

WATER NEWSLETTER

Developments in water sanitation and environment

- IN THIS ISSUE
- HEALTH PROMOTION AND SOLID WASTE MANAGEMENT IN GAZA CITY
 - BANGLADESHI AND DUTCH EXPERTS SHARE EXPERIENCES IN WATER MANAGEMENT
 - SANITATION PROMOTION KIT AVAILABLE
 - FRESHWATER CONFERENCE SET FOR MARCH IN PARIS
 - NEW PUBLICATIONS

NUMBER 254, FEBRUARY 1998

Health Promotion and Solid Waste Management in Gaza City

The Gaza Strip is a small piece of land 46 kilometres long and 6-10 kilometres wide with an estimated population of over 1 million. The refugee camps in the Strip are amongst the most densely populated areas of the world with between 20,000 to 100,000 persons per square kilometre. The Strip is faced with huge environmental health problems, which include deteriorating groundwater quality, lack of sewage systems, and insufficient collection of solid waste.

The waste management problem can be attributed to a lack of public awareness and very limited, basic services. Until recently the institutional structure in the municipality was very weak: no revenue recovery, bad planning and organization, too few vehicles and equipment. There was a lack of concern for the environment and insufficient dissemination of information on the hazards of poor solid waste management practices, leading to a public which appeared to have resigned themselves to living in such conditions.

After the arrival of the Palestinian Authority in Gaza in July 1994, the Gaza Municipality faced the immense task of building up its services (wastewater collection and treatment, solid waste collection and disposal, electricity etc.) and to obtain the citizens' cooperation and respect.

To strengthen the signed peace treaty between the Israelis and Palestinians, the European Union committed US\$ 9 million in 1994 for a four-year solid waste disposal management project in Gaza City. The Dutch consultants consortium Agro Vision Holland / IHE / Infoplan is assisting the municipality with the execution of the project, which has as objective, improved health, environment and living conditions for the population of Gaza City.

Three years later, the project has resulted in a virtual absence of garbage around containers and a tremendous visible impact on the cleanliness of Gaza City and its beaches.

Social impacts of the project include :

- Citizens' complaints about waste collection are dealt with within 24 hours;
- The number of complaints per 100,000 have declined from 33 to 1.6 over the 1994-1997 period;

- Approximately 90 % of households have a very positive attitude to the project with only 5 % saying there had been no improvement, according to a recent socio-economic study;
- In 3 years, 80% of Gaza City households have been reached through one or more environmental health education and community participation activities.

What led to the changes?

To meet the project's objectives, an integrated approach to solid waste management (SWM) was applied, which included:

- institution building
- training
- improved waste collection capacity by means of equipment provision (refuse collection trucks and containers)
- controlled landfill management
- intensive cooperation and coordination with other organizations and projects
- environmental health education and community participation
- cost recovery

An Environmental Health Education and Community Participation (EHE/CP) Section was set up by the Municipality and 12 female Gazans were trained as health promoters. Their main task was to raise public awareness on environmental health issues and to obtain the citizens' cooperation and respect.

The project in general and the EHE/CP Section in particular have been instrumental in this process; a continuous dialogue has been established between the Municipality and citizens - a first in the city's history. Strong alliances were built with both the technical staff of the Solid Waste Management Section and with Gaza citizens.

In order to achieve changes in attitudes and behaviours of Gaza citizens towards SWM, the staff of the Operations Section needed to be re-oriented first, using a cyclic or programmatic approach. The Operations staff were shown that they would benefit from a well-informed and empowered community. As a consequence the staff felt motivated to seek citizen's cooperation towards a cleaner environment and the citizens in turn felt motivated to cooperate with the Operations staff.



Initial EHE/CP activities are planned and executed in very close cooperation with the Operations Section and are only implemented in places where new regular collection services are rendered by the Municipality. The project strategy stresses the importance of repeating the same messages in different settings like home visits, neighbourhood meetings, mosques, clinics, women's centres, schools and television, for different target groups in the same neighbourhood. In this way, one can assure that all the different members of one household are exposed to one or more of the programme's activities. Organizing the EHE/CP programme implementation following the operations organization has proven to be very effective, and has allowed the EHE/CP section to follow a programmatic approach.

As a consolidation measure, neighbourhood committees have been established. The committees are trained in basic environmental health subjects, community participation skills and how to deal with the municipality.

The approach of the programme to intervene at family level and to consolidate via neighbourhood committees created alliances with other health and environment-related organizations: Palestinian Water Authority, World Food Programme, Ministry of Health, USAID Gaza Waste Water Project. Within the Municipality itself first aid courses, tree planting campaigns, rodent control campaigns, wastewater and drainage awareness and most recently a payment-of-electricity-bills campaign have been organized. The Municipal Council highly appreciates the Section's work and networking and cooperation with other (non) governmental organizations in Gaza City is fully supported.

The Municipality of Gaza wished to play the role of partner in development instead of only services provider. The project in general and its Environmental Health Education and Community Participation Programme successfully provided the Municipality with the tools to do so.

For more information about the project, contact:

Ms. Liesbeth Zonneveld
Agro Vision Holland BV
Gaza City Solid Waste Disposal Project
P.O. Box 16
Municipality of Gaza Fax: +(972)-7860551
Gaza City, via Israel e-mail: visionhg@trendline.co.il

Bangladeshi and Dutch Experts Share Experiences in Water Management

The Dutch have an impressive history in their battle against water, and have invested 250 million guilders in water programmes in Bangladesh in the last 25 years, mainly in flood control and integrated water resources management. A recent evaluation of this effort by the Dutch Government showed that half of that amount can be considered as a successful contribution to local beneficiaries in 110 newly developed polders in Bangladesh, as part of the Early Implementation Project (1975 - 1998). Another portion of the money was spent on training of hundreds of Bangladeshi at the Institute of Hydraulic Engineering or Institute of Social Studies in the Netherlands.

In recent years the Dutch involvement in sub-projects of the 100 million dollar World Bank -coordinated Flood Action Plan (FAP) has come under criticism by a coalition of Bangladeshi and Dutch lobby groups. Their criticism on water sector planning in Bangladesh can be summarized as follows:

- too technocratic and consultant driven
- not enough care for the environment
- no people's participation
- not sufficient and sustained transfer of technology.

This became clear at the Water Seminar "The Dutch Polder model - replicable?" organized on 26 January 1998 in the Hague by ICCO (Interchurch Organization for Development), one of the Dutch NGOs involved in the international debate on water sector development in Bangladesh.

"Fortunately, as a result of the debate during the FAP exercise the importance of both environment and people's participation has now been well recognized and these issues are now central to the New Water Management Plan to be launched shortly", said Dr. Saleemul Huq, Executive Director of the Bangladesh Centre for Advanced Studies, a research and policy institute. But he is worried that the Guidelines on People's Participation recently produced by the Ministry of Water Resources still belong to the old planning paradigm, "as it still involves people at the project planning stage only".

According to Dr. Huq the water sector should follow the successful example of the nation-wide participatory planning for the National Environmental Action Plan, which included feedback from a representative number of stakeholders. "The point of this new paradigm shift is that, rather than consulting people about a particular plan or project, the people should be asked what they really want or need with respect to the water sector before the plan itself is developed". Currently, the World Bank is doing it the wrong way, "telling bidding consultants to take on board a local non-governmental organization (NGO). NGOs need to be involved in an independent position in a participatory approach, getting the views of the people. Only after that the planning should start", Dr. Huq added in the discussion.

Critical questions were raised from the audience on what people's participation entails in practice. However, Bangladeshi and Dutch water experts agreed that the climate in Bangladesh is changing towards allowing discussion at the local level on water planning. The chances for success are high. But so is the risk of failure, as long as questions such as "people's participation: why? for what? by whom and how?" and the willingness to share power are not addressed properly.

For more information contact:

Lennard Roubos
ICCO
P.O. Box 151
3700 AD Zeist
Fax: 31- 30 692 5614
E-mail: admin@icco.nl

Sanitation Promotion Kit Available

A *Sanitation Promotion Kit*, the final product of the Working Group on Promotion of Sanitation of the Water Supply and Sanitation Collaborative Council, is available free of charge from WHO. The kit is a loose-leaf collection of practical materials from which practitioners and decision-makers can pick and choose what they find useful. The kit is divided into three sections: *Gaining Political Will; Doing Better Programmes; and Sharing Different Approaches.*

Users of the kit are encouraged to select portions of the kit useful to them, translate these into local languages and distribute or use them in the way they find most suitable.

