

WATER NEWSLETTER

Developments in water, sanitation and environment

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NUMBER 247, FEBRUARY 1997

The World's Water: Is There Enough? World Day for Water 1997

Water is a basic requirement for all life, yet water resources are facing increasing demands from, and competition among, users. In 1992 the UN General Assembly designated 22 March of each year as the World Day for Water. This year's celebration is being undertaken under the theme "Water Resources Assessment", with the slogan *The World's Water: Is There Enough?*

A vital resource

The celebration comes at a time when the global awareness of the vital role water plays in sustainable national development is increasing. Water is vital for sustaining life on earth. It is crucial for economic and social development, including energy production, agriculture and domestic and industrial water supplies. Therefore each unit of water should be used efficiently, equitably and soundly. The economic value that water generates should be given due attention when apportioning scarce water resources between competing uses, without infringing on the rights to basic services for all people.

Of all the water on earth, 97.5% is salt water, found primarily in the oceans. The remaining 2.5% is freshwater, almost all of which is stored in the ice caps of Antarctica and Greenland, and as fossil groundwater. The most accessible freshwater resources are in lakes, reservoirs, rivers and streams. These resources amount to only 0.26% of the total amount of freshwater in storage, or 0.007% of all water on earth that is renewable and available for use on a sustainable basis.

Growing tensions over water resources are becoming a potentially explosive source of conflict at the community level and up to inter-state politics. Many predict that wars of the next century will be over water, not oil or politics.

A shrinking supply

Much has been said about our shrinking supply of freshwater, which is a basic requirement for all life. In reality, the world's potential supply of freshwater has not decreased, but the pollution to which it is being subjected

and the demands which are placed on this supply, have indeed increased, complicated by irregular rainfall patterns. Water pollution is responsible for the death of some 25 million people each year, especially in developing countries. Half of the world's diseases are transmitted by or through water. It is estimated that 20% of the world's population lacks safe drinking water and 50% lacks access to adequate sanitation.

Between 1900 and 1995 water use increased by a factor of six, which is more than double the rate of population growth during the same period. The world population is projected to increase from the current 5.7 billion to 8.3 billion in 2025. The result is already evident in the competition for water for agricultural, domestic and industrial purposes. Some estimates suggest that, at the turn of the century, the amount of water available to each person in Africa will be one-quarter of that in 1950 and in Asia and South America, it will be about one-third of the 1950 figure. This situation is aggravated by the occurrence of floods and droughts. To compound the issue, the longer-term threat of global warming is expected to impact regional water resources significantly, with increases in floods in some areas and droughts in others.

International awareness

Awareness of the seriousness of water problems has evolved gradually over the years, and important recommendations have been formulated since the United Nations Water Conference in Mar del Plata (Argentina) in 1977. Other events that have focused on water issues include the 1992 International Conference on Water and the Environment, convened by the World Meteorological Organization (WMO) in Dublin, Ireland, and the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. The Ministerial Conference on Drinking Water and Environmental Sanitation held in Noordwijk, The Netherlands in March 1994 adopted an action programme to ensure follow-up to Agenda 21, Chapter 18 on Freshwater Resources. In 1994, the United Nations Commission on Sustainable



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Development requested a comprehensive assessment of the world's freshwater resources, including projections of future needs. The results of the study will be considered by the 1997 special session of the UN-General Assembly reviewing the implementation of Agenda 21.

WMO and the United Nations Educational, Scientific and Cultural Organization (UNESCO) are the lead agencies for the celebration of the 1997 World Day for Water. Efforts to mobilize support for the day include focusing public attention on the emerging global water crisis as the 21st century approaches.

We urge our readers to help organize/contribute to/take part in local activities around the World Day for Water.

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Research on Promising Water Resources Management Approaches

Banashkantha district is the most resource-poor and under-developed district of Gujarat, India. Extreme climatic conditions predominate - an average annual rainfall of just 20 inches, frequent droughts, and severe storms. Soil and water are saline, dissolved solids in groundwater exceed 3500 parts per million, and the groundwater table is sinking at the rate of 2 meters per year. Agriculture is the chief occupation of the area, followed by cattle breeding. Both are severely affected by extreme soil and water conditions, failure of rains, and drought. Migration in search for work and livelihood have become a way of life.

In 1988 the Self-Employed Women's Association (SEWA), a trade union working for poor and self-employed women in India, initiated the Banashkantha Women's Rural Development Project under the Santalpur Regional Water Supply Scheme (SRWSS), a Government of Gujarat programme under the Indo-Dutch bilateral aid programme.

The SRWSS aims at providing assured water supply, health, sanitation and income to the local communities. The programme provides the only potable drinking water in the area through six tubewells dug in a riverbed. Pipelines transport the water 110 km, mostly by gravity, and villagers have access through standposts.

The Banashkantha project's aims are to enhance, on a sustainable basis, the economic and social status of women in the region served by the water supply scheme, and thereby at the same time raise their abilities to pay for water; and to strengthen the integration between piped water supply and community-based management, operation

and maintenance of village facilities, health and hygiene and cost recovery.

To protect the scarce water resources in the area, SEWA has mobilized local communities and local resources for water harvesting activities, including pond lining to harvest rainwater, cleaning of wells and canals, and construction of minor irrigation structures and groundwater recharge. Under women's leadership, the communities conduct water resources inventories to determine which resources, past or present, could be revived or augmented. SEWA is also involved in assessing and building capacity among village water committees to give them the skills to take over O&M and cost recovery. Finally, SEWA has mobilized the local communities in reviving and augmenting water sources, which includes coordinating with the local government agencies for assured supply of water to the village. As a result some 43,000 women joined the campaign, and in one year more than 16 villages directly benefited through it.

Since the project started in 1988, migration has decreased by 80% in the project area. More than 15,000 women in the Santalpur region have been able to enhance, on a sustainable basis, their economic position and social status, thus increasing their ability to pay for water. Thirdly, women's autonomy has been enhanced through economic, social and political empowerment.

The Banashkantha case was one of several cases presented at a workshop held at IRC in November 1996, which launched a research, documentation and dissemination project "Promising Water Resources Management Approaches in the Drinking Water Supply and Sanitation Sector". The UNDP/IRC project aims to assess, document and disseminate project experiences with the water resources management principles as agreed at the 1992 International Conference on Water and the Environment, in Dublin. The principles concern:

- water source and catchment conservation and protection;
- water allocation needs;
- efficient water use;
- stakeholder involvement;
- gender balance;
- management at the appropriate level;
- capacity building and
- water's economic and social value.

At the preparatory workshop participants from thirteen projects joined three Advisory Group members to establish a framework to assess their experiences with WRM in the drinking water sector.

After the workshop, participants returned to their projects to assess the way in which they apply all or some of the selected key WRM principles, and their project's experience with these principles. Subsequently, they will return to IRC in June 1997 to jointly review all the project reports. The meeting will help to draw general conclusions as to the applicability of these principles for the WSS sector, bring out important problem areas and bottlenecks,

and enable the identification of the most promising practices and experiences. The project plans to disseminate its results among others in the form of a report that is planned to be published early 1998.

This project sprang from IRC's work done on water resources management for the OECD/DAC in 1994/95: a presentation on and publication of a catalogue of policies and strategies of external support agencies entitled *Towards Better Water Resources Management*.

Water Newsletter: Now on the World-Wide Web and by E-mail

IRC opened its home page on the Internet at the end of December. The page includes information about IRC and its Partners, What's New (including information about the World Day for Water), Who's Who at IRC, Advocacy (where you can find the *Water Newsletter*), Advisory Services, Documentation Services, Publications, Research, and Training. You can access and download this information from our site on The World-Wide Web at: <http://www.oneworld.org/ircwater/>

IRC's web page also includes the INTERWATER home page, a gateway to water and sanitation information on the Internet, which has been developed under the auspices of the Water Supply and Sanitation Collaborative Council.

You can now subscribe to an electronic version of the *Water Newsletter* through our list server. Please send an e-mail message to: majordomo@list.bart.nl

In the body of the message, type only the following:

subscribe water-newsletter

Do not include any other text or signature. We look forward to receiving your e-mail subscription.

News from the Netherlands: Municipality Separates Water for Drinking and Sewerage

After small experiments in various other cities in the Netherlands, Ede, in the east of the country, is the first municipality which will construct a new area of 3500 houses with a dual water system. In the next ten years the houses will get one pipe for their drinking water, while a separate pipe filled with rainwater will be constructed for flushing the toilet, doing the laundry and watering the gardens. The local energy company will construct the dual water net, which is expected to reduce the use of expensive drinking water by 50%.

In the higher part of the new municipal area rainwater will be collected per house or block of houses through water containers, sand reservoirs and underground reservoirs. In low-lying areas rainwater will be collected in ponds.

Alongside the new roads water will be allowed to infiltrate in the soil.

Many higher-lying sandy parts of the Netherlands suffer from desiccation, a decrease of groundwater. The drinking water in Ede comes from underground water of high quality which requires only limited treatment. All provinces in the Netherlands are trying to implement the agreed national policy of reducing the use of groundwater. Some regional water companies have signed contracts with large industrial water users to supply them with treated wastewater through a separate pipe system. By doing this they reduce on the amount of high quality drinking water used by industries.

New approaches for the 21st century

Sustainable and holistic integrated water management is the key in the Dutch water policy, which is currently being reviewed. A scenario study is underway about the best water supply in the Netherlands in 2010-2015. The first scenario is: drinking water and small business water supply remain in the hands of the government and all the other water uses will be left to the market. In the other two scenarios the total water supply will be government controlled. In scenario two efficiency will be striven for by putting implementation in the hands of the private sector. Scenario three will look into the option of having a regulator with far-reaching power.

In all three scenarios two options will be incorporated. The first is to treat water supply separately, the second one is to integrate water supply with the other two components in the water chain: sewerage and wastewater treatment. By mid-April this year the scenario study should be ready for wider discussion. Later in the year the outcome of the discussions will have to lead to preparation of a new law on water. The parliamentary clearance process is foreseen to result in a new law by April 1998.



Collaborative Council Mid-Term Review

A year after its Third Global Forum in Barbados, the Water Supply and Sanitation Collaborative Council held its Mid-Term Review meeting on 13 and 14 November 1996 in London, hosted by WaterAid. Ten working groups, four networks and four task forces reported on their activities, and announced their plans for the coming period.

New chairperson nominated

The meeting enthusiastically endorsed the recommendation that Mr. Richard Jolly, formerly Deputy Director General of UNICEF, succeed Mrs. Margaret Catley-Carlson, President of the Population Council, as Chairperson. Contingent on members' agreement, the appointment will be formally endorsed at the Council's next Global Forum in Manila. Awaiting his official appointment, Mr. Jolly began his role as Chairperson in January.

Improved communication

The Council acknowledged the need for improved communication among its working groups, so as to best avoid duplication on cross-cutting themes, and the need to put the Council results to work. In particular the need for special efforts in dealing with communication, gender and capacity building was recognized.

Communication: Five or six key advocacy messages will be identified to elaborate the Council's communication strategy.

Gender issues: Working group coordinators and task force members agreed to assess whether gender issues have been adequately addressed, whether their reports are "gender aware", and to ensure any tools and guidelines issued reflect the recommendations of the Council's Gender Network.

Capacity Building: In relation to capacity building, all groups were asked to highlight requirements anticipated for human resources development, institutional development, awareness raising, etc. The Council recognized the need for an early appointment of a communications officer, and highlighted five important elements of the new communication strategy: internal communications; public relations; document dissemination; putting results to work (awareness-raising about Council tools, guidelines and publications); and advocacy.

Latin American Chapter formed

In response to an effort to regionalize its activities, the Council had its first regional meeting in Latin America from 16-18 October in Quito, Ecuador. In addition to presentations made by Latin American sector professionals, presentations were made by the Working Groups on Operation and Maintenance; Sanitation; and Community Management and Partnerships with Civil Society. The meeting created four working groups of its own: Strategies for Management and Treatment of Wastewater; Modernization of the Water Supply and Sanitation Sector; Regulation and Certification on a Regional Basis; and Rehabilitation for Water Supply and Sanitation Systems. The meeting resulted in the formation of a Latin American and the Caribbean Chapter of the Council, for which donor support is currently being sought.

World Water Council

The Collaborative Council will become one of the founding members of the World Water Council with the provision that in a year's time the suitability of that decision will be evaluated.

Ad-hoc task force

An ad-hoc task force was formed to assist the Chairperson and Secretariat. The force will formulate a forward-looking strategy for the Council, including consideration of goals to be set; develop a terms of reference for a proposed evaluation of the Council; review and consolidate existing advocacy messages and develop a comprehensive advocacy

guideline for consideration at the Fourth Global Forum in Manila; and advise the Chairperson and Executive Secretary on responses to the World Water Council, particularly for a 20-20 vision for water supply and sanitation.

The Fourth Global Forum will be held in Manila, Philippines, from 3-7 November 1997.



New Publications



Wegelin, Martin (1996). **Surface water treatment by roughing filters : a design, construction and operation manual.** (SANDEC report ; no. 2/96). St. Gallen, Switzerland, SKAT. 163 p. : fig., tab. ISBN 3908001676. Price: GBP 10.95

This manual presents water treatment alternatives for rural water supplies in developing and newly industrialized countries and describes processes for solid matter separation. Part 1 contains a general introduction to rural water treatment. It describes the water treatment concept and raw water quality of different types of surface water, summarizes the various treatment processes used for solid matter separation, gives a brief account of bacteriological water quality improvement, provides a general layout of water supply schemes, and presents the development of roughing filter application. Part 2 describes design, construction, and operation characteristics of different prefilters and roughing filters. It provides information on filter layout, presents practical experience with different filters, describes construction, operational and economic aspects, illustrates some design examples, and discloses valuable information on the practical implementation of the prefiltration technology.

