on water from the country in which IRC is based rarely reaches the columns of this newsletter. Various recent news items justify to be shared with readers in other countries. They range from "ice skating for water" to multinational companies not paying part of their water bill in Amsterdam.

Early November 24,000 school children participated in the "skate for water" action on all the 17 ice rinks throughout the Netherlands. For each lap the children skated, individual

sponsors paid money. In total Dfl 800,000 (US\$ 410,000) was collected for drinking water supply in Burkina Faso.

With that amount organizer Foster Parents Plan can assist construction of 40 water points in a country, where at this moment less than one third of the population has access to safe water. Two years ago in a similar action the school children's skating resulted in Dfl 618,000.

135 litres drinking water per day

The average use of drinking water in the Netherlands is 135 litres per day. That is too much, feels VEWIN, the association of water companies. VEWIN has done research to find how and by whom drinking water is used. Outcomes were hoped to contribute to a better forecast of water use. VEWIN also looked for basic trends which need to be addressed in its continuing water conservation campaign.

On average a Dutchman uses 50 litres of water per day in bath or shower, 43 litres is flushed through the toilet, 25 litres is used for laundry, and 10 litres for dish washing. Real drinking of drinking water is so limited that it even doesn't appear in the statistics.

The most striking outcomes of the survey were that water use did not vary per income, nor per family size. Contrary to earlier thinking, the water use per head in a family of three people was higher than in a one person-family. In families of four or more water use per head diminishes.

There were two other interesting outcomes. The age group between 25 and 35 are the heaviest drinking water users with 141.5 litres per person per day. They use the shower more often, as well as their washing machines. VEWIN expects that this habit will continue in the future. The difference between water use in the North and South of the country is another striking outcome. People in the North use on average 124 litres per day, in the South 143 litres. The difference occurs in the water used for bath 5 litres in the North and 11 in the South, and in the shower 31.5 litres versus 40 litres per person per day.

Water bills

Two large multinational companies have a conflict about their water bills with the water company of Amsterdam. Oil giant Shell and chemical company Akzo owe the water company 1 million guilders. They refuse to pay part of their water bills, since the water companies in end 1991 abolished the reduced water rate for bulk users.

One of the parties in the Amsterdam municipality has proposed to cut-off the non-paying users from the drinking water supply network. It is likely that a compromise will be reached before this will happen.

The companies have offered to discuss measures to reduce water consumption, but feel that the Amsterdam water works is also interested to raise more money. The water company hopes that in good consultation a solution can be found. Other industries in the Netherlands are unhappy about the government's environmental taxes on groundwater. The paper and carton industry has to pay 5,6 million guilders for

the use of groundwater. And that is unfair, claims the industry's association. Through recycling of water, the industry has already halved its groundwater use compared to 1976. Massive amounts have been invested in water purification installations.

Lower priority on drinking water

The earlier mentioned VEWIN feels that the central government puts a lower priority on drinking water than on water supply to agriculture and industry. The groundwater in the Netherlands continues to be threatened by the access use of manure in agriculture. The surface water is polluted by pesticides, industrial and solid wastes. Drinking water production becomes increasingly difficult, and the price for consumers will need to be drastically increased shortly, the VEWIN warned.

The Netherlands has recently installed one of the most advanced watchdog systems for water quality on the two major European rivers, Rhine and Meuse, which passes through the Netherlands on their way into the North Sea. A 24-hour per day, fully automatic measurement of organic substances, raises alarm when too high concentration of substances in the water is found. Following this alarm, the water companies can stop their water intake from the rivers in time.

LESSONS FROM A SOIL AND WATER CONSERVATION PROJECT IN KENYA

"The farming communities are now themselves desilting water reservoirs behind the small dams they constructed and now ask us a hygienic drinking water facility". Mr. Moses O. Olang sums up one of the benefits of the Suam River Catchment Rehabilitation Project in North Western Kenya.

Since 1990 Mr. Olang and his team have been testing community-based and low-cost methods of intervention in soil and water conservation in this part of Kenya, near the Ugandan border. The Kerio Valley Development Authority (KVDA) executed this World Bank supported pilot project. The project leader and deputy director of KVDA Mr. Lokaito and project manager Mr. Olang see some interesting lessons coming from this pilot project.

A major one is that a pilot project, which spends not more than 42 % of the budget allocated in the original project proposal, may receive a poor rating from an evaluation team of the donor, but can still be considered to be a success on local involvement of farming communities and sustainability of self-help activities.