The Working Group found that the promotion of sanitation is a very complicated task requiring improvement in many aspects of the sector. Probably most important is gaining political will. Also important is carrying out sanitation programmes well (so they will be sustainable) and opening our minds to new and different approaches and technical solutions.

Sanitation science inadequate

The Working Group found that the science of sanitation is inadequate. Authors of various articles and tools in the Kit often found it difficult to write their pieces because so little is known or published in the sector. More is known about the various aspects of water supply, but often what works for water supply cannot be applied to sanitation. The image of sanitation and the demand for it is different from that for water.

The Sanitation Promotion Kit may be used in a number of ways by agencies active in the sanitation field:

- Agencies may reprint the kit in whole or in part, complete with their own logos, distribute it through their system, and make use of it in their own activities.
- Part or all of the kit may be translated into local languages and distributed through country programmes to partners in the sector.
- It may be used as background material for country- or district-level workshops on sanitation.
- It is suitable for incorporation in university curricula or for training in sanitary engineering.
- Through the WSSCC or otherwise, the kit may be used as background material for the creation of regional sanitation working groups and for the preparation of regional Sanitation Promotion Kits.

The kit contains evaluation forms which can be sent back to WHO. After two years, WHO will use that feedback to edit and reprint the kit.

Send your order to:
World Health Organization
Rural Environmental Health Unit
CH-1211 Geneva 27
Switzerland

fax: (41) 22 791 4159.
E-mail: sigalottif@who.ch.

Freshwater Conference set for March in Paris

The French Government is inviting the actors involved in water policy of 80 countries to participate in the *Water and Sustainable Development International Conference*. This Conference will take place in Paris from 19 to 21 March 1998.

During the United Nations Extraordinary General Assembly held in June 1997, the President of the French Republic proposed to host in France an International Conference that would gather all the actors involved in water policy. Its objective is to contribute actively to the elaboration of strategies necessary for improving water resources management and protection.

The actors involved in water policy of the 80 member countries of the Commission on Sustainable Development will participate: ministers and top officials from public bodies in charge of water management, representatives of the civil society, and representatives of financial institutions and international organizations such as the World Bank, the World Water Council, the Global Water Partnership.

Work will focus on three topics:

- Improving knowledge of water resources
- Favouring the development of new institutional capacities
- Optimizing water resources management through the elaboration of national strategies and the mobilization of appropriate financial means.

March 19 and 20 will be devoted to three experts' group meetings. On 21 March 1998, the ministers attending the Ministerial Conference, open to the participants, will adopt recommendations for an action plan.

Since December, mandated experts' groups have been preparing this Conference's work and drafting recommendations that will be sent to the countries that will participate in Paris Conference.

The Paris Conference is in keeping with the preparation of the 6th session of the Commission on Sustainable Development (New York, 20 April - 1st May 1997) and with the preparatory meetings of Cape Town (South Africa, 8-10 December 1997), and Harare (Zimbabwe, 28-31 January 1998).

For more information contact:

General Secretariat of the Conference:
Centre for International Conferences
19 avenue Kleber
75016 Paris
FRANCE
fax 33- 1 4008 0145
E-mail: ciedd@oiea.fr
Conference homepage on Internet: <http://www.eaudd.com>



New Publications



Emergency water sources: Guidelines for selection and treatment. Water, Engineering and Development Centre (WEDC), Loughborough, UK.

Personnel require a broad range of skills to be able to select a water source in an emergency situation and to determine an appropriate water treatment process to make the water potable. Information must be collected on the displaced and local populations; local environment (both human and physical); potential sources of water and their present and predicted water quality and yields; availability of resources and logistical constraints; and on the socio-political and security situations. Judgements then have to be made on the practical requirements to develop the water supply, the time to set up such systems and the potential impacts of abstraction from the water source on the local populations and the environment. All of this information must then be interpreted to select the most appropriate source and treatment process.

The Water, Engineering and Development Centre (WEDC) have developed guidelines to assist in the collection of this information and in its interpretation. The guidelines include procedural flow charts, selection tools, checklists and survey sheets and a range of supporting material including practical information and useful addresses. Procedures have been developed for both the initial survival level of response and the longer term and case studies highlighting management, legal, security, socio-political and cultural issues have been identified to highlight the complexities of source selection. Materials have also been included to assist in the assessment of water sources and supplies in urban emergencies, to assist in the assessment of industrial pollution and to identify potential impacts on the local population and the environment.

Training modules to be used within existing training courses or stand alone have also been developed to accompany the guidelines.

The guidelines were developed with funding from the Department for International Development (formerly the Overseas Development Administration) of the British Government and with the collaboration of a range of international organizations working in the relief field: International Committee of the Red Cross (ICRC); International Federation of the Red Cross and Red Crescent Societies (IFRC); Medecins sans Frontieres France and Holland; Oxfam (UK & Ireland); Register of Engineers for Disaster Relief (REDR); United Nations Children's Fund (UNICEF); and the United Nations High Commissioner for Refugees (UNHCR), and a range of individuals.

To obtain further information, contact Bob Reed, Project Manager, (e-mail: <R.A.Reed@lboro.ac.uk>).

To order a copy of the guidelines and/or training modules (available for £ 5 plus postage and packaging) contact Karen Betts (e-mail <K.J.Betts@lboro.ac.uk>).

Technology Transfer in the Water Supply and Sanitation Sector: A learning experience from Colombia, by Jan Teun Visscher, ed. Technical Paper no. 32-E, IRC International Water and Sanitation Centre. 1997 102 pp. ISBN 90-6687-026-5. Dfl. 40/US\$ 20. Developing countries Dfl. 28/US\$ 16.

Changing from technology transfer to technology sharing is essential to enhance the sustainability of interventions in the water and sanitation sector. This publication presents consolidated experiences from a technology transfer programme implemented in Colombia between 1989 and 1996. The programme introduced multi-stage filtration, an environmentally friendly water treatment technology, in eight different regions. A human-centred approach has been taken in this programme, which adopts joint learning projects for capacity building at institutional and community level. This approach is in line with current theory, and has a great potential to overcome some of the main problems in the sector. It breaks with the traditional top-down method of technology transfer and recognizes that technologies are embedded in the society were they were developed. In order to be sustainable, technology sharing is needed to ensure that the technology matches the new setting. The publication illustrates that a holistic joint learning project approach, as used over the past several years in Colombia, serves to develop this match and strongly supports capacity building in the sector. The publication comprises four main themes: a description of the programme and its results, a review of key issues in sustainable sector interventions, a discussion of theory and practice in technology transfer and an elaboration of the learning project approach.

For more information or to order, contact IRC's Publications Department.

Erratum

In our last issue we published an article about the Fly City Fly Catcher, and provided the manufacturer's address in Sweden for more information. Should readers require information about the Fly Catcher, please direct your queries to the distributor in the Netherlands, at the following address:

Harry Zandhuis
Baledo Trading BV
Laan van Beek en Royen 42 tel: + 31 (0)30 6911501
3701 AR Zeist, fax: + 31 (0)30 6920614
The Netherlands E-mail: Beekroyn@Pi.Net

COLOPHON	
EDITOR:	NICOLETTE WILDEBOER
DESKTOP PUBLISHING:	LAUREN HOUTTUIN
WITH CONTRIBUTIONS FROM:	DICK DE JONG IRC LIESBETH ZONNEVELD, AGRO VISION HOLLAND BV
PRINTING:	PALLAS OFFSET BV
DISTRIBUTION:	EURO MAIL BV
To subscribe to the electronic newsletter, send the following message to <majoromo@list.bart.nl>: subscribe water-newsletter	
Include no other text or signature.	

WATER NEWSLETTER

Developments in water, sanitation and environment

IN THIS ISSUE - TRAINING AT SARVODAYA: A RESPONSE TO DEMAND
- ORGANIZING TRAINING ACTIVITIES AT NETWAS IN KENYA
- MANAGEMENT FOR SUSTAINABILITY: A POSITIVE TRAINING EXPERIENCE IN COLOMBIA AND ECUADOR
- GENDER-SENSITIVE TRAINING: KEY TO SUCCESS
- UPCOMING COURSES

NUMBER 255, APRIL 1998

This issue is devoted to the experiences of IRC's partners in offering courses in their regions. We thank them for sharing their enthusiasm.