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DISTRIBUTION:	EURO MAIL BV



IRC

International Water and Sanitation Centre

WATER NEWSLETTER

Developments in water, sanitation and environment

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NUMBER 248/249, MAY 1997

Interwater: Your Internet Guide to Water and Sanitation Information

THE INTERNET and THE WORLD WIDE WEB

The Internet is a world-wide network of computers using normal telephone lines to transmit information. Using the Internet often costs little more than a local telephone call and a modest subscription to a local Internet provider. It is a completely decentralized network, governed only by a set of protocols which specify how messages must be formatted and routed.

One of the main reasons for the rapid growth of the Internet has been the development of the World Wide Web (WWW). This is a way of using the Internet to present, locate, transmit and receive not only electronic text, but also graphic images, video and sound. More importantly, the Web enables the user to move instantly from one electronic document, or 'Web page', to another, using 'hypertext' to link related concepts in documents on any computer connected to the Web. A page belonging to a particular organization is known as its 'home page', but many home pages, like the IRC home page, comprise many separate documents and are referred to as 'Web sites'. Software programmes known as 'Web browsers', such as Netscape or Internet Explorer, and others known as 'search engines', like Excite, HotBot, Yahoo and AltaVista, help users to locate and access the Web sites and pages they need.

There are also numerous 'gateways' on the Internet which guide users to other sources of information. One of these, known as INTERWATER, has been developed under the auspices of the Water Supply and Sanitation Collaborative Council to provide a gateway to water and sanitation information. INTERWATER is currently a separate element of the IRC home page, which in turn forms part of the OneWorld Online 'supersite' described elsewhere in this issue.

How INTERWATER began

In 1995, the International Association on Water Quality (IAWQ) and the Water Research Commission (WRC) of South Africa commissioned the Pollution Research Group

(PRG) at the University of Natal, Durban, to create a prototype 'information gateway' to water and sanitation information on the Internet. IRC, the United Nations Centre for Human Settlements (Habitat), the Environmental Health Project (EHP) of USAID, and the Water, Engineering and Development Centre (WEDC) at Loughborough University of Technology were invited to join an International Steering Committee to guide this development.

IRC is a member of the



InterWATER

partnership

The prototype gateway, initially known as 'WENDY' (Water Supply and Environmental Sanitation Services Electronic Network for Developing Country Needs) and later renamed 'INTERWATER', was demonstrated at the Third Global Forum of the Collaborative Council in Barbados in October-November 1995. The Council adopted INTERWATER as one of its mandated activities for the next biennium, and authorized the Steering Committee to function as a Council Task Force under the coordination of IRC.

Developing INTERWATER

After the meeting in Barbados, the IAWQ provided a subvention to the PRG to help promote INTERWATER in Eastern and Southern Africa and demonstrate it at the IAWQ conference in Singapore in June 1996. To develop capacity among IRC staff for developing and maintaining INTERWATER, IRC organized an in-house training workshop on Internet authoring techniques in February 1996. An informal meeting of Task Force members held at WEDC in April 1996 felt there was a need to improve access to INTERWATER, then mounted on a server in South Africa, by transferring it to the OneWorld Online server in the United Kingdom. This was done in December 1996, after the page had been substantially revised.



better water and sanitation for a healthy future

The Terms of Reference for the INTERWATER Task Force provide for it to undertake field projects in developing countries in order to offer training and support to sector institutions in setting up their own Web sites. So far, it has not been possible to make progress in this area, but it is hoped that it may be possible to establish a link with the Southern Partners Project of OneWorld Online, described elsewhere in this issue.

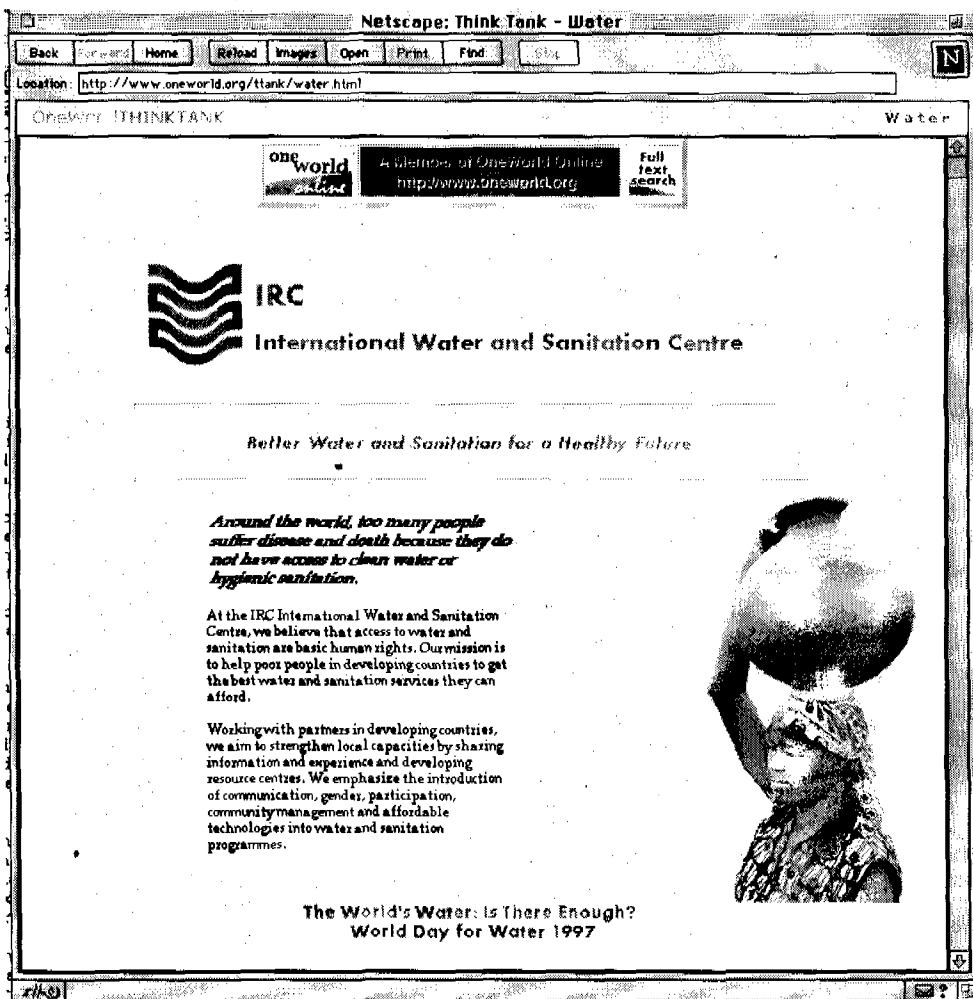
Creating a World Wide Web page and keeping it up-to-date require specialized skills, appropriate specialized software, and a considerable amount of time. It is not simply a question of loading existing information into a computer linked to the Internet; some preparation, editing and reformatting will usually be necessary before users can access and download it easily. Decisions may also need to be made as to what information should be made available free of charge and what should be paid for.

To overcome its weaknesses in information provision, the water and sanitation sector cannot and should not avoid joining this new phase of the 'Information Age'; but it should do with careful consideration and an awareness of all the implications.

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- What's New?
- IRC and its Linkages
- Who's Who at IRC
- Advisory Services
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- **INTERWATER Partners**
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- **INTERWATER Guide to Information Sources**
 - Organizations
 - Directories
 - Databases
 - Glossaries and dictionaries
 - Thesauri
 - Bibliographies and literature reviews
- **Water Supply and Sanitation Collaborative Council**



Searching for an Oasis on the Internet

Wandering around the Internet looking for information on water can make you feel like a traveller stumbling for hours across a cyberdesert, dying of thirst. Everywhere you look, you see thousands upon thousands of web sites, all utterly bereft of water data. With a new website created every four seconds, the chief virtue of the Internet - that it is so large and so open to all - is also its vice.

Then someone tells you the magic word: Yahoo. It's one of the many search engines crawling over the World Wide Web to produce lists of websites and documents related to a keyword you enter. Enter 'water', and you'll get hundreds of thousands of matches. After frustrated weeks of ploughing through these documents, you may decide most of them are useless because they fall below the quality you need to suit your purposes.

What *Water Newsletter* readers need is well-sourced, authoritative information about water, in the context of sustainable development. Even better is information that is organized with care and imagination, so that it can be easily 'navigated' and retrieved. It should also be fast to download, and have a text-only option.

Disseminating development information

That's exactly what OneWorld Online tries to do - not only on the theme of water, but on a whole range of themes related to sustainable development and human rights, since an underlying principle of OneWorld is that all peoples in the world have the right to a just share of that development.

But how did the people running OneWorld get to be experts in all these fields, so that they could collect so much of the right sort of information? The simple answer is that they couldn't and they didn't. They used their imaginations instead.

So they organized OneWorld not as a single site but as a single gateway. When the reader walks through this gateway, she finds an array of over a hundred autonomous websites. Each of these websites belongs to a partner organization, which deals expertly with one or more of these issues. IRC, for example, is a OneWorld partner, as are WaterAid and WEDC.

If our gallant reader were to stop wandering for hours across the Internet but were instead to comb the OneWorld Partner Directory, she would quickly find IRC's website, where she would find a mass of genuinely useful information on water. All the documents she finds on OneWorld will be carefully attributed and linked to an information page about the partner who provided it.

She could also use OneWorld's full-text search mechanism, using a keyword of her choice. Not only is it easy to use, but it searches every word of every document on every partner site on OneWorld Online in a matter of seconds. What's more, the name of the document on the list acts as a link, so if she does want to see the document itself, a click is enough to scoop her straight there - another great time-saver.

But OneWorld's real beauty lies elsewhere. Lists are great, especially when you have something specific in mind that you want to find - but what about the times when your aim is to browse a little and look at your subject with a fresh eye? Perhaps even with the eye of a child?

Let's go back to the moment our researcher first enters the gateway to OneWorld. The first page she comes across will be fresh and bright, with several different starting points clearly labelled, like News, or Perspectives, or Media. She might choose to go first to the News section, where she would find a daily news wire devoted entirely to global justice issues. It's updated daily, cross-indexed by date, country and theme. One of these themes is, of course, 'water', and is directly linked to hot news from partner sites.

For example, in a period of just seven days (13-20 March), there was a news story on water from Consumers International; several from InterPress Service on water projects in India; a commentary from Resurgence magazine about the UN's claim that water, not oil, will be the next trigger for war and more. A varied diet - and all from partners she probably wouldn't have thought of checking out simply through their names on the Partners' Directory.

Next, needing a rest from conflict over water, our researcher might head for a bit of fun. In BLAST, OneWorld's youth magazine, she is surprised to discover that Christian Aid has raised over £100,000 through such cheerful water games as primary school-aged children being sponsored to scrub down Nellie the elephant's trunk.

In the Media section, she is in for another surprise. She can not only read about, but can actually view, a video from Mozambique on water use. It is just one of the movies from the Television Trust for the Environment's award-winning online video database on sustainable development - full of movies made by Southern as well as Northern film-makers.

In the embryonic Think Tank section, she'll find expert documents geared to policy-makers, researchers, and academics (material from IRC is, of course, here). And all this is just a start. With partners' help, there could also be an exhibition of water photographs in the Gallery; a Guide to water issues for the lay reader; audio pieces where

information about water-borne diseases is disseminated free to the South through OneWorld's Radio News Service.

OneWorld is now being accessed by over a 100 countries each week, and receives well over two million hits each month. That's a lot of people who have been thirsty for good online information - and are pleased to have found a good oasis at last.

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Some OneWorld partners are specialists in the field of water:

Wateraid is a UK charity that works in partnership with communities in Africa and Asia by helping them to build their own water and sanitation projects.

IRC (International Water and Sanitation Centre) also work with partners in developing countries by sharing information and experience and developing resource centres.

WEDC (Water, Engineering and Development Centre) provides education, training, research, provision and management of physical infrastructure for development in low- and middle-income countries.

ITDG (Intermediate Technology Development Group) is an international development agency which works with rural communities in Africa, Asia and Latin America. It's *Waterlines* is the world's only magazine devoted entirely to low-cost water and sanitation. Written for professionals - administrators, engineers, project managers, policy makers, trainers and workers in the field.

Lots of other OneWorld partners carry occasional articles on water and sanitation - like IPS, People and the Planet, the ODA, and many more.

OneWorld Online's SOUTHERN PARTNERS PROJECT

OneWorld Online is entering a new and exciting phase in its development thanks to funding received from the EU to kick start a scheme designed to launch Southern NGOs on to the Web. The global on-line umbrella organisation is offering free Web sites and training in Web production to a group of 35 Southern NGOs working on issues as diverse as press freedom in Africa to appropriate rural technologies in India, to popular education and women's empowerment in Nicaragua.

The hugely popular OneWorld supersite, which is currently attracting over 2 million hits a month, offers a superb window on the developing world to web viewers everywhere interested in the subjects of sustainable development and human rights.

But not only will viewers benefit. The project has many other crucial, if ambitious, aims. OneWorld hopes to open a new channel of communication between NGOs themselves and to public opinion on every aspect of sustainable development, with special emphasis on the most current news from around the world. It hopes to counter the existing domination by the North of the world's information systems and to encourage NGOs to address the public directly without any filtering by traditional media gatekeepers. It wants to enable powerful, low-cost, fast South-to-South communication. Moreover it aims to enrich the library of electronic information held on the Internet with, at present, sorely underrepresented material from the developing world.

The project clearly has to be financially sustainable for those NGOs involved. The prohibitive costs of Internet connection and on-line time make this difficult for some

organisations, for, in the Pacific Islands. There are other costs too: time is needed to participate in the page production training and to update the web pages. Funding will need to be sought at the end of the first year to cover the costs of the supersite subscription. OneWorld Online is committed to seeking this funding but also hopes that some of its new partners will be able to find funds for this themselves. Training in page production techniques is one method of ensuring practical and financial sustainability for Southern NGOs. The training will be delivered through a combination of e-mail, the Web and floppy disk. We are hoping to run some overseas training events too, if funds permit.