In the project proposal drafted in Nairobi in 1989, budget provisions included high technology interventions such as many hours of tractor assistance to build one large dam. Mr. Lokaito was on the team that prepared that proposal. "The tractors were not needed. While testing out the participatory methods for agricultural development we were able to interest the farmers in building small dams with local

materials", Mr. Lokaito says, during a tailor-made information management course at IRC, which he followed with two of the Suam project staff.

The project integrated livestock improvements and grazing in enclosures, introduction of better crop seeds, early land preparation, weeding and pest control, supply of free seedlings, reseeding and proper use of reseeded areas, planting of sisal plants and napier grass contributed to higher milk yields. Constructed new earth dams and water retention ditches enabled women to grow vegetables.

Soil erosion control was a major element which the project was able to achieve. Pasoralists did not have to move their cattle very far, because the Boma re-seeding and dams provided them new opportunities.

Initially the project worked with demonstration farms. It turned out soon that contact farmers and "barefoot" veterinarian staff were much more effective in direct contact with the farming communities. The project was able to react flexibly to the demands of the farmers. For certain services provided by the project staff demand was 50% higher than the project target. More than 500 farmers benefited from this low-cost intervention. And more are likely to follow who have seen the benefits of a participating neighbour, Mr Lokaito thinks.

Other interesting outcomes were that women participated in 'barazas' or village meetings although their views were expressed through men. They were also involved in planting, weeding and harvesting of crops and vegetable gardens. A few got the chance to go on tours to other districts and training. The use of boma manure in reseeding and crop production gave a high biomass yield, which brought in a quick and direct benefit. The increased crop yield resulted in reduced dependence on famine relief supply in this region of Kenya.

The Kenyans followed a tailor made course in the Netherlands on Information Management to learn more about Geographical Information Systems, Monitoring Information, setting up of a small documentation unit, report writing, and promotion of lessons learned.

For more information about the project contact:

Mr. M.E. Lokaito
Deputy-Director
Kerio Valley Development Authority
P.O. Box 2660
Eldoret
Kenya
Fax: 254 0321 63365

SECTOR NEWS COVERAGE

In May an analysis was carried out at IRC of sector coverage in journals and newsletters available in the IRC library. Based on citations in IRC's current awareness bulletin *Highlights*, the following newsletters/magazines (excluding

the IRC Newsletter) were found to contain the most sector news over the period 1990-1992 (the numbers in brackets refer to the number of articles):

Top ten sector newsletters 1990-1992

1. Newsletter on Environmental Health (55)
2. World Bank News (41)
3. World Water (29)
4. Guinea-worm Wrap Up (25)
5. China Environment News (24)
6. Source (23)
7. UNDP Update (21)
8. Water and Wastewater International (20)
9. NETWAS Water and Sanitation News (19)
10. ADB Business Opportunities (16)

Based on citation in IRC's library database, the following journals were found to contain the most articles on the sector in the period 1990-May 1993:

Top 12 sector journals 1990-1993

1. Waterlines (89)
2. Journal of the AWWA (18)
3. Indian Journal of Environmental Health (17)
4. Aqua (16)
5. Water & Wastewater International (16)
6. Asian Environment (10)
7. Environment and Urbanization
8. H2O (10)
9. Health for the Millions (10)
10. Water Quality Bulletin (10)

Waterlines also scored highest for most subject areas (water, technology, health, social and management issues, and country project information). The only exception to this was the Indian Journal of Environmental Health, which contained more articles on environmental aspects.

INCREASING ATTENTION FOR HEALTH, ECONOMICS, AND DEVELOPMENT LINKAGES

The linkages between health, economics, and development is receiving increasing attention in the international public debate. The World Bank in its last World development report 1993 stressed the need for more investment in health care. And in December 1994 "Health, Economics, and Development: Working Together for Change", is the subject of the VII International Congress of the World Federation of Public Health Associations (WFPHA), to be held in Bali, Indonesia.

Health conditions around the world have improved more in the past 40 years than in all of human history, according to the World Bank Report. However, the poor in developing countries continue to suffer a heavy "burden of disease". Many diseases can be prevented at relatively little extra cost.

For poor people and poor regions, it is the household environment that carries the greatest risks to health. This is the result of poor sanitation and inadequate water supply (often compounded by poor hygiene), inadequate garbage disposal and drainage. The diseases associated with poor household environments occur mainly in developing countries, where they account for nearly 30 per cent of the total burden of disease. Modest improvements would avert almost a quarter of this burden, mostly as a result of reductions in diarrhoea and respiratory infections.

The report argues that governments should sharply redirect spending from top levels of the health system to basic public health programmes.

WFPHA-Congress

The congress in Bali, Indonesia, from 5 - 9 December 1994, is hosted by the Indonesian Public Health Association. It will bring together professionals from health, economics and development. Its aim is to develop an action agenda to integrate health concerns with economic and development policies.