Training at Sarvodaya: a response to demand

Sarvodaya Shramadana Movement is the largest people-based NGO in Sri Lanka. Sarvodaya implements an integrated programme of community development in over 8000 villages in Sri Lanka and it promotes social, economic and technological empowerment through collective action and self-reliance. Sarvodaya's technological empowerment programme is known as the Sarvodaya Rural Technical Services (SRTS), which has been a pioneer in rural water sector infrastructure development in Sri Lanka. SRTS, from an NGO perspective, leads the rural water sector. The most important factor for the success of its projects was found to be the effective integration of social empowerment and technical improvement which was brought about by the staged process of community development. From the beginning of the SRTS projects, a high level of community participation and demand orientation are guaranteed by social mobilization and through the village-level Sarvodaya Shramadana Societies. The social or "software" part of the community was ensured by dedicated volunteers of the social empowerment sector of Sarvodaya, while intensive training, standardization and close monitoring at various levels contributed to the high quality of the technical aspects of construction in the "hardware" for the projects. The World Bank-sponsored Community Water Supply and Sanitation Project (CWSSP) and other similar projects in Sri Lanka have made use of SRTS experiences, training given by SRTS instructors, and the technical manuals on the construction of gravity water schemes based on SRTS experience.

Joint courses in Sri Lanka

Since 1995, Sarvodaya has been offering the course *Management for Sustainability in Water Supply and Sanitation* annually with IRC. In 1996, *Hygiene Education and Promotion: Planning and Management for Behavioural Change* was also added to the curriculum.

The courses clearly cater to sector demand. What is offered by Sarvodaya and IRC is grounded on practical experience and the current theoretical and conceptual knowledge, which are attractive to the emerging sector needs. For example, issues relating to community management and sustainability are becoming critical to especially large-scale rural water supply and sanitation programmes that are currently being implemented both by governments and NGOs with

multilateral assistance. The enthusiastic response to the courses as well as the feedback received after the training substantiate this fact.

The profile of participants is quite diverse, which contributes immensely to the richness of their learning experience. The participants included engineers, community development workers, medical doctors and other public health professionals, educators and sociologists.

Evaluations lead to adaptation

During and after each course, serious evaluations are done by the participants as well as reviews by course coordinators. Based on this feedback necessary adaptations have been made in the courses that follow. Changes were made to the content, session durations and methods and to course material, so as to keep the curriculum learner-centred, participatory and relevant. Follow-up to assess the effects of the course and the benefits derived by the participants is done on an informal basis. However, this is an area which we believe is weak and needs strengthening.

Lessons learned

- International training in the water supply and sanitation sector has to evolve with time and should also cater to emerging needs.
- Pre-course assignments can bring rich experience into the training process.
- The resource persons' diverse backgrounds and nationalities are a strength.
- More practical/hands-on experience has to be included as appropriate.
- The costs for the participants should be kept at a reasonable and affordable level.
- A productive partnership between international and local water sector institutions is possible.

Marketing the course

The main marketing strategy for the courses is distribution of brochures well in advance to institutions and individuals locally and internationally. The address databases of IRC and Sarvodaya are utilized for this purpose. Active



better water and sanitation for a healthy future

promotion of courses is also done through personal intimations to selected organizations as well as water sector donor organizations. Over the years, former participants have also marketed the courses for us by "word of mouth". In the future, some form of advertising in journals and publications in the water sector is envisaged to promote the courses.

The other important aspect is that the preference by some South and South-East Asian sector personnel to participate in courses held in the region rather than in Europe or elsewhere has contributed to the marketability of the courses.

Future plans

Considerations are being given to expanding the curriculum. Towards the latter part of this year the course *Monitoring for Effectiveness* is being considered for the course agenda.

For more information contact:

Dr. Vinya Ariyaratne, Health Advisor, Sarvodaya,
98 Rawatawatta Road, Moratuwa, Sri Lanka
Fax: 94-1-647084/646512

Organizing Training Activities at NETWAS in Kenya

Network for Water and Sanitation (NETWAS) was established in 1986 through a UNDP/World Bank programme known as the International Training Network for Water and Waste Management (ITN). ITN was set up as part of a global initiative to support the International Drinking Water Supply and Sanitation Decade (1981-1990). The programme sought to establish centres of excellence in water and sanitation in the developing countries.

The overall goal of NETWAS is to contribute towards increased sustainability of community-based water supply and sanitation projects by enhancing the capacity of sector actors. The medium-term objective within the next four years is to contribute towards the establishment and/or improvement, strengthening and decentralization of appropriate organization structures and support services in the sector so as to assure sustainable sector programmes and projects. One of NETWAS' key strategies continues to be to support and work closely with sector institutions including government, training institutions, NGOs, communities and donors.

Training at NETWAS

NETWAS has organized the course *Management for Sustainability in Water Supply and Sanitation Programmes* (MfS) with IRC four times since 1994. The many applications received reveals a progressive increase in demand from various government departments, NGOs and donor-sponsored water projects since the inception of the course in Kenya. The course has attracted water engineers, economists, health personnel, sociologists, geologists and hydrologists. Initially, most course participants came from Eastern and Southern countries in Africa. Since 1995, participants have also been coming from water projects in West Africa. The Volta Rural Water Supply and Sanitation Project in Ghana sponsored four of their staff between 1995 and 1996, and participants have also come from government

ministries in The Gambia and Nigeria. Participants have emphasized the need for proper management of water and sanitation programmes, and feel that the MfS course fills this gap.

For some time, sector actors felt that provision of water and sanitation facilities alone would solve their problems, but now governments, NGOs and donors alike realize that proper use of the facilities is important. What was missing was the hygiene education component. To respond to this demand, last year NETWAS also offered the course *Hygiene Education and Promotion: planning and management for behavioural change* with IRC in the Spring of 1997. The course drew so many applicants that nearly half had to be turned down due to lack of space. Among the participants were Project Officers, Community Development Officers, District Planning Officers, and Human Resources Development Officers from the East, West and Southern Africa regions. It was clearly evident that the diversity of professional backgrounds enabled the course to harmonize the different understandings and approaches to hygiene education and promotion. One participant specifically commented that "I have now understood hygiene behaviour in water and sanitation," while another said that "the course addresses actual field problems".

Sponsorship for both courses has been provided by UNICEF; WHO; Irish Aid; DANIDA; UNDP II; Red Cross; DHV Consultants; HESAWA; WaterAid; GTZ; the governments of Malawi and Zimbabwe; Oxfam; WASHE Project, Zambia; Malawi Red Cross; SDC; Caritas Switzerland; and a host of water projects and government departments.

Regional adaptations in a changing sector

Since 1997, IRC has ceased offering the MfS course in the Netherlands, as courses offered regionally offer greater scope for tailoring to local needs and experiences. The course at NETWAS has thus been modified somewhat to cater to the regional demands of a changing sector. For the hygiene education course, the only adaptation made concerned the field visit, which was turned into a learning experience where participants were taken to Kibera peri-urban slum in Nairobi to assess the various hygiene-related activities being undertaken in one village in the slums. From this field visit, it was evident that hygiene education and promotion activities in peri-urban areas were much more acute than in most rural areas and required a lot of planning and committed execution.

Six months after a course, a follow-up questionnaire is sent to all the participants, on the basis of which course modifications can be made. Personal contact is also made to those participants within reach of the NETWAS staff.

The NETWAS courses are marketed through course flyers, in The East African newspaper, through NETWAS and IRC publications and newsletters; through workshops and conferences and through personal contact by NETWAS and IRC staff in their various activities.

For more information contact:

Mr. James Thuku, NETWAS International, PO Box 15614,
Nairobi, Kenya
Tel: 254-2-890555/6/7; Fax: 254-2-890554
E-mail: netwas@ken.healthnet.org

Management for Sustainability: a positive training experience in Colombia and Ecuador

The main objective of CINARA - Instituto de Investigación y Desarrollo en Agua Potable, Saneamiento Básico y Conservación del Recurso Hídrico of the University of Valle in Cali, Colombia, is to contribute towards the efficiency and sustainability of investments in the sector, through interdisciplinary research and technology transfer activities, collaboration with national and international organizations like IRC, and strengthening capacity at local and community levels.

The success of MfS

The success of the *Management for Sustainability in Water and Sanitation Programmes* (MfS) course that has been given at IRC International Water and Sanitation Centre in the Netherlands since 1989, prompted CINARA and IRC to organize the course in Cali, Colombia, adapted to conditions in Latin America.