Over 300 organisations have been contacted in the developing world, covering a huge range of issues related to OneWorld themes. OneWorld's fear was that Southern NGOs would see the Web as an irrelevant distraction from their main priorities. Nothing could be further from the truth! The organisations applying have expressed the desire to use their web sites to fulfil a wide range of functions, including publicising their needs, goals and activities; disseminating information on successful case studies; connecting themselves and their partner groups with interested groups globally as well as potential donors; receiving and exchanging information; providing information to local users; bringing human rights and social issues to the world public's attention; providing rich data banks for researchers; and fostering NGO cooperation over specific issues.

We have been overwhelmed by the number of applications from Southern NGOs very keen to get started on the Web, full of enthusiasm for the medium and the potential they perceive it has. The OneWorld team are very close to selecting the first 35 NGOs and intends to keep its partners updated as the project develops.

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E-mail Access to Water and Sanitation Information

For most of the individual users and agencies in the developing countries Internet means only making use of the very useful and cheap electronic mail facility. Sending and receiving e-mail messages may be ten times cheaper than faxes. E-mail provides an additional service for people working in water and sanitation: discussion lists on water and, to a much lesser extent, also on environmental

sanitation. However, roughly 90 percent of these discussion lists concern water issues in the USA and Europe. This reflects the focus of the agencies that put up information on the Internet: nine out of ten are from the USA, Canada, and Europe.

Information available via e-mail exists in various forms:

- discussion lists, through which text messages are put on a listserver (a centralized dissemination point) which can be read or commented on by all people with a similar interest; to maintain the quality some of these lists have a moderator checking that messages relate to the topic;
- newsletters, such as this *Water Newsletter*, disseminated through e-mail to subscribers through a listserver.

In the last two years IRC staff members have been scanning available discussion lists and newsletters. The following are among the most relevant for developing country water and environmental messages:

AFWATER: water in Southern Africa mailing list and experimental discussion list. To join send the following e-mail message:

subscribe afwater Firstname Lastname
mail to: majordomo@aquac.cwr.ac.za

DIALOG-AGUA-L: an Internet mailing list for water professionals, managers, academics, students, and others interested in water resources management in Latin America, managed by CES [The Florida Center for Environmental Studies]. To join send the following e-mail message:

sub dialog-agua-l Firstname Lastname
mail to: mailser@centauri.ces.fau.edu

GARNET: Global Applied Research Network, maintained by WEDC. To join, send the following e-mail message:

join water-and-san-applied-research Firstname Lastname
mail to: mailbase@mailbase.ac.uk

Land-And-Water-L: FAO electronic newsletter. To subscribe, send the following e-mail message:

subscribe land-and-water-l Firstname Lastname
mail to: mailserv@mailserv.fao.org

LCSEWERAGE: low-cost sewerage in both industrialized and developing countries coordinated by the Water & Environmental Engineering Research Group, Department of Civil Engineering, University of Leeds, England. To join, send the following e-mail message:

join lcsewerage Firstname Lastname
mail to: mailbase@mailbase.ac.uk

MEH2O-L: Middle East water. To join, send the following e-mail message:

join meh2o-l Firstname Lastname
mail to: listserv@vm.tau.il

WASTE STABILIZATION PONDS: mailing list coordinated by the Water & Environmental Engineering Research Group, Department of Civil Engineering, University of Leeds, England. To join, send the following e-mail message:

join wsponds Firstname Lastname
mail to: mailbase@mailbase.ac.uk

WATERQ-IDRC-CL: a discussion list (listserver) recently established by IDRC for the Water Quality Node of GARNET. The listserver has initially been established in a 'closed' format, so in order to join send an e-mail message to the listowner at:

gforget@idrc.ca

Water Newsletter: news on drinking water and environmental sanitation, 4 pages, 8 times per year from IRC. To subscribe, send the following e-mail message:

subscribe water-newsletter
mail to: majordomo@list.bart.nl

In general, while subscribing to these lists, do not use the 'subject' field of your mail programme and do not include any other text or your signature.

Be selective and try out first which lists you should subscribe to on a more permanent basis. My subscription to one global list on groundwater issues resulted in some 90 messages in my mailbox in two week's time at the end of 1996. Ninety percent were not relevant. Be aware that increasingly, messages include advertisements. Subscribing to too many mailing lists may mean that important e-mail messages for you may be buried among too many messages which you first have to quickly see before you delete them! Unsubscribing can be done by mailing to the listserver the command 'unsubscribe' in the same way as with 'subscribe'.

Accessing the Internet by e-mail

Accessing the Internet by e-mail provides more possibilities than current e-mail users may be aware of. General information on this, which includes how to access the World Wide Web, the more graphic and multi-media part of Internet, is available from:

Doctor' Bob's Guide to Off-line Internet Access (5th edition 1996).

It is available through e-mail: for US and South America type the following in the body of the message:

send usenet/news.answers/internet-services/access-via-email
mail to: mail-server@rtfm.mit.edu

for Europe, Asia and Africa type:
send lis-iis e-access-inet.txt
mail to: mailbase@mailbase.ac.uk

Document Retrieval by e-mail

For those who do not have Internet access, it is possible to retrieve WWW documents by e-mail. All you need to know is the address and location of the file containing the desired document (together these form the Uniform Resource Locator, or URL - that string starting with "http", or "ftp" or "gopher"). For example, people in developing countries can obtain the booklet *Communication Case Studies for the Water Supply and Sanitation Sector*, published by IRC, from the advocacy section on its WWW page, which is located at the Internet provider OneWorld Online. To do so, type the following command:

send http://www.oneworld.org/ircwater/advocacy/
comcases.htm

rsend <your own e-mail address>

mail to: agora@www.undp.org

For other documents follow the same instructions typing the appropriate URL.

We would appreciate feedback on the experience with using electronic mail discussion lists on low-cost water and environmental sanitation, especially from readers from developing countries.

Dick de Jong
Public Information and Advocacy Manager
IRC

e-mail: jong@irc.nl

Electronic Communication in the WSS Sector: GARNET's experience

Recent advances in electronic communications and widening access to computer hardware offer the water supply and sanitation sector unprecedented opportunities for quick, low-cost and effective information exchange. In line with its own activities to widen information exchange and promote communication, the Global Applied Research Network (GARNET) established between late 1994 and early 1995 two mechanisms to **supplement** its normal forms of (paper based) research networking: an electronic listserver and Internet site.

Listserver

The listserver ('water-and-san-applied-research', or WASAR), now in its third year of operation, is concerned with applied research issues in the sector. It is intended for practitioners with a research interest in both the UK and developing countries and is designed for an audience with technical engineering, institutional and health backgrounds. The aim of the listserver is to facilitate information exchange between individuals and/or groups with a similar multidisciplinary background who are interested in discussing and adding to research and developments in the sector. The type of information available can be subdivided into two categories: information which is posted and circulated to all members automatically and information which has to be individually requested and then 'downloaded' (or sent the former, typical postings include summaries of research-related activities or findings; research newsletters or bulletins; reviews of field experiences; and

requests for help or solutions with particular field problems. The latter involves files which can be 'downloaded' direct to the user's PC using pre-set commands, and normally include lengthy, or topic-specific documents which not all members may want to receive.

The listserver currently has 312 members, of which an estimated 20 percent (of those addresses that are identifiable) are from developing countries. On average, one message is posted to the list every two days. To subscribe to the list, send an e-mail message to:

mailbase@mailbase.ac.uk

In the body of the message type:

join water-and-san-applied-research Firstname Lastname

(NB: substitute your own name as appropriate)

Archives of monthly messages (which can be searched by keyword) are available through the Internet at <http://www.mailbase.ac.uk/lists/water-and-san-applied-research/archive.html>

Internet site

In early 1995, GARNET also established a home page on the Internet. The motivation for creating such a site differed slightly from that of the listserver, in that in addition to facilitating information exchange and dissemination of outputs, it was designed to allow users to gain research-specific information quickly and conveniently from the multitude of sector-related sites on the web.

The site's pages employ a minimum of graphics on the basis that users will be encouraged to return if they can access the pages quickly and without delay. After a general introduction section about GARNET (history, purpose, objectives), the user can browse pages on the following:

1. topic networks - relating to the 16 topic specific networks which comprise GARNET (including both hardware and software issues)
2. outputs - full text versions of newsletters (biannual), working group papers on different aspects applied research (priorities, funding, etc.), workshop proceedings, directories of research and funding agencies, and cases studies of successful applied research
3. links - links to sites across the web, with options to access directly to research specific information (i.e., research programmes, publications, databases, etc.)
4. archive - selected conference papers, on-line databases, newsletters and journals
5. how to join - contact points
6. feedback - comments to the GARNET Secretary about the Internet site.

The site currently records an average of 1200 visits per month. Future planned developments for coming months include adding a partner's page (for those supporting GARNET's decentralization initiative), expanding the links page and topic networks sections.

To make up your own mind, visit the site at: <http://info.lut.ac.uk/departments/cv/wedc/garnet/gmtover.html>

Alternatively, for further information about either the listserver or GARNET in general, contact:

Mr Darren Saywell
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Leicestershire LE 11 3TU, UK

Fax: +44 1509 211079 E-mail: d.l.saywell@lboro.ac.uk

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Tel: +44 1509 222890

Fax: +44 1509 211079

Internet:

<http://info.lboro.ac.uk/departments/cv/wedc/index.html>

Top Ten Water and Sanitation Bookmarks on the Internet

The following are the ten most prominent water and sanitation sites on the Internet, in alphabetical order.

African Water Page (maintained by Len Abrahams) is a page dedicated to the water sector in Africa. Issues addressed include water policy, water resource management, water supply and environmental sanitation, water conservation and demand management, and a variety of others. A primary objective of the page is information dissemination on water issues in Africa and to exchange views and ideas on water on the continent.

URL: <http://wn.apc.org/afwater/index.htm>

CINARA (El Instituto de Investigación y Desarrollo en Agua Potable, Saneamiento Básico y Conservación del Recurso Hídrico Valle) combines research and training activities of the University of Valle in Cali, Colombia, with activities concerning the transfer of methodology and technology in collaboration with international organizations and institutions, community-based organizations and local enterprises. This site is in the Spanish language.

URL: <http://cinara.univalle.edu.co>

EHP (Environmental Health Project) is funded by the United States Agency for International Development. It helps development organizations address environment-related health problems. It concentrates on causes of infant and child illness and death in USAID-assisted countries and provides technical assistance among others in tropical disease control, water and sanitation, wastewater and solid waste.

URL: <http://www.access.digex.net/~ehp/>

IRC International Water and Sanitation Centre is an independent, non-profit organization supported by and linked with Netherlands Government, UNDP, UNICEF, WHO, World Bank, and Water Supply and Sanitation Collaborative Council. Activities are directed towards capacity building in the water and sanitation sector through research and training, advocacy, information and documentation support, publications and advisory services on issues such as communication, gender, hygiene education and community management.

URL: <http://www.oneworld.org.ircwater/>

SANDEC stands for the Department for Water and Sanitation in Developing Countries at the Swiss Federal Institute for Environmental Science and Technology (EAWAG) in Dübendorf, Switzerland. The activities of SANDEC centre on problems of sustainable development in economically less developed countries. It aims to find and/or develop concepts and technologies in the water and sanitation sector which are appropriate and sustainable for the different physical and socio-economic conditions prevailing in developing countries.

URL: <http://www.eawag.ch/dept/san/>

WaterAid is a UK charity specializing in water, sanitation and health promotion. This organization provides financial support and technical advice to communities overseas to help work towards practical solutions to their water and sanitation problems. WaterAid believes that working with partners and community participation are the key to sustainable development. WaterAid was the winner of the 1995 Stockholm Water Prize.

URL: <http://www.oneworld.org/wateraid/index.html>

WEDC (Water, Engineering and Development Centre) is concerned with planning, provision and management of water, sanitation and other physical infrastructure for development in low- and middle-income countries. Provides education, training, research and consultancy related to improvement of health and well-being of those in urban and rural communities.

URL: <http://info.lut.ac.uk/departments/cv/wedc/index.html>

WHO/Environmental Health The Division of Control of Tropical Diseases of the World Health Organization (WHO/CTD) supports treatment and prevention programmes on various water-related diseases, including: dracunculiasis (or guinea worm disease); malaria; schistosomiasis (or bilharzia); and onchocerciasis (or river blindness). The Division of Child Health and Development deals with diarrhoeal diseases in children.

URL: http://www.who.ch/programmes/peh/peh_home.htm

World Bank/TWU, the Transport, Water and Urban Development Department of the World Bank provides extensive externally funded technical assistance in water supply and sanitation through the UNDP-World Bank Water and Sanitation Programme. The Water Division of the Department deals with water resources management, utility reform and nonformal institutions for service delivery to the poor. In the Land, Water and Natural Habitats Division, the Blue Team aims to promote an ecosystems approach in Bank-financed water projects.

URL: <http://www-esd.worldbank.org/html/esd/twu/org/twuws/undpws.htm>

World Water Council The mission of the World Water Council (WWC) is to raise public awareness about the critical water issues at all levels including the highest decision-making level and to prepare a long-term vision for Water, Life and Environment. Together with the Government of Morocco, the WWC organized the First World Water Forum in Marrakech, Morocco, from March 20-25, 1997.

URL: <http://walrus.com/~abe/wwc/1ahome.htm>

IRC's Director Departs after 25 Years

On 31 December 1996 Mr. Hans van Damme left IRC after being its Director for 25 years. Under his leadership IRC gained the international recognition it enjoys in the water and sanitation sector today. Mr. Van Damme will continue his service to the water and sanitation sector through advising the Water and Sanitation Collaborative Council.

IRC's Governing Board has appointed Mr. Jan Teun Visscher as Acting Director and has initiated a procedure for the recruitment of a new Director. Mr. Visscher is a sanitary engineer with a long experience in the sector and has been coordinating IRC's activities in Latin America for the last several years.