WFPHA congresses are held every three years and are co-sponsored by WHO and UNICEF.

Order information:

World Bank (1993). *World development report 1993 : investing in health*. New York, NY, USA, Oxford University Press. ISBN 0-19-520890-0 (pbk)
price: US\$ 19.95

For further information and abstract forms (deadline 15 May) of the WFPHA Conference contact:

WFPHA Secretariat
c/o APHA
1015 15th Street N.W, suite 300
Washington, DC 20005
USA

HEALTH IMPACT OF WATER RESOURCES DEVELOPMENT

Hunter, J.M. ... [et al.] (1993). *Parasitic diseases in water resources development : the need for intersectoral negotiation*. Geneva, Switzerland, World Health Organization. - x, 152 p. ISBN 92-4-156155-6
Price: Sw.fr. 35/US\$ 31.50. In developing countries
Sw.fr. 24.50

Aiming at financiers, planners and managers of water resources development projects this book advocates the need to make health concerns a central part of the development dialogue. It draws upon a large body of evidence to demonstrate both the magnitude of project-related health risks and the feasibility of their prevention and control. An

overview of the problem is given, concentrating on the reasons why the health impact of development policies continue to be neglected. The many ways in which water development projects can exacerbate parasitic diseases are explained. A detailed review of the evidence linking specific features of projects to changes in the incidence and prevalence of these diseases is provided. Data from studies of over 60 dams and irrigation schemes are used to document health risks exacerbated by ecosystem changes. The special case of small dams is also covered. A review of technical measures for disease control demonstrates that parasitic diseases are an avoidable risk. The reasons why these highly effective techniques have not been implemented are explored and different approaches for achieving policy adjustment are described. Detailed practical advice is offered to health authorities on how to negotiate with other sectors and how to prepare a feasible health plan for a water resources project. A series of six key arguments that can form the basis of a persuasive negotiating strategy are included.

Available from: WHO Distribution and Sales, 1211 Geneva 27, Switzerland

OVERSEEING CONSTRUCTION TRAINING GUIDE

Gavin, John; Hockley, Trevor; Joyce, Steve (1993). *Community sanitation improvement and latrine construction program : a training guide*. Arlington, VA, USA, Water and Sanitation for Health Project. - ca. 520 p. (WASH technical report ; no. 83)

Price: Not quoted

The guide is designed for a two-week workshop for district-level development agents. It concentrates on the skills necessary to oversee latrine construction rather than the development of construction skills. There are 18 sessions with accompanying handouts covering behavioural and excreta disposal practice surveys, latrine design and selection, planning and evaluation, supervising construction, sanitation education, and operation and maintenance. The following latrine types are considered in the guide: 1. basic latrine with cover; 2. ventilated improved pit (VIP) latrine; 3. water-seal latrine; 4. raised pit latrine.

Available from: WASH, 1611 N. Kent St., Room 1001, Arlington, VA 22209-2111, USA, tel: +1-703-2438200, fax: +1-703-5259137, telex: WUI 64552

NEW PUBLICATIONS FROM IRC

COMMUNITY MANAGEMENT: EXPERIENCES AND GUIDELINES

Evans, Phil ; Appleton, Brian (1993). *Community management today : the role of communities in the management of improved water supply systems*. The Hague, The Netherlands, IRC International Water and Sanitation Centre. - iv, 35 p. (Occasional paper / IRC ; no. 20)
Price: Dfl. 20/US\$ 11 (SAL + 30%, airmail + 40%)

To consolidate desk research and field studies and to provide guidance on community management of water supply and sanitation systems, IRC in collaboration with UNDP, UNICEF, WHO and the UNDP/World Bank Water and Sanitation Program organized an international workshop in November 1992 called: The Role of Communities in the Management of Improved Water Supply Systems. This document brings together the experiences shared during that workshop and the results of desk research and it also highlights the key issues involved. The first chapter points out that community management is needed for reliability, sustainability and replicability of water supply and sanitation projects. Chapter two describes community management from the perspective of the partners involved, while the third presents some guidelines on putting community management into practice. Chapter four touches on key issues, such as political will, strategic planning, policy and legislation, decentralization, training and education, public education and social marketing, and monitoring and evaluation, which governments should take into account to create an enabling environment for community management. The final chapter identifies a number of gaps in knowledge which require further study to substantiate the guidance on the most effective ways of implementing successful community management. Numerous field cases are quoted in the boxes throughout the document.

Available from: Publications Dept., IRC, P.O. Box 93190, 2509 AD The Hague, The Netherlands, tel: +31-70-33 131 33, fax: +31-70-38 140 34

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