The course was first offered in Colombia in 1994 and has been repeated five times, once especially for FINDETER, a state financial agency that supports community development projects. Initially the course was promoted only in Colombia, but since 1996 other Latin American countries have been invited to participate, particularly Central American countries and countries in the Andean region. As a result, in the last two years 22 participants attended from Ecuador, Bolivia, Venezuela, Mexico, El Salvador, Nicaragua and Brazil, and one participant from Africa (Mozambique).

The success of the course led to it being offered in Guayaquil, Ecuador in November 1997, for staff members of sector institutions in the Guayas Province. The course was jointly organized with the Universidad Católica de Santiago of Guayaquil and IRC.

The interdisciplinary character of the course can be seen from the backgrounds of the 100 participants in Colombia to date: technical sciences and engineering, 58; social sciences and economics, 33; natural sciences, 7; other, 2. Most participants come from state institutions at different government levels in the water and sanitation sector, which finance their own participation. Some participants come from private entities or international organizations such as USAID, CARE and UNICEF. CINARA grants some fellowships through agreements with institutions, or fellowships linked to development projects. For the course in Colombia in 1997, CINARA received financial support from the Inter American Development Bank (BID).

Management for Sustainability has been offered as a course/workshop based on an interactive process that starts with collecting the participants' experiences, and presentations by resource persons. To help the participants to formulate specific problems, visits are paid to projects which have been developed by CINARA together with the communities and regional institutions involved, and have been running for over five years.

Although there is no follow-up course, the MfS course has delivered important results. Several projects that were developed during the course have been successfully

implemented. The most important spin-off, however, is the National Sustainability Programme that is being implemented in three regions in Colombia. The main objective of this programme is to develop, through Team Work Learning Projects, integral projects with sustainability criteria in communities with fewer than 12,500 inhabitants.

The course has also revealed the similarity of the problems affecting the sustainability of drinking water and sanitation projects in the participants' countries. These similarities relate to limitations in the planning and formulation of projects, institutional vacuums that interfere with the processes; inefficient management of the loan agencies; low level of cost recovery; inadequate selection of technology; poor conception of the integration of environment/health; low community participation in the different phases of the project; and deficient operation and maintenance. These aspects also coincide with the problems identified after the Water Decade, and in different international evaluations.

Future Plans

CINARA's goal for 1998 with regard to the Management for Sustainability course, is to re-structure the contents according to the evaluation that took place after the most recent course, and to promote a course that will take place in Cuenca, Ecuador. The success of the course has prompted CINARA to carry out a series of events called AGUA 98 as of 1 June 1998, which will have as its central theme, the sustainability of projects that are implemented in the water sector.

For more information contact:

Mario Alejandro Pérez Rincón, MfS Course Coordinator,
CINARA, Apartado Aereo 25360, Cali, Colombia
Fax: +57-23 393289, e-mail: maparez@cinara.univalle.edu.co

Gender-Sensitive Training: key to success

Creating gender awareness is a first step for men and women to appreciate each others' values and realize that various project activities may work out differently for both sexes. At all levels, men and women need to be aware of their different positions and functions in relation to water supply and sanitation. At the international level, this means gender-sensitive policy proposals and statements. At the national level, policy makers must create an environment in which a gender approach can be applied. Management staff of implementing agencies need to be aware of the positive impact of a gender approach on project efficiency and effectiveness. Field staff, who are closest to members of the community, need a good understanding of gender and the implications of working in a gender-sensitive way.

Training in water supply and sanitation projects is very much geared towards building capacity to carry out specific tasks. Adding attention to gender in training can lead to more effective and sustainable services and facilities, and prevents a bias towards either men or women.

Only properly trained staff can put gender issues on the agenda with the communities. To do this, tools and techniques have to be developed to enable project staff to understand gender and to transform this awareness into concrete activities. They must understand the different activities of men and women, their time spending during the

day and their access to and control over resources, and ensure that these are taken into consideration.

A gender approach accepts that the attitudes, roles and responsibilities of men and women are not static, but change over time. Together, project staff and women and men in the community can evaluate existing patterns, and look for possible actions which will improve the balance between women's and men's work and their control over resources and benefits. For their involvement to be meaningful, however, community members, too, must be properly trained.

To prevent a possible worsening of the position of women and to make optimal use of available human resources, training activities should be equally accessible for both men and women. In fact, many projects regard the training of women as essential to their success. As a result of projects applying a gender approach, women are assigned new roles, for example as pump mechanics, latrine builders, and treasurers of maintenance funds. A training needs assessment looks into the required performance, the capacity needed to fulfill certain tasks, and the capacity already available in terms of experiences and existing knowledge and skills. Participatory methods ensure the participation of both men and women, and stimulate the learning that starts from the experiences the people have. For example, to counteract breakdowns of pumps left unrepaired by men, women more often are trained in monitoring and maintenance of pumps. Experience shows that even though men are trained to repair the pumps, they do not always see the urgency of doing so. Women are also considered to be reliable treasurers of maintenance funds, and training in bookkeeping is increasingly geared towards women.

Women and men trained and employed according to what is most effective, and staff who ensure that women and men jointly share decisions, work and benefits in water supply, sanitation and hygiene, will ultimately result in better hygiene, health and well-being in the family.

The 1997 annual abstract journal *Woman, Water, Sanitation* is a special issue devoted to gender-related considerations for training and education. The introductory state-of-the-art article emphasizes the importance of gender in training. It addresses its nature and relevance, and looks at the training necessary for different levels of project staff to apply a gender approach. Current insights into the gender roles of women and men in communities is revealed, and attention is given to the development and implementation of gender-sensitive training. The article is followed by nearly 70 abstracts of relevant literature and a section on resources which includes resource institutions, publications and articles, conferences and meetings, internet connections, audio-visual materials, journals, and training possibilities.

Woman, Water, Sanitation, jointly published by PROWESS/UNDP-World Bank Water and Sanitation Program and IRC, can be obtained from IRC for US\$ 13/Dfl 26. To order contact IRC's publications department or send an e-mail message to <tjonkonjoe@irc.nl>.

Upcoming Courses

Gender in Water Supply and Sanitation. Short Training Course at IRC in The Hague. 8-26 June 1998, US\$ 3600

In the first week an overview is given of all gender issues in water supply and sanitation. Discussions, professional presentations and problem analysis are geared towards becoming familiar with the background and working experience of all course participants. The week concludes with clarifying and discussing major key concepts and approaches in gender.

In the second week, different aspects of the planning, implementation and monitoring of gender activities are dealt with. These include the collection of gender-sensitive data, gender-sensitive objectives and indicators, planning and implementation at different levels, participatory and gender-sensitive methods, monitoring for effectiveness, and organizational aspects and human resources development.

In the third week, participants will compile their own experience and the newly gained skills and knowledge by working on an individual assignment. With the support of IRC staff, they will produce a concrete action plan or strategy paper for use in their own project or programme.

For more information, contact IRC's training section or send an e-mail to <zepeda@irc.nl>.

IRC/Partner courses for the remainder of 1998

Netherlands (IRC)		
Monitoring for Effectiveness	4-23 May	US\$3600
Environmental Sanitation	7-25 Sept.	US\$3350
Hygiene Education & Promotion	12-30 Oct.	US\$3600
Kenya (NETWAS International)		
Hygiene Education & Promotion	20 April - 8 May	US\$2975
Management for Sustainability	14 Sept. - 2 Oct.	US\$2975
Burkina Faso (IPD)		
La promotion de l'hygiène	15 June - 3 July	US\$2850
Viabilité des programmes d'eau et d'assainissement	23 Nov. - 11 Dec.	US\$3400
India (Nashik)		
Management for Sustainability	4-23 May	Rs 25,000
Sri Lanka (SRTS)		
Hygiene Education & Promotion	8-26 June	US\$3000
Management for Sustainability	7-25 Sept	US\$3000
Monitoring for Effectiveness	19 Oct. - 6 Nov.	US\$3000
Colombia (CINARA)		
Gestión para la Sostenibilidad de Programas de Abastecimiento de Agua y Saneamiento	19-30 Oct.	US\$1250