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PRINTING:	PALLAS OFFSET BV
DISTRIBUTION:	EURO MAIL BV

WATER NEWSLETTER

Developments in water, sanitation and environment

IN THIS ISSUE - WATER UTILITY PARTNERSHIP FOR CAPACITY BUILDING IN AFRICA
- JOINT WHO-UNICEF STRATEGY TO IMPROVE WATER SUPPLY AND STRENGTHEN LOCAL HEALTH SYSTEMS
- WOMEN BRING ABOUT BEHAVIOURAL CHANGE IN INDIA
- LESSONS LEARNED IN WATER AND SANITATION
- NEW PUBLICATIONS

NUMBER 250, JULY 1997

Water Utility Partnership for Capacity Building in Africa

Most water utilities in Africa operate at a low level of efficiency, with deteriorating quality of service and lagging coverage, particularly for the poor. They have little prospect for improvement unless they engage in a broad institutional reform resulting in financial autonomy and increased private sector participation. The reform of water utilities and the strengthening of their capacity is at the heart of the drive to extend water and sanitation services to the poor and to address Africa's mounting urban environmental problems.

The Water Utility Partnership for Capacity Building in Africa (WUP) programme was launched in 1996 as a regional programme to contribute to the development of drinking water service in urban and peri-urban areas throughout Africa. It will provide a unique opportunity for facilitating reform and promoting ownership, learning and identifying innovative ways for improving quality of services, and strengthening the capacity for knowledge, development and dissemination at the regional level. The three-year programme will be funded by a special grant from the World Bank (15-20%), UAWS (10%), and the remainder from partners, ESAs and the private sector.

Key partners in the programme are the Union of African Water Suppliers (UAWS), Abidjan; the Centre Regional pour l'Eau Potable et l'Assainissement à Faible Coût (CREPA), Ouagadougou; and Training Research and Networking for Development (TREND) Kumasi.

Objectives are to improve utilities' performance through institutional reforms and appropriate solutions; enhance collaboration between utilities, NGOs and community-based organizations (CBOs) involved in the sector, emphasizing improved access to drinking water and sanitation in urban fringe areas; strengthening the capacity of NGOs and CBOs involved in WS services to those under-served by formal institutions; and creation of an adequate platform of collaboration between UAWS, CREPA, TREND and other training, research and information organizations. WUP sees itself as an open partnership for water utilities, donors, NGOs, training and research institutes, and as a network for gathering and exchanging experience. It also acts as a catalyst to initiate

changes in attitude in order to improve sector performance at national and regional levels. Finally, WUP aims at capitalization of assets by identifying centres of excellence in Africa to take the role of reference centres, and the dissemination of experiences of successful utilities.

The four components on which the programme will focus from 1996-1998 are:

- *drinking water and sanitation sector development:* Strategies will be set up which enhance the autonomy of water distribution and sanitation utilities, promote use of commercial management principles, and incite improved performance.
- *mastering and optimizing water utilities management:* emphasizing management, and leakage control and reduction. Good practices will be disseminated.
- *service development in urban slums and peri-urban areas:* Water utilities and sanitation agencies will help to strengthen the informal sector's capacity to support WS programmes on a sustainable basis, and water utilities' competence in health and hygiene education will be strengthened.
- *communication:* an Internet site will be set up.

The programme hopes to benefit from the complementarity between English and French-speaking Africa, the first being more efficient in terms of water utilities, the second advanced in terms of community contribution in suburban areas. It aims to reduce the gap between the development of water and sanitation networks in urban centres, and the suburban population's access to drinking water.

The programme outputs will include knowledge and information dissemination workshops and seminars; activity reports, including concrete recommendations from specific studies; manuals and toolkits resulting from studies conducted in the sector in Africa, and formal and informal networks for exchange of experience.

More information can be obtained from:

Union of African Water Suppliers

01 B.P. 1843

Abidjan, Côte d'Ivoire

Tel: 00 225 24 14 43

Fax: 00 225 24 26 29



better water and sanitation for a healthy future

Joint WHO-UNICEF Strategy to Improve Water Supply and Strengthen Local Health Systems

1.2 billion people in the world have no access to safe drinking water, while 2.9 billion people do not have access to proper sanitation systems, according to the latest statistics from the World Health Organization (WHO).

To combat this trend, WHO and UNICEF have for the first time adopted a common operational strategy.

The joint strategy recognizes that efforts to improve water and sanitation facilities need to be reinforced. Major points of the plan include the delivery of consistent messages by the international community on provision of water supply and sanitation; a common approach to supporting countries in designing and implementing sustainable water supply and sanitation programmes at country level; and the advocacy of water as a health and social resource rather than only as an economic good.

The Joint Committee on Health Policy (JCHP) agreed that "WHO and UNICEF should emphasize sanitation and hygiene as an essential element of human development and as the fundamental basis for health in their joint efforts in the area of water supply and environmental sanitation", but noted that specific future plans and activities still needed to be elaborated.

WHO's and UNICEF's support for countries' water supply and sanitation programmes must be integrated into the two organizations' efforts to promote district health systems, the meeting agreed, and the JCHP adopted a two-year action plan to encourage the construction of local primary health-care systems.

The JCHP defined a district health system (DHS) as one large enough to be able to provide the components and technologies needed to support primary health care but as one small enough to be administered effectively and efficiently.

In the action plan, WHO and UNICEF agree to work to strengthen district health systems and monitor their development, to disseminate information on district health systems and advocate their place within health sector reform. Activities will include more detailed analyses of the health care situation in selected countries, as well as joint work by WHO and UNICEF to support selected districts in implementing innovative programmes in areas such as malaria control and safe motherhood. Reduction in maternal mortality, for example, could be used as an indicator of improvement in the performance of district health systems, the JCHP noted.

"District health systems ... can ensure equity of access to health services and people's greater involvement in caring for their own health and well-being," said Dr. Hiroshi Nakajima, Director-General of WHO.

WHO's and UNICEF's Executive Boards first began collaborating on common areas of health policy concern in 1948 following a resolution of the first World Health Assembly. The JCHP is now being expanded to include the United Nations Population Fund (UNFPA) and will be called the WHO/UNICEF/UNFPA Coordinating Committee on Health.

"The new Coordinating Committee on Health will provide an excellent means of focusing more particularly on the needs of reproductive health, safe motherhood, and child, adolescent and women's health," said Dr. Nakajima, while Mrs. Carol Bellamy, Executive Director of UNICEF, added that "we must redouble our collaborative efforts to attack this problem, which is clearly one of the most neglected - if not the most neglected - health-care situations facing the developing world".

Women Bring About Behavioural Change in India

In Prakasam District of Andhra Pradesh, India, women's involvement in water management and sanitation in 26 fluoride-affected villages has made a difference. Under the Chandavaram Scheme of a joint project between the Royal Netherlands Government and the Government of Andhra Pradesh, protected drinking water was to be supplied to the villages. After the technical component of the project had been implemented, the Society for National Integration through Rural Development (SNIRD), a local NGO, was made responsible for implementing the community participation aspect, through the Netherlands Project Office as monitoring agency. The objectives of the "Community Education in Water Management and Sanitation Promotion" programme include awareness raising among women, school children and youth on water, sanitation and hygiene behaviour; setting up village-level operation and maintenance committees; supporting Gram Panchayats in developing the project according to felt needs; and enhancing leadership qualities in informal and formal leaders, and women.

Two-fold strategy

The first step in the two-fold strategy to reach the objectives is the promotion of village-level institutions. For each public standpost, five women members are identified who form a public standpost committee. Once a month they meet to discuss health, hygiene and sanitation, and maintenance of water supply systems. Eighteen-member village action committees are also formed, comprising 50% women. This decision-making body meets once a month to discuss the water supply systems. To actively involve the younger members of the community, youth groups are formed in each village which meet monthly regarding water management and sanitation promotion activities. Bi-weekly school health programmes raise awareness on health, hygiene and nutrition, and school health clubs are promoted to encourage involvement in school sanitation.

Through training, women's hygiene practices and skills in water management and sanitation are improved, and campaigns and cultural programmes create awareness among the community as a whole.

The second step, which is included in the technical component of the programme, includes reinforcement of awareness and training in management of the water systems. This part of the programme is designed and formulated from a women's perspective as each all-woman public standpost committee is formed. The committee members number public standposts, handpumps and wells for monitoring purposes, share responsibility in keeping the platforms and drainage areas clean and chlorinating the wells regularly, and carry out minor standpost repairs. They assess the supply of protected water at each standpost and produce monthly reports. Of all the standpost committees formed, some 70% were found to be very active during the most recent project phase.

The village action committees, which comprise 50% women, contribute to the maintenance of the overhead storage reservoirs area. Their enthusiastic efforts in improving fencing, planting flowers and removing thorn bushes have led to nearly park-like reservoir areas in two of the villages. Formal village-level 'mahila sangams' (women groups) are formed, and these are in turn involved in a thrift programme, to contribute to maintenance costs. The mahila members are also involved in kitchen garden promotion under a wastewater management and nutrition programme.

Monitoring indicators for the programme include maintenance of water supply systems, participation of the community in the programme components, women's involvement and development, and resource mobilization and awareness level within the target villages.

Noticeable behavioural changes

Before SNIRD began its community participation project, the women used protected water for washing their clothes, as the water had a chlorine odour. They would wash their clothes on the platform of the water sources, affecting the sanitation situation adversely. Now, educated about fluoride in underground water, the women only use the protected water for drinking purposes. The protected water is supplied every second day, and the women properly store it in their homes. The community members did not feel a sense of ownership of the overhead storage reservoirs, which held the water supply, and the area around the reservoirs are used for defecation. Since their awareness has been raised on water management, water committees have taken the initiative to maintain the water sources properly, and educated mothers no longer allow their children to defecate in the reservoir area. Education and awareness raising has also contributed to noticeable increases in awareness of diarrhoea treatment, filtering and boiling drinking water, and awareness of the overall village environment.

Lessons Learned in Water and Sanitation

ACTIONAID Pakistan (AAPk) implemented work in its project area of Kalingar Union Council, North West Frontier Province of Pakistan by working in the water, sanitation and health sectors. In an effort to contribute to developing a system which encourages community management and accountability, they tried to improve their approach to development work through lessons learned over the last four years. Some of these are shared here.

Water

The community's role and contribution in a project must be mutually agreed and then clearly articulated. It is important to have formal contracts with the community members in order to clarify the roles and responsibilities of all the actors involved in the implementation work. AAPk has found that such a contract creates a greater sense of ownership amongst the community.

There is a need to involve the community in all decisions related to a project. No decision is too trivial or obvious.

It is extremely important to be fully aware of the political dynamics within a community. Often delays in projects are caused by the rivalries existing between social groups. Awareness of these can greatly help in solving issues.

It is essential to ensure that people living near springs, who have established historical user rights, be fully incorporated in the planning, designing, implementation, monitoring and evaluation of schemes.

The community must be motivated to consider drainage or wastewater removal systems. This is necessary to reduce the incidence of disease in an area. Communities seem to be less concerned about this issue. There is a need to raise awareness through health education, which must be incorporated as component of water schemes. When finalizing the location of the standposts with women, there is a need to help them evaluate the location from a hygiene point of view so that they do not end up with puddles of stagnant water.

It was only possible to resist the efforts of the influential members of the community by being clear amongst ourselves about the principles and values that dictate our interaction. Discussion about the values and principles to be adopted, was also held with villagers and in most public events.

Lack of ownership as a consequence of limited participation throughout the implementation of schemes has contributed to the failure of schemes in the past. Participation of men and women is essential. Women must also be involved in the technical aspects of the scheme.

Even though careful plans are prepared, sometimes changes become necessary during implementation. AAPk has found that there is a need to document changes and evolutions for effective monitoring and evaluation.

Often a participatory rural appraisal (PRA) is seen as a one-off diagnostic event to be carried out when first starting a programme. However, the importance of understanding just what participation means and following this throughout the project is essential to successful implementation. Participation can be brought about by a range of methods and processes but those that favour development of village learning and evaluation skills should be encouraged.

Sanitation

Health education must accompany this work, as should the organizing of villagers into groups to address both correct use and care of latrines in the schools and access by the poorer community members.

Physical targets need to be matched with awareness raising campaigns and health education in schools where the latrines are for communal usage.

Maintenance and proper usage of demonstration latrines in schools should be ensured through group commitment prior to installation. Children/teachers should be trained in the proper use of latrines.

As AAPk continues to reflect and learn from their own and others' work they realize the importance of sharing experiences as widely as possible. It is with this spirit that they carry on their community development work.

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PRINTING:	PALLAS OFFSET BV
DISTRIBUTION:	EURO MAIL BV



New Publications



WAMMA: Empowerment in Practice by Julie Jarman and Catherine Johnson. WaterAid, London, March 1997. ISBN 0 9513466 7 9. 20 pp.

This report is the first in a series which analyze WaterAid's experience in providing integrated water, sanitation and hygiene education projects in developing countries. It assesses the development of a collaborative partnership between the Tanzanian government and WaterAid, which between 1992 and 1996 helped 86 communities in the Dodoma region provide themselves with improved water supply and sanitation systems.

Implications for policy emerge which are relevant for both the water and sanitation sector, and the wider development community. Key conclusions are: governments and NGOs can be effective partners in community water supply and sanitation programmes; empowerment of fieldworkers makes them dynamic agents for change; motivated and empowered communities manage their own water and sanitation projects well; participatory approaches need to work within existing systems and structures; changing attitudes and working practices take time; adding the health dimension to water programmes calls for flexible and innovative approaches; and finally, the approach used is not a blueprint, but is replicable given certain preconditions.

These preconditions for fruitful government/NGO partnership are:

- Enabling policy climate
- Available fieldworkers
- Official backing
- Patience and flexibility
- High priority for community development
- Adequate donor resources.

Wamma: Empowerment in Practice can be obtained free of charge from:

WaterAid Tel: +44 (0)171 793 4545
 Prince Consort House Fax: +44 (0) 171 793 4545
 27-29 Albert Embankment
 London SE1 7UB, United Kingdom



WATER NEWSLETTER

Developments in water, sanitation and environment

IN THIS ISSUE - TWO BILLION AND COUNTING
- PARTICIPATORY ACTION RESEARCH ON COMMUNITY MANAGEMENT OF RURAL WATER SUPPLY
- COMMUNITY MANAGEMENT AND PARTNERSHIPS WITH CIVIL SOCIETY
- ASSESSMENT OF PROMISING APPROACHES IN WATER RESOURCES MANAGEMENT
- WATER DEMAND MANAGEMENT AND CONSERVATION

NUMBER 251, OCTOBER 1997

Two billion and counting

A Millennium commitment on water services for the unserved

More than 250 of the world's leading water and sanitation experts will assemble in Manila, the Philippines from 3 to 7 November to discuss strategies which could save many millions of human lives in the coming Millennium.

Of the 4.5 billion population of the developing world, more than a billion have no access to a supply of safe drinking water and more than 2.5 billion are without hygienic means of personal sanitation. The result is a horrifying toll in death and debilitating disease. More than 10 million people die each year from cholera, typhoid, dysentery and other diarrhoeal diseases caused by poor sanitation. That is equivalent to 70 jumbo jets crashing with total loss of all passengers - EVERY DAY OF THE YEAR.

The sector professionals gathering in Manila come from more than 100 countries. They work for water ministries and agencies in developing countries, bilateral and multilateral donors, NGOs, professional associations, research and information organizations. These water "stakeholders" are being brought together by the Water Supply and Sanitation Collaborative Council -- an organization formed in 1991 to foster national and international cooperation among all stakeholders in the pursuit of improved and sustainable water and sanitation services for all, with an emphasis on the world's poor.

For six years, the Council has sponsored working groups of specialists to produce advocacy guidelines and tools which can be used to bring faster progress towards safe water and sanitation for all people. The solutions are known; the tools are ready. In Manila, the participants in the Council's Fourth Global Forum¹ (Theme: *Water and sanitation for all: Calling all stakeholders*) will work out how they, their colleagues and their counterparts around the world can push communities, governments, donors, NGOs and all other stakeholders into intensified efforts to implement effective water and sanitation programmes.



They will look separately and collectively at the challenges in Asia (where three-quarters of the unserved billions live), Africa and Latin America; and they will discuss the special problems experienced by small island developing states and those of the countries of Central and Eastern Europe and the Newly Independent States of the former Soviet Union.

The outcome of the meeting is expected to include regional action programmes guided by new regional focus groups of the Council. The programmes will have a common goal, achievement of safe water and adequate sanitation services for all the world's people as early as possible in the new Millennium.

Participatory Action Research on Community Management of Rural Water Supply

In the context of the four-year participatory action research (PAR) project on community management ("MANAGE") funded by the Netherlands DGIS IRC's Eveline Bolt in September 1997 provided support to the Nepali research team. This included discussion on how the team should continue with the research, systematization and documentation of experiences, and the start of the dissemination of lessons learned. In that period a meeting of the National Reference Group took place, in which the PAR team gave an update to the representatives of government and non-governmental organizations in this group, who are interested in the experiences in this participatory research. The team mentioned a few challenges still ahead in the research project:

- Systematization of PAR process and outcome in the community;
- Harmonizing different political interest groups to a common goal;
- Make people think of more alternative solutions to problems identified;

The team also mentioned the following "lessons" learned so far:

1. Problem analysis served as an eye opener and generated action;

1) The others were in Oslo, Norway (1991), Rabat, Morocco (1993), and Bridgetown, Barbados (1995)



2. The dynamics of communities can not be adjusted to a fixed timetable as time and space differ from the proposals of the institutions, thus results in a short time cannot be expected;
3. Each situation, culture etc. requires its own approach;
4. Sufficient space, openness, interactions, reflections and training help feel as part of the process and build a sense of ownership;
5. Action research volunteers in the communities are instrumental for research activities, they have developed leadership capabilities, so new leaders emerge;
6. There is still a need to unlearn, make ourselves humble, listen and take a backseat;
7. Activities in the communities should be facilitated without creating dependency;
8. Problems identified are of technical, managerial and social nature, although communities always start mentioning technical problems only. Communities ask for training in those areas.

The director of WaterAid (sponsor of the partner organization in Nepal, NEWAH) said: Working in communities with existing water supply systems allowed determination of problems and strategies to solve them. We should now also try to use PAR-experiences for identification and documenting "warning signs", signs we can act upon to prevent problems in new projects. He also said that much emphasis is put on identification of problems and he stressed that community strengths also need to be made explicit in presentations and documentation.

Two days were spent in one of the research communities for a review of the activities so far and further action planning. An interesting event was the monitoring exercise using the so-called "spider-model", developed by CARE-Nepal. This model is a tool for assessing the capacities of community groups within the areas of organization, management, linkages/networking, fund mobilization, and participation/mobilization.

With the country team the expected outputs of the research were discussed and how the country teams' contributions could be as rich as possible. In order to facilitate systematic documentation of experiences and results the team discussed how review processes could take place.

Similar support missions are being under taken to support the research team in the other participating countries: Cameroon, Colombia, Guatemala, Kenya, and Pakistan.

Community Management and Partnerships with Civil Society

The Third Global Forum of the Water Supply and Sanitation Collaborative Council (WSSCC) held in Barbados (November 1995) endorsed the creation of a Council-sponsored Working Group (WG) on Community Management and Partnerships with Civil Society. The aim is to present to the WSSCC frameworks which will facilitate more harmonious interaction among governments and the various actors of civil society

(private sector, NGOs, community-based organizations (CBOs) and best practices of community management approaches, and to influence governments and external support agencies (ESAs) to adopt these approaches, including involving the actors of civil societies in their planning processes.

The Task Manager and regional co-ordinators of the WG adopted a case study approach covering the variety of frameworks of interaction and community management practices. The Group held wide-scale consultations and regional workshops in Latin America, Asia and Africa. Based on the lessons drawn from about 30 cases studies, the WG emphasises three principal recommendations:

- Adoption of a Code of Conduct on community management by the largest possible range of stakeholders;
- Creation and strengthening of sustainable alternative financing mechanisms at the community level
- Development of indigenous WSS management systems fostering self-reliant and self-help approaches.

The plan of action proposed to the Forum by the WG looks in depth at these three initiatives for reinforcing the effectiveness of community management and partnerships with civil society. Each tool will be built on capacity building and complementary partnerships among stakeholders.

Task Manager: Raymond Jost, International Secretariat for Water (ISW)

Assessment of promising approaches in drinking water supply related water resources management

The continued mismanagement of water and land resources is putting human health and sustainable social and economical development at risk, with consequences for domestic water supplies. The significance of this problem has been highlighted at a number of international fora, (Mar del Plata 1977, Dublin 1992, Rio 1992, Noordwijk 1994 and OECD DAC 1994) at which international and national policy makers have under-written a number of basic principles and recommendations for the improved formulation of policies and strategies to tackle this issue. The promotion of an integrated approach to water resources management (WRM) is considered crucial to sustain life and ensure sustainable development of water resources.

Although information on key recommendations is finding its way throughout the world and a wide range of international and national agencies support these principles, the linkage between policy and practice is often missing. Indeed a recent review (Saunders et al., 1996) found that such internationally recognised principles were in practice applied largely on an 'ad hoc' project basis in the Drinking Water Supply and Sanitation Sector (DWSS), despite a concerted effort to enshrine such principles into the policies of both donor agencies and, increasingly, national governments. Similarly there is a noticeable lack

of documentation or information concerning experiences or promising approaches related to the implementation of these principles.

With the support of external support agencies (ESAs) including DGIS/VROM (Dutch government), UNDP, SIDA and SDC, IRC has embarked on a project to assist staff members of a number of Drinking Water Supply and Sanitation projects and programmes to jointly review and document practical experiences with WRM.

Participating projects

Projects participating in the assessment represent cases from Asia, Africa and Latin America and come from the following countries including Cambodia, Colombia, Ghana, Guatemala, India, Nepal, South Africa and Zambia. Most projects operate in the water supply and sanitation sector in rural areas, some also cover small urban centres (CARERE, Mgeni CMP, Tonga WSP). A few participating projects address water issues in a broader context in the form of catchment management (Mgeni CMP, IWDP Jabua District). Most projects have a clearly development oriented character though some to a lesser extend due to the emergency context they are operating in (CARERE, Support to WASHE). A wide variety of support agencies and donors are involved in the assessment.

Following the preparatory meeting in 1996 in which a framework was agreed participating projects documented their experiences. The results were shared in a synthesis workshop which took place at IRC in September.

List of all participating projects:

1. **Cambodia Area Rehabilitation and Regeneration / CARERE-WATSAN**, Cambodia, UNOPS.
2. **CARERE-WATSAN**, Ministry of Rural Development, Cambodia, UNOPS.
3. **Surveillance and Control (Post Disaster Armero / Tolima (San Felipe) Area)**, CINARA, Colombia
4. **Volta Rural Water Supply and Sanitation Project**, Ghana, GWSC/Danida.
5. **Water Source of Peace**, Guatemala, UNICEF
6. **Banaskantha Women's Rural Development Project**, SEWA & Water Board, India, DGIS.
7. **Integrated Watershed Development Programme Jabua District**, India, Unicef.
8. **Maharashtra Rural Water Supply and Sanitation Project**, Project Planning and Monitoring Unit, Government of Maharashtra, India, DFID.
9. **Rural Water Supply and Sanitation Project (Lumbini zone)**, Nepal, HMG/Finnida.
10. **Mgeni Catchment Management Plan**, UMGNI Water, South Africa.
11. **Tonga Water Supply Project**, Mvula Trust, South Africa.
12. **Support for WASHE projects in Drought Affected Areas of E. & S. Provinces of Zambia**, Zambia, DWA, UNICEF.
13. **Northern Province Development Programme**, Zambia, Irish Aid.

Two key lessons stood out from the participants' experience:

- The participatory assessment approach aiming at involving key stakeholders at various levels (national, district, local) was in many cases a very innovative approach and contributed to awareness and - often first time - discussions among various stakeholders at various levels on the topic.
- While much of the dissemination of outcomes of the project still remains to be done, it is encouraging to see that in a number of cases the participation in this project has already led to production of dissemination products (articles, presentations, audiovisuals). In two cases it has led the partner country to delegate additional participants to the Synthesis Workshop (Nepal, India).

In group work on the **preliminary outcomes of the assessment** the following conclusions emerged:

- In most cases national governments - often with support of ESA's - have started to address water resources management, although often limited to resource inventories and to a lesser extend assessing demands and formulating indicative water master plans. In none of the cases have national governments updated or formulated new water resources acts.
- While awareness about the fact that water is a scarce and limited resource exists and is growing both at national, regional and also local levels, very few cases report concrete measures taken to start managing water resources in a comprehensive way. In most cases measures are taken in an uncoordinated sub-sector wise way.
- None of the participating projects dealing with water supply and sanitation have already built in a clear water resources management policy or component. The exception are those projects that explicitly focus on river basin or water catchment management (Umgeni, Jabua District).
- While elements of principles as formulated in international fora are known and to a certain extend adhered to in the cases represented, there is no conscious comprehensive knowledge about these internationally formulated recommendations at project level and therefore also not a deliberate policy to translate the principles into concrete measures. The implications of many of the principles are still being discussed mainly at national levels, e.g. decentralisation, privatisation, gender balance, cost recovery, social and equity aspects, etc.
- What is poorly developed in most cases is the strengthening of horizontal (inter sectoral) and vertical (national, district, local) co-ordination and cooperation of various actors. It is also evident that the leading role to promote this integrated participatory approach generally does not lie with the institutions in the water and sanitation sector.

Water demand management and conservation

At its Global Forum in Rabat in 1993, the Collaborative Council agreed to establish a Working Group on Institutional and Management Options with specific reference to water demand management. The IMO working group reported to the WSSCC meeting in Barbados and at that meeting a group session on demand management and conservation was held. The council then decided to form a special working group on Water Demand Management. Working Group members represented a variety of interesting experience, gained in developing and industrial countries, dealing with the range of demand management policies and instruments, as well as plans to implement demand management strategies.

One workshop was held in Oslo, Norway, in April 1997. Case studies and papers were presented. Questionnaires were sent to 25 countries and were analysed and discussed by the group. Two resource papers on demand management were commissioned, one being a general overview, the other proposing a strategy for urban water demand management.

Historically, the predominant approach to water resources development has focused on developing new supplies and structures to manipulate available supplies to meet perceived water needs. Hallmarks of this paradigm include large dams, water diversions, central water supply and wastewater treatment works, and many other such structures. Because this water supply management approach considers water needs as requirements that must be met, and not as demands that are variable and changeable, it has led to overuse of the resource, over-capitalisation, resource wastage, pollution, and other problems of varying severity. A most important fact about these problems is that the prevailing paradigm can neither explain nor suggest permanent, cost-effective solutions to them, unless courageous policy making and rigid implementation strategies are followed.

The alternative approach places water demands themselves, not structural solutions, at the centre of concern, and develops large capital-intensive structures only after opportunities have been fully analysed for lowering or mitigating the proposed demands in a more socially beneficial manner. This is true in urban, industrial and agricultural water supplies. Urban water demand management deals with the emerging problems of water utilities having 40-60% and even higher levels of unaccounted for water. Case studies clearly show the ability to decrease unaccounted-for-water toward the 15-20% levels and reduce wastage in the domestic and commercial sub-sectors by 20-25% through leakage repair, metering, reduction of water thefts, and retrofitting by the private sector or by utility staff.

Irrigation efficiency increases through the application of measures like adequate pricing of water, crops selection and techniques such as lining of canals, introduction of sprinkler or drip irrigation, automation and many other options. This leads to substantial increases in yield and income per unit of water, thus enabling the potential release of large quantities of water from the agricultural sector for municipal and industrial usage.

Industrial demand management efforts promote water savings and lowering of water pollution levels. They encourage energy and raw material savings, and potential reuse of wastewater. Recent developments show that exchange of fresh water used for irrigation with treated sewage effluent has become a feasible option to deliver additional water to cities at much lower costs than those associated with the execution of the new water projects, which in many cases are from remote and polluted sources. Treated effluents contain important nutrients to enhance agricultural productivity.

A comprehensive demand management strategy calls for the use of policy, legal, economic/financial, technological and other means. However, the group agreed that governments should not wait for the establishment of adequate institutional structures. Implementation of a stage-by-stage demand management strategy can assist and trigger the proper functioning of the utilities, thus creating the necessary enabling environment, for future institutional structuring..