COLOPHON	
EDITOR:	NICOLETTE WILDEBOER
DESKTOP PUBLISHING:	LAUREN HOUTTUIN
WITH CONTRIBUTIONS FROM:	
DR. VINYA ARIYARATNE, SARVODAYA, SRI LANKA	
MR. JAMES THUKU, NETWAS INTERNATIONAL, KENYA	
MR. MARIO ALEJANDRO PÉREZ RINCÓN, CINARA, COLOMBIA	
PRINTING:	PALLAS-OFFSET-BV
DISTRIBUTION:	EURO MAIL BV

To subscribe to the electronic newsletter, send the following message to <major@list.bart.nl>: subscribe water-newsletter. Include no other text or signature

WATER NEWSLETTER

Developments in water, sanitation and environment

IN THIS ISSUE - VIETNAM WOMEN'S UNION TAKES COMMUNICATION INITIATIVE
- KEREN SUCCESSFULLY IMPLEMENTS WATER AND SANITATION PROGRAMME
- VILLAGE HEALTH WORKERS CAN TEST TUBEWELL WATER FOR ARSENIC
- SOURCE WATER AND SANITATION WEEKLY
- NEW PUBLICATIONS

NUMBER 256, JUNE 1998

Vietnam Women's Union takes Communication Initiative

In the Socialist Republic of Vietnam, 80% of the population lives in rural areas. Safe water coverage from improved sources is 47% in rural areas, and 53% in urban areas, and sanitation coverage in rural areas is a mere 23%. The country has a large variety of water sources and water qualities. In mountainous areas gravity flow systems prevail, whereas in the plains areas people use dug wells or tube wells with public standposts or household connections. Rainwater catchment is rather common in areas with high rainfall. In some coastal areas intrusion of seawater causes well water to become saline. In other areas iron content of groundwater makes people prefer other sources for drinking. Water from rivers and ponds is an important source for domestic use, and is also sometimes used for drinking.

Over the past two decades, the Government of Vietnam has organized significant programmes for household latrine construction. In some areas, however, sanitation practices and facilities show large variations, in coverage as well as in technology, and many facilities have an economic value. In some areas in the north simple latrines are found that allow for the use of fresh excreta on agricultural fields. In the south of the country fish from fish pond latrines are for sale at the market, and in some places, human excreta can be found for sale at the market.

Despite their economic value, however, these latrines often bring about considerable health hazards. The unhygienic conditions of many of the latrines, as well as the area and surface- and groundwater pollution caused by the use of fresh excreta account for a high prevalence of bacteriological and worm infections. Insufficiently practiced personal hygiene behaviours like handwashing add to morbidity.

The Government of Vietnam puts significant effort into increasing access to improved water and sanitation facilities through means like research, implementation of hardware facilities and facilitating credit schemes. Major government actors are the Ministry of Agriculture and Rural Development, through its Centre for Rural Water Supply and Sanitation (mainly rural water supply); the Ministry of Construction (mainly urban), the Ministry of Health (rural sanitation), and the Vietnam Women's Union.

Women's Union behind behavioural change

Acknowledging that water supply and sanitation facilities are to be used and sustainable, communities will have to be enabled to take care of them and use them optimally, through mobilization and hygiene education activities.

The Vietnam Women's Union, the most active mass organization in the country, with cadres and members at the commune, district, provincial and national level, is one of the implementing agencies' main partners. Its role, in short, is to ensure behavioural change, through ensuring mobilization and the implementation of hygiene education. People's committees at the various administrative levels act as coordinators between implementing agencies, and lead community members to apply and develop consistent hygiene behaviours.

Communication patterns and methods are geared towards passing on behavioural messages from the central level down to the commune and household level, whereby mass-media like radio and loudspeakers or community gatherings and household visits by community motivators are used. Monthly women's group meetings organized by community motivators are also an important means of communication.

However, behavioural change in terms of maintenance, management and optimal use of facilities has not occurred at the scale and intensity required. It was recognized that centralized planning and implementation, effective for various development areas, is not effective for mobilization and hygiene education meant to bring about behavioural change that is not directly linked or is even detrimental to economic benefit.

Participatory training for community motivators

Realizing the limited effectiveness of some key activities carried out to date, the Vietnam Women's Union decided to address this communication issue by asking UNICEF's assistance for the translation of a participatory tool kit¹

¹ Narayan, D. and Srinivasan, L. (1994). Participatory Development Tool Kit; Training Materials for Agencies and Communities



into Vietnamese. The kit contains a set of tools to train community motivators in using more two-way communication (like the so-called cup-exercise, the resistance/openness to change model and the force-field analysis). Also included are tools to train them to work with community groups (including mapping, sorting and ranking). These participatory tools for use by the motivators in the community are also included in the kit.

However, having access to participatory tools does not automatically mean that one knows how they can be used. This is best discovered in a process of learning by doing, whereby learning experiences are linked to the realities of daily life in order to arrive at a motivation to creatively use the tools for improved communication.

IRC was asked to facilitate a workshop for provincial level staff of the Women's Union, responsible for training community motivators in their province. Participants got acquainted with concepts underlying the participatory method and tools. From this understanding they experimented with the community tools, which will allow them to take community motivators through the same learning process. In the course of the workshop an annex to the tool kit was written, outlining learning points, pitfalls and suggestions for improving communication through the use of participatory tools.

One more "however": changing ways of communication, thus also listening to community members' ideas, knowledge and concerns, has to be supported by a responsive administrative and political environment. Training and planning workshops should therefore not only be organized for implementers, but also for administrators and politicians.

Keren Successfully Implements Water and Sanitation Programme

Can a water and sanitation programme be successful when the funding agency's interventions are minimal and the local and national agencies are the actual owners and implementers of the project? Those involved in the programme for sanitation and water improvement in Keren, Eritrea, have come a long way in making their programme successful.

Keren is the second largest city of Eritrea, with a population of about 58,000. Over the years a combination of war and drought caused a population influx from the surrounding rural areas. In 1992 a dry season prompted the Water Resources Department (WRD) of Eritrea to seek the help of UNICEF and the donor community to remedy the critical drinking water supply shortage in Keren. Sources were drying up and the old water distribution system, dating back to the 1920s and maintained only until the 1970s, had deteriorated from old age and lack of maintenance. Furthermore, the new houses built to accommodate the new residents had no public services at all. Most water was provided by water tankers organized by the Red Cross.

Nationals in the drivers's seat

UNICEF responded immediately to the situation, which had reached emergency status. Together with the WRD it developed a two-phase programme, and then stepped back to allow the WRD and the Municipality of Keren to implement it. The activities, carried out between 1992 and 1997, were funded by UNICEF through donations from the governments of the Netherlands, Canada, Sweden, Germany, and others. What makes the programme unique is that it was designed by UNICEF to support national and local agencies in their endeavours to improve their own situation - an approach which is in line with the self-reliance policy of the Eritrean government. The status of UNICEF as an impartial international organization through which the financial assistance was channelled, made it easier to establish relations supportive of the country's own development efforts. The advice and international experience provided by UNICEF was transferred to those responsible for providing services to the beneficiaries. UNICEF's input was also instrumental in bringing together the stakeholders.

Phase one was an emergency programme dealing with the rehabilitation of the existing water system. Since the available supply of water was inadequate to cater for the whole population, expansion was considered for phase two. It aimed at new water source development, transmission lines and distribution network construction, a water treatment plant, an operation unit, and a balancing reservoir. Parallel to the water system development, a sanitation programme was also incorporated in the plans.

A learning experience for the agencies

Early this year, UNICEF and the Government of the Netherlands initiated an evaluation of the programme. The cooperative evaluation revealed that allowing the national and local agencies to implement the programme on their own made the whole intervention a learning process. While service goals were reached, however, there are elements which need improvement, fine tuning, and additional efforts. For example, the WRD succeeded in transferring technical skills to the local artisans, but managerial skills at the level of the Keren municipality were not given adequate attention. In order to ensure sustainability of the programme, continued support is needed, therefore, in the form of capacity and institution building, and community mobilization. It is now clear that an analysis of local and national capacity at the onset of the project could have led to an even more successful second phase.

From a technical viewpoint, the evaluation revealed that the lack of involvement of an experienced planner resulted in construction of a system in which it is impossible to regulate the water distribution, and a lack of sufficient technical capacity building has resulted in a lack of skills to operate intake and treatment in extreme situations. Other important elements, such as protection of the water source and additional measures to safeguard the supply during extended droughts, have not yet been taken.