In contrast to conventional approaches demand management is much more aggressive in its use of economics to influence the origin of water demands in the first place, to provide incentives for satisfying given "ends" in the cheapest possible manner. Demand management also depends critically on raising public awareness, and on adoption of a series of structural and operational measures to cut losses and improve the efficiency of water use.

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COLOPHON	
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DESKTOP PUBLISHING:	LAUREN HOUTTUIN
WITH CONTRIBUTIONS FROM:	WATER SUPPLY AND
	SANITATION COLLABORATIVE COUNCIL
	EVELINE BOLT, IRC
	PETER BURY, IRC
PRINTING:	PALLAS OFFSET BV
DISTRIBUTION:	EURO MAIL BV



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The Water Newsletter is printed on recycled chlorine-free paper

WATER NEWSLETTER

Developments in water, sanitation and environment

IN THIS ISSUE - GENDER IN DEVELOPMENT THEATRE
- KEY QUESTIONS FOR PLANNING/ EVALUATING COMMUNICATION TOOLS/METHODS
- THEATRE COMMUNICATES!
- MARKETING COMMUNICATION FOR BEHAVIOURAL RESULTS IN WES PROJECTS
NUMBER 252, NOVEMBER 1997

Gender in Development Theatre

For generations, people have expressed themselves through music, songs, dance, plays, puppets and other performing arts. Such arts have long been a form of social memory and a means to pass on commonly held values and perspectives to younger generations. They have also been an important medium to spread news and expand cultures. In the second half of the 20th century the performing arts began to play a role in development programmes.

Public participation in the formulation and implementation of theatre programmes was low. Themes and scripts were not based on the perceptions of the audiences and no members of the public took part in preparing and staging the shows. Audiences were seen as the passive receivers of information. While the level of public participation and thus the effectiveness of the performances is increasing, development theatre can only be really effective if attention is paid to gender differences.

The Gender Aspect

Theatre for social change is often gender-neutral, while reality is not gender-neutral. Men and women have different responsibilities, needs, and interests, and differ in freedom to gather and speak out in public and in access to information. These differences are not static, but change through internal processes and external influence. When development programmes neglect these realities they do not fully reflect the situation of the people and may consolidate and reinforce existing inequalities.

There are several examples of gender focus in performing arts. In his book *When People Play People*, Zakes Mda describes gender in a traditional art form. Girls from a village with an improved water supply made a song to ridicule girls in the neighbouring village for their unimproved system. The song expresses the needs of rural women and girls for an improved water supply and stresses the chief's responsibility in obtaining such an improvement for the women in his village. The case shows that traditional performing art may inspire critical thinking among young women on gender issues and can be a tool for pressurizing local leadership to meet women's needs.

Another case concerns development theatre in Western Kenya. A theatre group was engaged to perform plays on better sanitation and hygiene in villages served by a water

supply and sanitation project. During the show the actors invited reactions from the audience, including comments from women and children. One play blamed especially the women for being dirty, unhygienic, and guilty of poor sanitation practices and gave the impression that women should be shouted at and ordered around. The women objected to this treatment and stressed that responsibilities for good sanitation and hygiene had to be shared between women and men.

In communication it is often held that women are predominantly passive in public gatherings. This alleged passiveness is, however, strongly related to the selection and way of use of the media. In theatre for development workshops organized in Tanzania between 1983 and 1991 women proved to be very active communicators when the workshop organizers involved women and men in their search of village problems and the choice of themes and art forms. Women always selected problems which concerned them most and chose traditional women's dances with songs as the art form culturally acceptable for them, but introducing new gender themes. Key themes included schoolgirls made pregnant by teachers and wealthy villagers, poor water supply, unfair division of labour, and failing income-generation projects. The dances proved an effective mechanism to bring out the viewpoints of the various groups, unite the women, hold leaders accountable in a way which was culturally accepted and put pressure on them to take things in hand.

The use of the performing arts for the promotion of water and sanitation projects and for changing risky behaviour is an established phenomenon in India. Forming local theatre groups and equipping them to develop and perform their own plays based on their own analysis of local conditions and practices is a further development. Very recent is the incorporation of a gender perspective into such groups and their productions. By assisting male and female villagers to translate a gender-specific analysis of village conditions and problems into performing arts and to link the performances to action, it is hoped to achieve a more effective use of development theatre for environmental and social change.

An account of how performing arts are used to raise gender awareness in training workshops comes from the Philippines. Here, raising consciousness on gender and



better water and sanitation for a healthy future

change of gender roles are the specific objectives and themes of Usapang babae, or gender awareness through theatre arts, games and processes. During the three-day workshop, the women practice various forms of performing arts to become more aware of their restricted position, identify changes, and build confidence to undertake these changes. The participants also learn how to organize the same workshop with other women.

Summary

Including a gender focus requires that gender aspects are explicitly recognized and planned for in the formation of the group and the development of the story and messages. It is clear that elements of gender are an important aspect to be looked at when planning and analyzing various forms of development theatre.

Active participation of women in problem review, theme selection, script development, and performance can influence gender roles and relations. Enabling women to express themselves ensures that women's concerns and viewpoints are included in the collection of scripts and that gender concepts are communicated between women and between women and men. Women's art forms are recognized and consciously used alongside those of men,

preventing the reinforcement of the myth that women are audiences and theirs is only a passive role. But where the initiative of the group and the reception by the community allow, changes can go further.

The step from women as performers to women as producers in India, for example, was made when an external consultant helped one group to make a slide show to provide the context for a puppet show on village sanitation. It is relatively uncommon to find general development programmes which train village women to become producers of modern communication products.

In future, it would be useful to carry out a systematic field review of the impacts of the activities of the various performing arts groups on gender relations and on division of knowledge and tasks in water supply, sanitation, and hygiene. Typical issues for further research related to gender would be a content analysis of the existing plays on gender aspects and field studies on access of men and women to performances and the appreciation and effects of gender themes.

Adapted from: "Bringing Gender into Development Theatre: Five Cases in India" by Christine van Wijk in Media Asia, vol 24, no. 1, 1997, pp. 23-29.

Key questions for planning/ evaluating communication tools/methods

When planning communication tools and methods a range of key steps are essential to increase the effectiveness of the communication intervention. Below is a checklist for tools which are being used in IRC's advocacy communication work, which has proven to be useful for participants in short course programmes.

Title:	Production date:
Format:	Producing agency:

- What is the key objective (which and whose problems are being addressed)?
.....
- Who, how big and at what level is the intended audience?
☐ primary ☐ secondary
☐ individual ☐ family ☐ community ☐ district ☐ region ☐ national ☐ international
- Is the material: ☐ promotional ☐ instructional ☐ motivational
- Has the educational, socio-cultural and communication situation of the audience been researched?
☐ yes ☐ no
- What is the intended frequency of use?
- Is the material used: ☐ standing alone ☐ as part of a communication process?
- Has the material been pretested? ☐ yes ☐ no
 If so, were changes incorporated in the final design?
- Why was this medium/method selected?
- Is staff that has to use the method/tool trained in communication processes? ☐ yes ☐ no
- Number of copies produced
- Costs
- Which other communication methods are used in support?
- Is impact measurement planned, done and fed back into planning? ☐ yes ☐ no

Feedback on the use of this checklist would be appreciated and can be mailed to Dick de Jong (jong@irc.nl)

Theatre communicates!

Participatory theatre enhances the effects of hygiene education. This was a striking observation of an internal impact study on the hygiene education component of an ongoing water supply and sanitation project in Africa. The study was conducted by the African Medical Research Foundation (AMREF), an NGO. It was held half a year after a pilot study on Theatre for Development took place.

The Rural Domestic Water Supply and Sanitation Programme II (RDWSSP II) - in Nyanza Province, Kenya - conducted this pilot study on Theatre for Development as support of the hygiene education part of the programme. The study was designed to assess whether Theatre for Development would be a realistic, cost-efficient and effective means to boost this important part of the programme. The general focus of the pilot project was on the ten water and sanitation topics that form the basis of the RDWSSP hygiene training, as well as on personal responsibility towards a community's own development.

From the start of the Theatre for Development study it was obvious in the set-up of the RDWSSP - 250 target communities a year, scattered over 6 districts - that the financial and logistical requirements would make it almost impossible for theatre groups to visit every community. However, the pilot study still aimed to see whether the concept of using Theatre for Development would be feasible and whether there were alternatives to visiting every community with an elaborate theatre programme.

Results and impact of the theatre study

Theatre for Development triggered additional and new thoughts about certain subjects. The pilot study, for instance, indicated that community members came up with different reasons for change of hygiene practices after seeing the performance - reasons that were mostly related to social interaction with other community members.

Furthermore it was obvious that people enjoyed the performance very much and actively participated. The plays, poems, songs and mimes were perceived as reflecting the lifestyle of the audience and were easily accepted.

Whether this change of opinion and new thoughts would lead to permanent behaviour change was a question that could not be answered in the scope of the theatre pilot study. However, during AMREF's internal impact monitoring study held six months later, more positive changes in hygienic behaviour were observed in all the communities visited during the theatre pilot study than in those communities where hygiene education was not supported by Theatre for Development.

This impact monitoring wasn't focused on the theatre component, but on hygiene education as a whole, which involved a package of hygiene education methods. Thus the observations of the impact monitoring have a limited scope with specific regard to theatre.

Limitations

As the primary conditions of professionalism and reflection on the lifestyle of the audience were fulfilled, limitations mainly concentrated on costs and logistic problems. The cost per person watching the performance was approximately 42 Kenya shillings (about US \$1.50). Although by Western standards this is not high, it is an amount that local people - surviving on a meagre income - probably would not pay to see the performance.

The aim of the RDWSSP II is to assist 250 communities a year, but even a target of 50 to 100 communities involves a lot of organizational difficulties. As suggested by one of the theatre groups, performances should be held during the dry season when there isn't a lot of fieldwork to be done. Market days, festivals and special holidays should be avoided. This limits the time available for performances. A simple calculation showed that the project would need several theatre groups to visit all the RDWSSP communities.

Alternatives

Based on the RDWSSP possibilities and limitations and the results of the theatre pilot study, it seems to be a sound option to combine Theatre for Development with other ongoing projects that involve schools and other institutions.

Furthermore, during a workshop staff members were trained by professional actors, thus enabling them to more easily promote the use of theatre by teachers, women's and youth groups or members of other village institutions. The findings of the theatre pilot study on what type of performances and techniques worked where, were incorporated in this training. The findings of the AMREF impact study have affirmed the RDWSSP to increase the use of all kinds of theatre techniques during all stages of the programme: planning, hygiene education, monitoring and evaluation.

The experiences in Western Kenya are described in the book *Drama and Theatre: communication and development: experiences in Western Kenya*, edited by Loukie Levert and Opiyo Mumma (1995). The book can be obtained from Kenya Drama/Theatre and Education Association (KDEA), PO Box 39374, Nairobi, Kenya.
Tel: +254-(0)2-334244, ext. 28081
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For more information on the theatre project described above, please contact:
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Marketing Communication for Behavioural Results in WES Projects

Water and sanitation projects have traditionally focused on the goals of establishing and maintaining water sites, trusting that the ready availability of clean water would

naturally lead to its effective use and the accompanying improvement in people's health. This trust was misplaced. There is now the realization that behavioural results involving specific uses of water require their own focused communication attention.

It is this behavioural imperative which led to the innovative design of the Guinea-Bissau Water and Sanitation Communication-Training Project by IRC and UNICEF. No longer satisfied with the end goal of establishing and maintaining water sites, the new project became an intense communication training project directed at achieving behavioural results for greater impact on people's health.

There are 80 individual behavioural results aimed for in the project, ranging from anal cleansing to washing hands after use of the toilet to disposal of wastewater. Here is a sensibility loath to be restrictive about what is to be accomplished. It is driven by a development conscience which cannot abide leaving some goals aside. It would be considered not good, not nice, not fair, to pull back from 80 behavioural results in five years to, perhaps, 10. It is as if to say, if you are in the market you might as well try to sell everything.

But even the poor villager's marketing instinct cautions against this: village marketers sell a restricted range of products to a market they well understand. This is clearly evident as one walks through the village markets of rural Guinea-Bissau and even its urban public markets.

A marketing communication sensibility would have forced a restrictive focus on a few key behaviours and subsequently would exhaust a process of fully understanding these behaviours in the community context, exploring those factors which prompt the behaviours and those which serve as deterrents. To the credit of the current project, it does dedicate significant time to anthropological research in the communities, but one suspects that the outcome is directed more at working towards participatory democratic village institutions rather than understanding why people do not wash their hands after using the toilet.

The "development communication" sensibility constrains the project with a traditional fascination with media and materials. The project document itself focuses on the dominance of radio, with much discussion of developing rural radio and listening groups. And then there is mention of using community theatre, and a range of other audio-visual aids suited for non-literate audiences. Enormous

effort seems to go into the production of posters and flip charts for use by animators in their community communication work. All of this seems quite misdirected given the dominance of face-to-face networks of communication. Guinea-Bissau society is not visually provoked. Even traffic signs are few. People listen to radio but it would be a mistake to rely heavily on radio as the central medium for prompting behavioural change on intimate matters such as personal hygiene. The use of massive numbers of village-level animators or other face-to-face communication agents has to be the centerpiece of communication efforts.

And with this strategy one would not necessarily burden the "agent" with a mess of audio-visual support. In the Guinea-Bissau project it was reported that animators are impressively animated when they are sharing information with a community group: they use their hands and facial expressions and body movements with passion as they engage people in looking at new behaviours. But often one sees them interrupt their natural discourse when they remember that they were taught to use audio-visual aids; so they quickly stop their natural presentations, reach for the charts and end up with a stilted, dull exposition. The marketing communication sensibility would forgo the posters and charts and rely on the inherent vigour and passion of animated agents for personal selling.

Marketing communication sharply focuses on behaviours and behavioural results. It should be an added input in most social development programmes. Unfortunately, the long history of sustained successes in achieving behavioural results in the private sector through marketing communication tends to be treated, unfairly, as removed from the behavioural goals of social development efforts.

While expressing one more time the striking uniqueness of a substantial communication and behaviourally-driven WES project in Guinea-Bissau, and the need for more of these worldwide, one asks to be allowed a final bit of marketing arrogance: If a marketing communication sensibility were to inform the design of the information-education-communication (IEC) components of Water and Sanitation programmes, such programmes would have far more dramatic impact on the lives of people than they do now.

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Note from the Editor: In February 1997, the author was involved in designing the five-year Advocacy and Communication Component of the UNICEF/Government of Guinea-Bissau Country Programme. In the course of the assignment, he had the opportunity of looking at the IRC/UNICEF Water and Sanitation Communication and Training Project in Guinea-Bissau. His observations do not necessarily reflect those of the organizations involved in this programme.

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PRINTING:	PALLAS OFFSET BV
DISTRIBUTION:	EURO MAIL BV



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WATER NEWSLETTER

Developments in water, sanitation and environment

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NUMBER 253, DECEMBER 1997

Ghana Develops National Strategy for Hygiene Education

Ghana is one of the few countries in the developing world which is developing a National Strategy for Hygiene Education. In late September 1996 a national workshop on Hygiene Education for Action in Tamale in Northern Ghana drew 36 participants from various governmental and NGO programmes, as part of a process to define a common national strategy for the hygiene education component within the Community Water and Sanitation Division (CWSD).

A remarkable achievement in Ghana is the national policy on the implementation of water and sanitation programmes. Under the policy an IDA-GoG financed Community Water and Sanitation Project (CWSP) has been established. The Community Water and Sanitation Division (CWSD) of the Ghana Water and Sewerage Corporation (GWSC) plays a facilitating role in harmonizing all water and sanitation programmes at the national, regional and district levels. "From lessons learnt on water and sanitation programmes implemented in the past, it is imperative that hygiene education should be integrated into different phases of the project cycle for water and sanitation programmes to maximize health benefits to be derived from such projects", says Eugene Larbi, Managing Director of Training, Research and Networking for Development [TREND] in Kumasi.

The National Hygiene Education Workshop in Tamale built on the products from three earlier regional workshops: School Hygiene (April, 1996), Community Animation and Training (May, 1996), and Materials Development (September, 1996). It also used the results of a National Hygiene Education Study carried out in August 1996 by a team of consultants and sector staff.

Problems and New Approaches

These workshops identified some of the elements of the new approach to hygiene education, such as: focus on community problem solving and action planning rather than message delivery; integration of hygiene into all

phases of the project cycle; and community management of water supply and sanitation systems as well as the integration of water supply, sanitation and health. The Hygiene Education workshop participants identified a range of problems in hygiene education linked to water supply and sanitation projects in the past, which are illustrated by the cartoon. These were enumerated as:

1. Lack of integration
2. Message-based didactic messages
3. Lack of respect for life experiences
4. Disempowerment and dependency
5. No demand for hygiene
6. Messages not related to the local context
7. Changing behaviour is more than knowing facts
8. Focus on individual behaviour
9. Message-imposing materials



To address these problems the Tamale workshop finalized a new approach to hygiene education delivery and made the following Declaration:



better water and sanitation for a healthy future

Tamale Workshop Declaration

1. *Integration:* Hygiene awareness and action should be integrated into all phases of the project cycle and community management of water supply, sanitation and health.
2. *Focus on change:* Hygiene education will focus on behavioural change, not information delivery.
3. *Locally decided target:* Each community will develop its own standards for hygiene behaviour.
4. *Putting the community in charge:* Not the field workers, but the community will be in charge of the process of building commitment to change.
5. *Participatory, learner-centred methods:* Hygiene education will use a participatory process of discussing, problem-solving and action planning.
6. *New attitudes and skills for hygiene educators:* Field workers need to learn the skills of asking questions and facilitating discussions, and develop an attitude of showing respect for the knowledge base and experience of the people in the rural communities.
7. *Education for change materials:* Materials should be designed to support the new emphasis on behaviour change.
8. *Topics:* The hygiene education programme should focus on a limited number of topics, such as keeping potable water from pump to mouth clean, pump site cleaning and maintenance, care and use of the latrine, hand-washing before touching food and environmental cleaning.
9. *Collaboration:* Collaboration between village committees, field workers, latrine artisans and four relevant ministries needs to be strengthened so that messages and approaches are consistent.
10. *Monitoring:* Monitoring tools should be used by the community and the CWSD.
11. *Sanitation:* Sanitation should be given a higher priority within the CWSD.

Among activities currently being conducted to enhance hygiene education promotion are field studies on Knowledge, Attitudes, Beliefs and Practices (KABP) on hygiene, and capacity building for DWSTs of district assemblies, headteachers, school health coordinators from Ghana Education Service and other stakeholders to carry out sustainable hygiene education programmes.

Successful School Hygiene Education

The school hygiene education component of the CWSD is making a remarkable impact in the sector. A comprehensive School Hygiene Education Syllabus as well as detailed session notes based on the syllabus have been drafted and are being tested in four regions. Selected teachers, headteachers and other affiliated personnel in the pilot regions are being trained. Latrines/urinals are being constructed for the selected schools under the IDA-GoG financed support programme. Drinking water with handwashing facilities, to reduce contamination through hand contact with potable drinking water in schools are

being put in place by the selected schools to link theory with practice. To ensure that training programmes for teachers and school health coordinators are tailored to suit their needs, a number of child-centred active participatory learning methods and child-to-child approaches have been developed and are being used in all training sessions to facilitate teaching and learning.

It is known that hygiene education needs to be reinforced with visual materials to make it effective. A number of visual materials for education, training, information and promotional activities on hygiene education have been developed for the water and sanitation sector by NGOs and other private consulting groups engaged in training and development.

Working groups on hygiene education are being encouraged to meet periodically to share lessons and experiences. "There is a lot of communication going on amongst all the key players", adds Eugene Larbi. There is also an increasing focus on local capacity building at the community level. Donors discuss collaboration on bi-monthly basis, and these have led to further discussions in special groups such as Training and Management officers, Hygiene Education Specialists and technical staff.

The Bottom Line is: Sanitation for All

A global campaign is being launched to tackle the "shameful" sanitation situation throughout the developing world. Donors, UN agencies, NGOs and developing country professionals have agreed that concerted action is needed to end the squalid, health-threatening conditions endured by some three billion people¹. They are committed to GESI — **The Global Environmental Sanitation Initiative** — intended to accelerate achievement of the goal of hygienic sanitation for all people as soon as possible in the coming millennium.

The decision to mobilize resources through a joint campaign was taken in Manila, Philippines on 7 November, at the final session of a Forum organized by the Water Supply and Sanitation Collaborative Council (WSSCC) with the theme: *Water and sanitation for all: Calling all stakeholders*. The Council's Chairperson **Richard Jolly**, Special Adviser to the UNDP Administrator and architect of the *Human Development Report*, described the global picture as "a scandal" which must be recognized at the highest level. Other Council members were equally emphatic that the current situation is putting an increasing burden on countries' social and economic development plans and aggravating the already intolerable living conditions of the rural and urban poor.

1. Statistics compiled by WHO and UNICEF show that approaching three billion people in the Third World had no access to hygienic sanitation at the end of 1994, and the situation was getting worse year by year. Some ten million people a year are said to die from diseases directly related to lack of safe water and sanitation facilities.

Gourisankar Ghosh, Chief of UNICEF's Water and Environmental Sanitation Section, who proposed the global initiative, highlighted the unacceptably high death toll and morbidity rate among the urban poor living in unsanitary conditions.

Dennis Warner, Chief of Rural Environmental Health in the World Health Organization, described the growing gap between those with safe water supplies and those with adequate sanitation, adding that "we should all be ashamed about the deplorable sanitation backlog".

Ebele Okeke, Deputy Director, Water Supply in Nigeria's Federal Ministry of Water Resources, was one of many Council members from developing countries to express support for an intensive effort "to move sanitation forward" as a major contribution to poverty alleviation, social stability and economic development.

Following the Manila decision, the Collaborative Council is to coordinate the global campaign. It will help all agencies active in the sanitation sector to share information, foster cooperative programmes, and initiate an advocacy campaign to raise public and political awareness of the urgent need for action. Individual agencies will remain responsible for their own activities, but may be expected to respond positively to the global call for more resources to be devoted to sanitation improvements.

The Manila meeting involved 230 of the world's leading practitioners in the field of water supply and sanitation from more than 80 countries. They heard reports from expert groups and reviewed guidelines, codes of conduct and practical tools to help countries to increase water and sanitation coverage more rapidly. As a result of decisions taken in Manila, the Council will now also operate on a regional basis, with Regional Chapters or Focal Points in Africa, Asia, Latin America, Central and Eastern Europe & the Newly Independent States, and the Small Island Developing States. The regional sections will participate in the Council's continuing analysis, advocacy and communication in five major topic areas:

- Environmental Sanitation
- Community Management and Partnerships with Civil Society
- Institutional Issues
- Human Resources Development
- Water Demand Management and Conservation

They will also establish their own regional networks for sharing knowledge and experience, and reinforce the Council's global networks on Operation and Maintenance, Applied Research (GARNET), Gender Issues in Water Supply and Sanitation, and Services for the Urban Poor.

A Council Task Force has been established to develop **VISION 21**, a long-range vision of a world in which all people have access to adequate water and sanitation services, as a basis for short and medium term targets for achieving that vision. As Richard Jolly said in Manila: "At present rates of progress we would not achieve sanitation

for all by the Year 2100; that is totally unacceptable". The Vision 21 Task Force will analyze successes and failures of the last two decades and seek ways to impress on politicians and key decision makers the need to adopt policies which will bring much faster progress towards the goal of Sanitation for All.

At the Manila forum, the chair of the Collaborative Council was passed from Ms. Margaret Catley-Carlson to Mr. Richard Jolly. Ms. Catley-Carlson left behind the five pieces of wisdom below for the water and sanitation sector.

Five Pieces of Wisdom for the Water and Sanitation Sector

1. There is a predictable water supply crisis on the horizon, with the world population growing; there is a cry from sector people for more effective and efficient advocacy to do something about it.
2. Women are the key to sustainable and hygienic water and environmental sanitation. They are not sufficiently utilized, the awareness of that is growing.
3. Sanitation is vital. We know we have not got it right yet. It is great to see the emphasis put on sanitation in this meeting.
4. The future is urban, so is the problem. Two billion people moved to cities in our working lives.
5. Globalization, privatization and decentralization are here to stay. They offer an opportunity if we can move it outward and link it to communities and users.

Participatory Action Research: from diagnosis to action

A four-year participatory action research (PAR) project on community management of rural water supply, funded by the Netherlands Government, continues to be carried out by research teams in four villages in each of the six participating countries* with IRC guidance. The community diagnosis, generated a lot of information about problems related to the management of the water supply system and about strengths and weaknesses in the community that could help or hinder the implementation of solutions to those problems the communities want to solve. One of the most challenging aspects of the diagnosis phase was to help communities discover the social and managerial problems underlying the obvious technical ones for which they often hold the implementing agencies responsible. The diagnosis phase provided not only a wealth of information, but also a high level of commitment towards the development of action to bring about changes.

In close cooperation with men and women in the communities concerned, the research teams developed strategies, methods and tools to address managerial problems and monitor the effect on service performance.

* Colombia, Guatemala, Cameroon, Kenya, Nepal, Sri Lanka
(Water Newsletters 235, 240, 243, 252)

The research teams are currently documenting the initial results. The aim is to develop experimental designs that are reliable as well as manageable and which can be monitored by the community members themselves.

In Colombia each of the communities opted for a different way to go about experimenting. La Sirena tried all possible solutions during a certain time starting with the first most viable. An example was the development of the articles of the association of members. First it was experimented to develop the articles by authorizing each article through the assembly. When after two months this did not lead to a satisfactory result, they started experimenting with the next option: distribution of the articles in each sector of the community. The third option was discussion with sector representatives and the last option was to use existing organizations.

In Yanthooko, Kenya, the treasurer has gained confidence in issues related to financial management. She keeps her records up to date and shares these with members on a regular basis, at least once monthly. The resultant effect has been increased confidence among members who have in turn been giving their financial contributions on time. In the same community, minutes of meetings are being kept, and are helping to reduce repeated deliberations on the same issue, this has meant reduced time for meetings, which has greatly improved the attendance and frequency of meetings.

Another aim is to strengthen local capacity (skills, self-confidence, organization) in order to be able to plan and design experiments independently. The basic idea is to improve, reinforce, enhance and add to existing experimental practice. It includes also the actual capacity to implement and monitor experiments, looking at skill development, group building, strengthening exchange and supportive linkages with other communities or community members and with support agencies.

Spider Model

In Nepal the research team facilitated the use of the spider model, which aims at building the groups' self awareness by high participation and also aims at action planning (see *Water Newsletter* 252).

The five main strands of the spider web can symbolize the important characteristics of a self-reliant and sustainable community organization. If some pillars are lacking or are very weak the organization may not sustain or function effectively. The pillars need to be strengthened to make the overall organization stronger and more self-reliant.

The main technique of the spider web is scoring or ranking of a groups' capacities according to certain indicators or characteristics, referring to the five key dimensions of a community organization: organization; management; fund mobilization; linkage/networking and participation/representation.

Insight in useful managerial strategies, methods and tools will be systematized and documented. The

experimentation phase should also shed light on support mechanisms to be put in place by sector agencies. The project team at IRC will combine the various contributions of the participating countries and compile a series of five documents for wider distribution. The documents describing how to facilitate a diagnosis process and how to support community experimentation will be tested before publication.

A predecessor to these documents is *Water Supplies Managed by Rural Communities; country reports and case studies from Cameroon, Colombia, Guatemala, Kenya, Nepal and Pakistan*, 134 pp., published in the IRC Project and Programme Paper series (PR 5-E). The document gives an overview of the water supply and sanitation situation in the six countries at the beginning of the project. For each country a general review of the sector in 1993 is followed by a detailed case study on community participation in a specific locality. A review of general conclusions and lessons learned concludes the work. The publication can be ordered from IRC for US\$ 23.20 (developing countries US\$ 15.80).