Achievements ensure Keren's water supply

Comparing programme goals to achievements, the evaluation revealed that the share of the serviced population has increased by 400% since the water network was augmented, and that the network is capable of providing the 30 l/p/d originally planned. However, the distribution of the water is not equitable. If it were, all those within reach of the network could have 20 l/p/d, as the population growth has been faster than anticipated and the yield of the source well less than planned. While the water fee has been raised to a realistic level, water prices are just a fraction of those charged by vendors, and time spent collecting water has been reduced by the construction of standposts.

While the transition from the 'immediate solution' approach common to emergency work to the learning approach characteristic of the second phase was not an easy one, it has been precisely this learning approach which has been the key to phase two's success. The achievements to date justify a continuation of the programme, and attention to both technical and managerial capacity building will certainly ensure the sustainability of Keren's water supply.

Village Health Workers Can Test Tubewell Water for Arsenic

The discovery of arsenic in groundwater in Bangladesh has aroused widespread concern. BRAC, a Bangladeshi development organization, has been active in determining the level of arsenic contamination in tubewell water. Village-based health workers have been found to be very suitable for carrying out large-scale testing campaigns of tubewell water.

In collaboration with the Government of Bangladesh BRAC conducted a testing programme to determine the nature, extent and magnitude of the arsenic problem. Under this programme all the tubewells of Hajiganj thana that were thought to be highly affected were tested. The broad objective of the testing programme was to determine the level of arsenic concentration in all tubewells of Hajiganj thana and thereby develop a simple, inexpensive and rapid arsenic testing methodology, while at the same time assessing the capability of village health workers trained by BRAC to test the tubewells in their own villages for arsenic contamination. Forty village health workers were given a two-day training on how to operate the field kit, after which it took about a month to complete the whole testing programme at Hajiganj thana.

Out of the total of 11,954 tubewells at Hajiganj thana, arsenic concentration in 859 tubewells was found to be within 0.01 mg/L. The remaining 11,096 (93%) tubewells were found to be contaminated with arsenic concentration greater than the acceptable limit. To determine the validity of the field kit results 193 randomly selected water samples from Hajiganj thana were analyzed by spectrophotometre, and were found to agree in 178 of the cases, or 92%.

Testing and awareness-raising must continue

The arsenic problem in Bangladesh is growing very rapidly and appears to be a threat to public health. This study also strongly confirmed the existence of the problem.

The number of tubewells to be tested is very large, necessitating development of a simple, low-cost, low-key, and community acceptable system of tubewell testing. BRAC has shown that rural illiterate women can effectively be trained to carry out testing of tubewells in their own villages very quickly and at a reasonably low cost.

NGOs are working closely with community people, meeting and interacting on a regular basis to implement various programmes and disseminate related messages. For example, BRAC workers meet with 2.2 million women, representing the same number of families, every week. Messages on arsenic and arsenic hazards can easily be transmitted through such network. BRAC has worked with the government in this testing experiment which shows that effective collaboration between the government and NGOs can be forged to address a huge problem such as the arsenic contamination in tubewell water in Bangladesh.

*Mushtaque Chowdhury, Md. Jakariya,
Md. Ashiqul H. Tareq, Jalaluddin Ahmed*

For more information contact:

Md. Jakariya
Environmental Researcher
Research and Evaluation Division
75 Mohakhali, Dhaka 1212
Bangladesh
E-mail: bracamr@bdmail.net

(Note from the Editor: For more information on the arsenic poisoning in Bangladesh, interested readers with Internet access can consult the West Bengal and Bangladesh Arsenic Crisis Information Centre's website at: <http://was.net/wei/dch/acic/index.html>)

SOURCE Water and Sanitation Weekly

SOURCE is a weekly news bulletin on water and sanitation produced by the Documentation Unit of the IRC International Water and Sanitation Centre. It is sent free of charge to subscribers by E-mail and is also made available on IRC's Web Page (<http://www.oneworld.org/ircwater>).

SOURCE includes short news items related to water and sanitation in developing countries, with an emphasis on rural and peri-urban areas. Each item includes, where possible, an E-mail contact address and a URL of the news source.

To subscribe to SOURCE send an E-mail to: majordomo@list.bart.nl with the following message:
subscribe source
end
Leave the subject line blank.



New Publications



Gender in Water Resources Management, Water Supply and Sanitation: Roles and Realities Revisited, by Christine van Wijk-Sijbesma, IRC International Water and Sanitation Centre, The Hague, The Netherlands. Technical Paper 33-E; 212 pp; ISBN 90-6687-027-3; US\$ 25.

This book is the revised and updated edition of IRC's 1985 bestseller, *Participation of Women in Water Supply and Sanitation: Roles and Realities*, which is now out of print. The aim and structure of the book are threefold. It aims to present a simplified framework for gender analysis which can be used in rapid participatory assessments and in planning. It also gives an overview of the developments at policy level on integrated water resources management, and aims to link this to gender analysis. Finally, it summarizes and analyzes the operationalization of gender in water resources management principles in the drinking water and sanitation sector.

Gender in indigenous water resources management is looked into, as well as experiences with the application of the gender-based WRM principles in new drinking water supply, sanitation and hygiene promotion projects. Towards the end of the book the organizational context, which enables these new approaches to be implemented, is described, with a look at the shift to demand-responsive, decentralized programmes which combine hardware and software, and recognize the realities of gender, class and ethnic differences.

Technology Transfer in the Water Supply and Sanitation Sector: A learning experience from Colombia by Jan Teun Visscher ed., IRC International Water and Sanitation Centre, The Hague, The Netherlands. Technical Paper 32-E; 102 pp.; ISBN 90-6687-026-5; US\$ 20.

Changing from technology transfer to technology sharing is essential to enhance the sustainability of interventions in the water and sanitation sector. This publication presents consolidated experiences from a technology transfer programme implemented in Colombia between 1989-1996. The programme introduced multi-stage filtration, an environmentally friendly water treatment technology, in eight different regions. A human-centred approach has been taken in this programme, which adopts joint learning projects for capacity building at institutional and community level. This approach is in line with current theory, and has a great potential to overcome some of the main problems in the sector. It breaks with the traditional top-down method of technology transfer and recognizes that technologies are embedded in the society where they were developed.

In order to be sustainable, technology sharing is needed to ensure that the technology matches the new setting. The publication illustrates that a holistic joint learning project approach, as used over the past several years in Colombia, serves to develop this match and strongly supports capacity building in the sector. The publication comprises four main themes: a description of the programme and its results, a review of key issues in sustainable sector interventions, a discussion of theory and practice in technology transfer and an elaboration of the learning project approach.

Operation and Maintenance of Sanitation Systems in Urban Low-Income Areas in India and Thailand, IRC International Water and Sanitation Centre, The Hague, The Netherlands. Project and Programme Paper 6-E; 97 pp.; US\$ 10.50.

This study intends to review the performance, use and operation and maintenance requirements of sanitation systems in low-income urban areas in India and Thailand. Specific attention is given to user attitudes and practices with regard to operation and maintenance of the systems and to the role of the authorities both in the provision of the systems and in their operation and maintenance. The outcome of the study includes an assessment of the requirements for operation and maintenance and recommendations for the planning, design, implementation and management of future sanitation schemes.

The research focuses particularly on the double pit pour-flush latrine in India, and in Thailand on the cesspool system, septic tank with anaerobic upflow filter and two types of treatment plants, the aerated lagoon system and the activated sludge system-aeration tank. Other systems found in the research areas are also included in the analysis, such as public latrines in India and septic tanks with soakaway in Thailand.

For more information or to order any of these publications, please contact IRC's publications department at the address on this newsletter or send an e-mail to Carmen Tjon Kon Joe at <tjonkonjoe@irc.nl>.

COLOPHON	
EDITOR:	NICOLETTE WILDEBOER
DESKTOP PUBLISHING:	LAUREN HOUTTUIN
WITH CONTRIBUTIONS FROM:	
	MD. JAKARIYA, BRAC, BANGLADESH
	EVELINE BOLT, IRC
	COR DIETVORST, IRC
	HEIKKI WIHURI, IRC
PRINTING:	PALLAS OFFSET BV
DISTRIBUTION:	EURO MAIL BV

To subscribe to the electronic newsletter, send the following message to <majordomo@list.bart.nl>: subscribe water-newsletter. Include no other text or signature

WATER NEWSLETTER

Developments in water, sanitation and environment

IN THIS ISSUE - WOMEN AND WATER RESOURCE MANAGEMENT IN LATIN AMERICA: A WORKSHOP
SELF-MONITORING IN UGANDA
- WHO/UNICEF/WSSCC WATER SUPPLY AND SANITATION SECTOR MONITORING
- LAST ISSUE OF WATER NEWSLETTER
- NEW PUBLICATIONS
- UPCOMING EVENTS

NUMBER 257, AUGUST 1998

Women and Water Resource Management in Latin America: a workshop

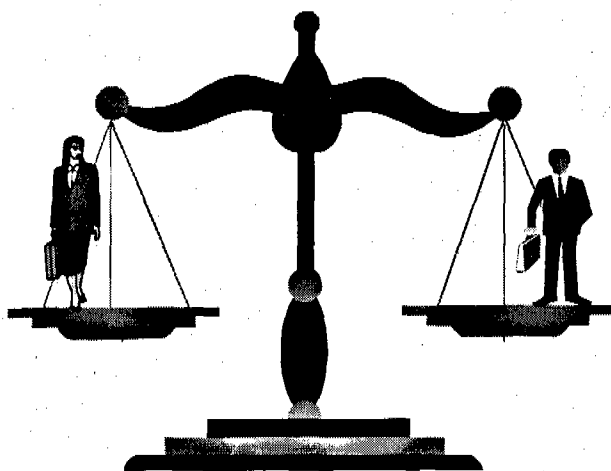
In the area of water management, the role of women has to date focused primarily on providing and using water at the household and community level. While important, the contributions of women are not limited exclusively to these activities. Equally important are the significant roles women play as decision makers, planners, managers and research scientists in making sustainable water resources development and management possible. Sadly, women's current and potential contributions in these important areas have been largely ignored.

Some 40 professionals, most of whom were senior women decision-makers, participated in the Latin American Workshop "Contribution of Women to the Planning and Management of Water Resources," in Mexico City, 21-22 May 1998. The objectives of the workshop were to analyze women's current and potential roles in sustainable water resources management, and to provide a forum wherein experiences could be objectively reviewed in order to draw practical and operational lessons.

Findings

Analysis of 12 commissioned background papers, which will be part of a book to be published by the United Nations University Press, Tokyo, Japan, led to the following findings:

- Statements at international conferences in support of women's involvement at all levels are by themselves unlikely to improve the situation in the foreseeable future and should become a platform for action.
- Women's participation must be increased and attention must be given not only to women's achievements but also to the discrimination they face.
- Water resources management includes technical, political and social issues and the participation and contributions of all the actors should be objectively analyzed.
- Women alone cannot play a pivotal role in guarding the environment; the society as a whole must be concerned with it. Society has to be better educated to deal efficiently with the various water problems and has to be empowered to influence the decision-making processes.
- Communication, training, education, transfer of information and interdisciplinary teams were considered to be fundamental issues which could contribute to integrated water development, and also increase the participation of women in balance with the participation of men.
- Importance of the role of NGOs was also stressed in order to involve the overall population in water resources development programmes.
- In rural areas male emigration has created new roles and responsibilities for women. Their presence as decision-makers in the irrigated lands increases significantly when men emigrate. Because of the importance of the role of women as administrators and producers of irrigated lands, managers and users of irrigation districts should redefine their roles, so as to improve overall water resources management. Women should get the necessary technical training to plan and manage the water supplies and facilities by themselves.



The women represented government, the private sector, universities, research institutions and NGOs, as well as national and international organizations. The workshop was convened by the International Water Resources Association (IWRA), the Inter-American Institute for Cooperation of Agriculture (IICA) in Brazil, the Swedish International Development Agency (SIDA), the Global Water Partnership (GWP) and the International Water Management Institute (IWMI).



better water and sanitation for a healthy future

More women choose to study water resources

Properly educated and trained women and men are important assets to the water sector. Case studies revealed some promising statistics about women in water studies. In Brazil, the number of women studying water resources engineering has increased by 40% during the past decade. In Panama, the number of female students in civil engineering has increased from 2% at the beginning of the 1970's to about 47% at present. Analyses from Brazil indicated that more women are now joining water resources-related careers mainly because of their own personal choice.

In Panama, 37% of the ministers, vice-ministers and head of agencies related to water issues are women, 43% of the academic staff in water sciences of the major universities are female, and a similar percentage of women work as technicians and engineers in the government and private sector in the water field. Increased participation of women in water resources management can only be realized if women themselves make a choice to be educated and pursue careers in the water area.

The number of women who are senior decision-makers is still low. However, there has been a remarkable increase in the number of women who are planners, supervisors, managers, researchers, operators, and technicians. While more should be done, the progress already made by women water professionals in many Latin American countries should be clearly recognized.

Adapted from an article by:
Cecilia Tortajada
Member, IWRA Committee on International Collaboration
Mexico, D.F., Mexico

Self-Monitoring in Uganda

Over the last 3 years IRC has developed practical tools to enable actors at all levels to develop their own monitoring system. These systems will help them identify solutions to problems and act to improve the situation; in so doing they directly improve the performance of their projects in the short term.

Under the headline "Success! Success!", the following was taken from an Information Sheet (1/1998) on Community-Based Monitoring developed by the Small Towns Water and Sanitation Project (STWSP) in Uganda, following a workshop organized by IDA/Directorate of Water Development of the Ministry of Natural Resources. The workshop was planned and facilitated by IRC with support from UNDP-WB RWSG, Combine Consultants and NETWAS.

The Small Towns Water and Sanitation project focuses on eleven small towns and the peri-urban areas of Jinja-Njeru. It consists of: i) water supply including piped services, wells and spring-fed systems ii) environmental sanitation iii) hygiene education iv) community participation in planning, implementation, operation and maintenance of facilities, and v) institutional strengthening and capacity building. This is

the first large water project in Uganda in which the users of facilities, and town and district officials have a decisive role to play in planning, implementing, and above all becoming owners of their basic services. The project seeks to go far beyond physical implementation, aiming to ensure that benefits are realized in the form of improved health and robust economic development.

In order to promote active community engagement in the project, DWD emphasizes the use of monitoring strategies which are directly linked with remedial action. Monitoring is used to solve problems, build on opportunities and as a result improve project performance in the short term. It incorporates a variety of stakeholders in actively collecting, analyzing and acting on information.

In the STWSP systematic monitoring approach, the communities - men, women, children, local government and special interest groups - become leaders and planners of activities. Which often can simply be described as 'seeing', 'checking', 'measuring' and 'ACTING' on information 'if there is anything wrong' and referring it to appropriate levels for action where necessary. Vertical linkages are required with a two-way information flow to communities, committee members, urban authorities, district authorities and then to DWD so that elements of monitoring activities can be fed into the Management Information System. In this way all stakeholders at their various levels participate in the monitoring of the project. This innovative strategy recognizes the existing capacity of communities to take responsibility for identifying and solving their day to day water supply problems more effectively than 'monitors' from the centre (external). Each stakeholder therefore handles information best suited to its level rather than, for example, the centre trying to collect and analyze all the information. In this way community-based monitoring leads to reliability, effectiveness and sustainability of the project benefits.

The workshop demonstrated that community members have a high level of interest in monitoring their own work. Participants from user groups, water and sanitation committees, urban councils, district level, consultants and national level prepared town-specific simple monitoring plans and selected indicators, which they are currently applying in their everyday activities.

Specific issues currently being monitored include.

- Water is transported and stored in "safe" manner - containers used are "clean";
- Water is used in "sufficient" quantity - if 20 litres per person per day are not being used, why not and how can it be encouraged?
- "good" sanitation - in this case very different indicators were developed depending on the behavioural patterns in specific towns;
- Women are "effectively" involved in decision-making processes. Again different towns developed different indicators, for example: a number of women have "agreed" to site selection; an issue raised by women has been "acted" on by the committee; women members of committee have "required skills" and "actively influence" decisions taken.

The Small Town Water Supply Project has ambitiously initiated self-monitoring at all levels. It was noticeable in the workshop that enthusiasm for a practical approach to plan monitoring was not confined to "professionals", to the contrary simple and more realistic monitoring plans were developed by town water supply committee members. It will be interesting to learn how the town committees, district staff and national staff of DWD apply the tools and monitoring system that they devised, and we look forward to sharing these lessons with you in the future.