STREAM to improve Institutional Landscape

Since the 1960s, the approach to providing safe water supply and sanitation to those in developing countries has gone through many changes. A technical approach prevailed in the early days, followed by a focus on social aspects in the 1970s. The '80s brought a recognition of the economic value of water, and in the early 1990s, environmental aspects came to the forefront of activities.

All the while the need for expertise, human resources, skills and institutional support has been accepted as important for sector development. However, these sector support services, an area which could be called the 'institutional landscape', is still under-estimated and requires study and conceptualization. This landscape is now broader because of the strong call for decentralization and management at the lowest appropriate levels.

Recognizing the importance of effective sector support services, the development of resource centres is emerging as an important issue. A resource centre focuses on the collection and dissemination of relevant national and international knowledge and experiences that can be of use for and contribute to strengthening of capacities in the sector. Commonly, a resource centre may provide various kinds of support services, e.g. documentation and referral services, training programmes, advice from sector specialists, research on and collection of local field practices and experiences, and institutional support.

To respond to this need, IRC launched the **STREAM** Project - a Study on Resources and Management. This project aims to gain insight into the processes and experiences around the development and functioning of water supply and sanitation resource centres in Africa,

Asia, Europe and Latin America, and to come up with conclusions, recommendations and lessons learned to effectively develop and support such centres in the future.

The project covers a period of two years and is funded by the Dutch Government's Directorate General for International Cooperation (DGIS). Eight water supply and sanitation sector organizations, two each from Africa, Asia, Europe and Latin America, will be invited to conduct a participatory case study research. The two organizations from each region will visit one other and conduct the case study research on institutional processes and experiences of each other's organization. To stimulate equality and reciprocity among project partners, IRC will also participate in the case study research.

Throughout the project, the participating organizations and the IRC project management team will be supported by a Sounding Board Group (SBG) of no more than eight members. The SBG will consist of women and men representing each of the four regions, with different professional backgrounds in the areas of water supply and sanitation and/or institutional development. Four members of the SBG will act as regional facilitators during the case study research.

The methodology for the case study research, as well as other planning and implementation issues, will be defined and decided upon during the Assembly Workshop, which is tentatively planned for the second half of May 1998.

The Assembly Workshop will be the participatory platform where major decisions concerning content, methodology and activities will be made, within the overall framework of the project document as agreed upon with DGIS.

After the case study research, a series of one global and four regional meetings will be organized to present the findings, to give other organizations from the particular regions the opportunity to share their knowledge and experiences, and to jointly come up with lessons learned, recommendations and possible joint future activities.

The project team is currently identifying organizations that are suitable and willing to participate in the case study research, as well as members for the SBG. It is our aim to keep as many people as possible informed about the project by short articles in this Newsletter at regular intervals. Those interested in further details of the STREAM project can contact IRC. Contact persons are Cornélie van Waeningh (STREAM Project Manager), Esther de Lange, and Maria-Lúcia Borba.

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GARNET's Pit Latrine Network

GARNET (Global Applied Research Network) is an activity that is designed to facilitate the sharing of applied research information between researchers working in the water and sanitation sector throughout the world. The method to achieve this is through informal, low-cost and decentralized networking links.

GARNET is thus structured around a series of networks, which are either topic-based or geographically based. Each network is operated by a coordinator who has responsibility for keeping network members abreast of new developments and research within the field/sector, putting researchers in touch with other members working in a similar area, and reporting back to the global network coordinator on a regular basis.

One of these networks is the pit latrine network, which currently has nearly 150 members world-wide. The objective of the network is to enable members to exchange ideas about a wide variety of topics relating to pit latrines, including aspects such as design, construction, operation, maintenance, and emptying in rural, urban or peri-urban environments. Of particular interest are results of recently completed research, or interim findings from current projects. Other material of interest includes references to new publications, workshops or electronic sources of information.

The pit latrine network has just published its third newsletter (No. 3, November 1997), which includes member's queries; research projects; focus on pit emptying; and research notices.

Articles and information for the future issues are welcome. The next issue is planned for January 1998 - copy deadline is mid-January. Contributions need not be lengthy (1 or 2 short paragraphs on a project or fieldwork would be sufficient) and can be on any issue of relevance to the topic. The newsletter is distributed free to all members either electronically or via post.

If you would like to know more about GARNET's activities or the network, or have an article to contribute to the newsletter, please do not hesitate to contact:

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<http://info.lboro.ac.uk/departments/cv/wedc/index.html>

Alternatively, visit the pit latrine network's website at:
<http://info.lut.ac.uk/departments/cv/wedc/garnet/tncpitl.html>

People's Water Management Campaign in India

- In the Bangalore metropolis in Karnataka, India, 51 percent of the 759 samples of groundwater analyzed were found to be non-potable.
- Almost 50 percent of the groundwater used in and around Delhi is contaminated with fluoride and nitrate. This not only threatens lives but is also poisoning 70 percent of the crop yield.
- The state government in Rajasthan has proposed legislation to curb the use of groundwater by giving wide-ranging powers to the district collector or the sub-divisional magistrate. Under the proposed law they can order closure of private and public sector tanks and wells in water-scarce areas. They can also prohibit sinking of new wells in areas which are declared as "over-exploited".

These three short items were published in the campaign supplement of the Indian magazine *Down to Earth*, published by the Centre for Science and Environment (CSE). In March this year, CSE, a well-known advocacy agency on environment and involvement of communities which annually publishes a Citizen's Report on the State of India's Environment, started a campaign to save the dying traditional water harvesting system in India.

"Dying Wisdom: Rise, Fall and Potential of India's Traditional Water Harvesting Systems", CSE's fourth report, was launched in public meetings at 15 places all over India, together with a major media campaign. The report attempts to study in-depth the Indian tradition to find answers to today's irrigation and drinking water problems. It is an argument for revival of local water harvesting systems, an attempt to understand the ways of managing water.

The book looks into India's 15 ecological zones, each with its localized water systems. In the statement of shared concern it recommends strategies for the revival of local harvesting systems. The three basic components of the campaign are: debureaucratization, handing over the control of systems to the local communities, and allocation of sufficient financial resources to local water management. The results of the study were also published in various issues of *Down to Earth* magazine.

The right to clean water campaign mobilizes non-governmental organizations and environment campaigners all over India. Campaign newsletters keep the network of activists informed about developments elsewhere. "Individual agencies across the country are struggling to save lakes and water tanks, but a collective policy is lacking", says CSE water campaigner Himanshu Thakkar. This has partly to do with the fact that in India, water is the responsibility of the state governments and not of the central government in Delhi.

CSE publications on water pollution have also triggered public interest litigation cases before the Supreme Court in Delhi. At the end of last year the Court directed the central government to set up an underground water authority to protect the subterranean reservoirs which are being depleted due to overuse. In its order the judges said that the existing Central Water Resources Board could act as the new authority, if given wide powers.

Conflicts on water sharing between states flare up regularly. The last one concerned the Cauvery river conflict from early 1996 on water allocation between Karnataka and Tamil Nadu. The Prime Minister had to step in to force a compromise, which is still not being accepted by all parties. A recent analysis on shared water in India ordered by the central government showed that there are 36 places where water sharing between water affluent and water short areas may create conflicts.

To order "Dying Wisdom" (US\$ 12) or for more information on the water campaign contact:

Centre for Science and Environment

41 Tughlakabad Institutional Area Fax: 91- 11- 6985879

New Delhi - 110062, India e-mail: cse@sdalt.ernet.in

Water, Health and Development: International Conference and Competition

SIMAVI is a charitable organization which provides direct support to medical projects in developing countries. It was established in the Netherlands in 1925 and has Her Majesty Queen Beatrix as its patron. In 1995 Simavi established its World Water Fund to answer to a growing number of requests for aid in the field of water and sanitary facilities in developing countries. The water fund recognizes the important link between safe water and good health, and encourages initiatives to improve both. The fund not only evaluates proposals, but also develops ideas of how safe drinking water and good sanitary facilities in developing countries should be brought to the attention of the Dutch public. It also looks into the financing of requests.

In the year 2000 Simavi will celebrate its 75th anniversary. On that occasion the foundation will host an international conference entitled *Water, Health and Development*, to be held on 17 March 2000 in Noordwijkerhout, the Netherlands. As part of the celebration, an international competition will be held for the best essay or design on water supply and/or sanitation development. The competition will invite original ideas to improve water supply or sanitation conditions. The supply may be connected to a hospital or clinic, or be in poor rural and/or urban areas in developing countries. Entries could address:

- The development of innovative and widely applicable tools, instruments or installations for small-scale water supply, including abstraction, treatment or distribution as well as for sanitation or wastewater treatment;
- An original, practical and widely applicable proposal for a project in small-scale rural water supply/

sanitation or wastewater treatment, preferably including hygiene promotion.

Participation forms will be available as of 1998, and entries should be forwarded to Simavi before September 1999. A commission of international experts will appraise the entries, and the prize will be awarded at the conference. As prize, Simavi will make the funds available for the implementation of the winning idea.

For more information or to request a participation form, please contact:

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Women's Participation and Gender Consideration in Water Supply and Sanitation Services

Sustainable development in the water supply and sanitation sector can be enhanced if an equitable, gender-balanced approach is taken in all phases of sector decision making, planning, implementation and management. This was the premise of a regional workshop organized by UNESCO, UNDP/World Bank and UNICEF in collaboration with the South African National Committee for the International Hydrological Programme and the Water Research Commission, held in Pretoria from 24 to 26 November 1997.

The workshop drew participants from 16 countries in the region to disseminate experiences in using gender-aware approaches and to assess the impact of these approaches on programme/project sustainability. The workshop was the first stage of a regional process of consultations among sector actors which will lead to the development of operational guidelines for the implementation of gender-sensitive, demand-responsive water supply and sanitation projects.

A hundred and twenty persons representing various UN agencies, governments, NGOs, universities, research organizations and consultant bureaus, exchanged experiences and lessons learned on gender-sensitive approaches and reached a common understanding on how these can lead to project performance in terms of effectiveness, sustainability and mobilization of local capacity. The group concluded that one of the constraints to effective implementation of gender sensitive approaches is the misunderstanding that gender means women's participation as opposed to the participation of the entire community (women, men and children).

During working group sessions and plenaries, country representatives began preparing action plans to implement and assess gender-sensitive approaches at different levels (policy, managerial and project levels) from the shared experiences and knowledge gained. Many of these action plans include awareness-raising to arrive at clearer definitions and a better understanding of the gender concept, and capacity-building to ensure proper use of gender tools.

The UN organizations have agreed to follow up this process with among others, additional workshops, network facilitation for information exchange, and advocacy. The final workshop report, case studies and presentation papers will be made available shortly.

For more information please contact:

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Fly Catcher Reduces Disease

Flies thrive on wastewater, which in many parts of the world, is loaded with dysentery bacteria. Once transmitted from flies to food, this bacteria causes severe diarrhoea, dehydration, and death. Fly City HB of Sweden has developed the *Fly City* fly catcher, a non-toxic and environmentally friendly fly trap that claims to reduce the number of flies in a given area by up to 70%. The device consists of a plastic bag (the trap) with a lid in which there is an entrance to the trap. The flies are lured by the scent of a mix of protein meal and water in the bag. The bait is chemical-free, and harmless to humans and animals. Ultraviolet light (sunlight) activates the bait, which then emits a scent irresistible to flies. Once inside, the flies die by drowning. The *Fly City* fly catcher has a life span of 4-6 weeks and can carry 12,000-15,000 flies. Disposal is easy - *Fly City* can be thrown in the trash or burned.

For more information on the device, contact

Fly City i Varberg HB
Bälgatan 8
432 31 Varberg
Sweden

Tel: +46 0340-134 80
Fax: +46 0340-275 60



New Publications



Second Water Utilities Data Book, Asia and Pacific Region. Edited by Arthur C. McIntosh and Cesar E. Yñiguez, Asian Development Bank, 1997. ISBN 971-561-125-7. 210 pp.

A more analytical update of the first data book published in 1993, this data book analyzes 1995 data from 50 water utilities in 31 of the Asian Development Bank's developing member countries. It includes the results of consumer surveys, a section on private sector participation, articles on the ADB's strategy in the urban water supply sector, best practices, and trends in performance from 1991-1995.

It is expected that the data book will provide stakeholders with a broad perspective of water utility services and institutions in the Asian and Pacific region. Utilities should find it useful as a benchmark against which to measure their own performance.

The book is free to governments, bilateral and multi-lateral development agencies, water utilities, and academic and research institutions. Others may purchase a copy for US\$20 inclusive of airmail postage. To obtain a copy of the Second Water Utilities Data Book, write or fax to:

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Hygiene Evaluation Procedures - Approaches and methods for assessing water and sanitation related hygiene practices. Astier M. Almedom, Ursula Blumenthal and Lenore Manderson, May 1997. ISBN 0 9635522 8 7. £ 7.95. US\$10.00. 130 pp.

Hygiene Evaluation Procedures provides practical guidelines for evaluating water and sanitation-related hygiene practices. Designed to make qualitative research skills accessible to practitioners with little or no previous training in social sciences, the handbook describes methods of gathering, reviewing and interpreting qualitative information, by using a variety of sources and methods to produce effective, reliable and trustworthy data. Using case studies from Africa and Asia involving field personnel working in water supply, sanitation and health/hygiene education projects, the handbook was developed as a practical answer to the limitations of using a single method or instrument for information gathering. Alternatives to questionnaires are proposed, including a variety of methods and tools which can be mixed and matched; appraisals of individual methods and tools to help in the selection of the most appropriate combinations for the desired purpose; and a useful selection of common mistakes and pitfalls.

Those working in the water supply, sanitation and hygiene education sectors will find the practical guidelines outlined in this handbook extremely useful. At the same time, it can be applied to wider areas, such as assessments of health practices and health promotion, in both developing and developed countries.

For more information or to order please contact:

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a very healthy and happy 1998