For more information please contact:

Mr. Ephraim Kisembo
Small Towns Water and Sanitation Project IDA/DWD
P.O. Box 20026 tel: 256-041 220397
Kampala fax: 256 41 220901
Uganda e-mail: ekisembo@imul.com

or Marc Vézina, IRC e-mail: vezina@irc.nl

WHO/UNICEF/WSSCC Water Supply and Sanitation Sector Monitoring

The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) have been historically at the forefront of initiatives and programmes dealing with water supply and sanitation sector monitoring. A major impetus to monitoring was provided by the International Drinking Water Supply and Sanitation Decade (1981-1990), which was a major outcome of the United Nations Water Conference held in Mar del Plata, Argentina, 1977. The Mar del Plata Plan of Action recommended that governments "develop national plans and programmes for community water supply and sanitation, and identify intermediate milestones within the context of the socio-economic development planning periods and objectives, giving priority attention to the segments of the population in greatest need". Resolution II of the Conference also recommended that "national development policies and plans should give priority to the supply of drinking water for the entire population and to the final disposal of waste water".

It was from these recommendations that routine monitoring of water supply and sanitation became established during the Water Decade. WHO, in association with other members of the UN system, including UNICEF, was requested to expand its ongoing activities in monitoring and to report on the status and progress of community water supply and sanitation during the Decade.

Considerable progress has been achieved in sector monitoring over the past years. However, the current process of rapid sector transformation, new approaches, different roles and players at both global, regional and country levels, require the development of innovative monitoring approaches which should build on previous experience and should respond to the deficiencies of past efforts. The Water Supply and Sanitation Collaborative Council (WSSCC) established a monitoring task-force which is intended to work in close collaboration with WHO, UNICEF and other interested partner organizations in the development of this work.

There is a common agreement on the need to strengthen monitoring issues at country and global levels and to promote the involvement of multilateral and bilateral agencies and NGOs interested in this issue. WHO and UNICEF, in partnership with the WSSCC intend to conduct the following tasks by the end of year 2000:

- Continue the current efforts for promotion of monitoring and capacity building at the country and regional level; preparation of a "toolkit" of relevant materials to support national and regional level capacity building;
- Preparation of a major, substantial year 2000 assessment of the global water supply and sanitation sector status as at the end of 1999.

A plan of action was produced by the WHO and UNICEF aiming at the implementation of the above activities.

Although considerable progress has been made, it is necessary to strengthen this programme at the global, regional and country level. The current process of sector monitoring development, which is coordinated and promoted mainly by WHO and UNICEF, should count on the involvement of other active external support agencies. The establishment of the WSSCC Task Force on Monitoring should be an important component of this effort.

The membership of the WSSCC Task Force on Monitoring is being established amongst interested sector agencies and the first meeting is being planned accordingly. The precise dates and venue will be announced shortly.

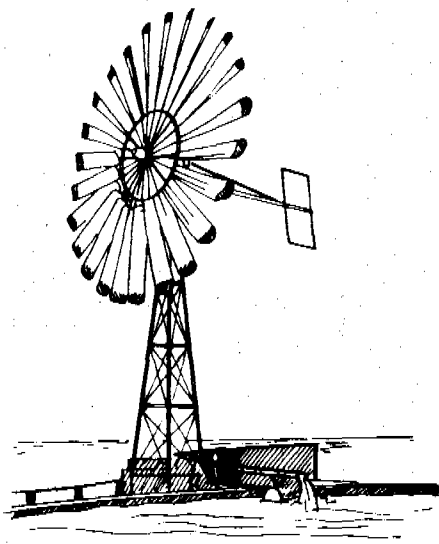
Last Issue of Water Newsletter

You are currently reading the last issue of the *Water Newsletter*. For years it has been bringing you news on water and sanitation policy, field experiences and information about courses, publications and events. As from September, the *Water Newsletter* will be replaced by the bi-monthly newsletter **SOURCE Bulletin: water and sanitation news review**, part of the **SOURCE Water and Sanitation News Service**. The news service also includes **SOURCE Water and Sanitation Weekly**, a weekly electronic news bulletin produced by IRC's Documentation Unit, described in our last newsletter, and an archive of **SOURCE** materials. The new eight-page **SOURCE Bulletin** will combine the best of **SOURCE Weekly** with sector news on water and sanitation, news from the Water Supply and Sanitation Collaborative Council, and news from IRC. You will also continue to receive news about courses, publications and events. **SOURCE Water and Sanitation News Service** is a joint endeavour of the Water and Sanitation Collaborative Council and IRC, with support from WEDC.

New Publications

Water-pumping devices : a handbook for users and choosers, by Peter Fraenkel; 2nd rev. ed.. - London, UK, Intermediate Technology Publications, 1997. 254 pp. ISBN 1853393460. US\$36.95 /£19.95

This book is the revised edition of the original 1986 publication. It reviews options for lifting irrigation water on small and medium sized land-holdings ranging from 0.25ha to about 25ha. It begins with explanations of the general



IT windpump, made in Kenya as the 'Kijito' and in Pakistan as the 'Tawana'

principles of water lifting and small-scale irrigation. This is followed by a review of pump types and water-lifting techniques. The next section discusses sources of power for pumping including: human and animal power; combustion engines (internal and external) and electrical power; and alternative energy sources such as wind, solar and hydro power, and biomass. The final section looks at the choice of pumping systems, not only in terms of financial and economic considerations, but also in terms of practical considerations such as availability of technology.

For more information contact:

IT Publications
103-105 Southampton Row
London WC1B 4HH, UK
Tel: 41-(0)171 436 9761
Fax: 41-(0)171 436 2013
e-mail: itpubs@gn.apc.org

Solids separation and pond systems for the treatment of faecal sludges in the tropics : lessons learnt and recommendations for preliminary design (Report, unpublished document) by Udo Heinss, Seth A. Larmie, Martin Strauss; SANDEC -Duebendorf, Switzerland 1998. 56 pp. (SANDEC report; no. 5/98)

This report, based on research undertaken in Ghana, aims to provide guidelines for the preliminary design of faecal sludge treatment schemes comprising solids-liquid

separation and stabilization ponds. One of the main chapters in this document covers anaerobic pond technology for high-strength wastes and the results of field investigations conducted with anaerobic ponds. Use of facultative ponds is also described, with particular focus on ammonia toxicity for algae from high ammonium levels in fresh and highly concentrated faecal sludges. Effluents and solids quality standards for faecal sludge treatment plants are discussed and a set of guideline values proposed. The authors recommend schemes comprising anaerobic and facultative ponds and a separate pre-treatment stage for solids-liquid separation as a suitable technical option for the treatment of low to medium-strength sludges, such as septage. Guidance on the preliminary design of such schemes is provided.

For more information contact:

SANDEC
Ueberlandstrasse
CH-6000 Duebendorf
Switzerland
Tel: +41 1-823 5025 / 20
133 Fax: +41 1-823-53 99
e-mail: heinss@eawag.ch
strauss@eawag.ch

Upcoming Events

II International Symposium on Suitable Water Management and Technologies for Small Settlements, 13-15 October 1998, Barcelona, Spain

This is a follow up to the first symposium of the same name held in February 1997 in Terrassa, Spain. The symposium aims to bring together expert from all over the world to discuss every aspect of water management and technology, focusing on participants' experience and the problems they may have encountered in relation to urban peripheries, communities in metropolitan areas, isolated housing developments, rural areas, villages, industrial areas, and tourist and leisure resorts. Some of the topics at both plenary and parallel sessions include catchment areas, combined surface, ground- and reused water resources, public health concerns and disinfection, low-cost systems with easy operation and maintenance, assessment of demand and use of non-conventional resources. Next to plenary and parallel sessions, there will be workshops and paper and poster presentations.

For more information contact:

II International Symposium
G. Tecnologia del Agua EUETIT
Colon 1 08222 Terrassa (Barcelona)
Spain
tel: +34 3 739 8092
fax: +34 3 739 8091
e-mail Symposium: colibri@euetit.upc.es

COLOPHON	
EDITOR	NICOLETTE WILDEBOER
DESKTOP PUBLISHING:	LAUREN HOUTTUIN
WITH CONTRIBUTIONS FROM:	JOSÉ HUEB, WHO
	MARIA-LÚCIA BORBA, IRC
	DAVID SAUNDERS, IRC
PRINTING:	PALLAS OFFSET BV
DISTRIBUTION:	EURO MAIL BV