

**Outcome in Summary  
of the  
Second Global Forum of the Water Supply and Sanitation Collaborative Council  
Rabat, 7-10 September 1993**

**Making the Most of Resources**

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**SIGNPOSTS  
TO  
BETTER WATER SUPPLIES  
AND  
SAFER SANITATION**

**The Water Supply and Sanitation Collaborative Council  
c/o World Health Organization, Switzerland**

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## Foreword

The Executive Summaries included in this document cover seven of the most critical issues facing agencies seeking to improve water supply and sanitation services in developing countries. The topics were chosen at the Water Supply and Sanitation Collaborative Council's first Global Forum held in Oslo in September 1991. During the following two years, seven Working Groups collated information, experiences and opinions on each topic. Their discussions and analyses involved literally hundreds of water and sanitation professionals and other specialists from both developed and developing countries.

The resulting reports, presented to the Council's second Global Forum in Rabat in September 1993, represent one of the most comprehensive analyses to date of the activities and performance of the water and sanitation sector during the 1980s and the early 1990s. Through case studies, literature searches, widespread discussions and, not least, the Working Groups' own specialist experiences, the groups provided the Rabat Forum with principles and guidelines for improving the effectiveness of future investments in water and sanitation and, most importantly, with new sets of tools to help bring about those improvements.

At Rabat, the Working Group reports became the basis for a new Council initiative – *The Rabat Action Programme (RAP)*. A primary aim of the RAP is to ensure that the guidelines and tools are put to immediate use, so that water and sanitation agencies can make the best possible use of available development resources. By publishing the Working Group Executive Summaries in this single volume, the Council hopes to provide a useful source of background information on the strategies and actions endorsed by the sector professionals in Rabat.

As more lessons are learned and new issues emerge, more Collaborative Council Working Groups are analysing trends and developing recommendations. The voluntary efforts of the many individuals and agencies involved speaks volumes for the commitment and enthusiasm of water and sanitation sector professionals. On behalf of the Council, I express our gratitude and admiration for their efforts and commend this publication to all those involved in water and sanitation programmes as a practical tool to help them in their work, and as a record of an innovative and effective process of collaboration.

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## Preface

At the Global Forum of the Water Supply and Sanitation Collaborative Council held in Rabat, Morocco, in September 1993, seven Working Groups presented reports on key sector issues identified at the Council's previous meeting in Oslo, Norway, two years earlier.

The reports of the seven Working Groups represent the collective experience and expertise of many specialists from developed and developing countries, and their recommendations are being turned into action through the Council's Rabat Action Programme (RAP).

This publication presents in one volume the Executive Summaries of all seven Working Groups. It thereby forms a useful and digestible record of the reasoning behind the RAP activities.

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# Country Level Collaboration

## 1. Collaborative Council Mandate

- 1.1 At the Water Supply and Sanitation Collaborative Council (WSSCC) meeting in Oslo in September 1991, the Council reiterated that country-level collaboration (CLC) remains one of its key objectives. Having reviewed reports from five Oslo working sessions on CLC, the Council saw a need to review current CLC experience, seeking out success stories, and to develop a framework and guidelines which would help developing country agencies, external support agencies (ESAs) and NGOs to achieve better collaboration at the country level. A Council Working Group was formed to develop recommendations to be put to the September 1993 WSSCC meeting in Rabat.

## 2. The Working Group on Country-level Collaboration

- 2.1 A total of 44 individuals agreed to take part in the Working Group's deliberations; 20 worked with developing country agencies, 20 with ESAs, and 4 in a consultancy capacity. All were kept informed by mail at each stage of the Working Group's deliberations, and 17 attended a Workshop in Kandy, Sri Lanka, in February 1993, to help formulate the Group's conclusions.
- 2.2 An initial survey of country-specific and more general experience of CLC yielded 20 contributions, which were reviewed by consultants in June 1992. The consultants' report — *Country Level Collaboration in the Water Supply and Sanitation Sector*, by Hafiz Pasha and Mike McGarry — is available in English and French. The material was helpful in providing an overview of the more visible forms of CLC and made it clear that considerably more collaboration was actually going on in developing countries than most Working Group members were aware of.
- 2.3 To obtain more detailed information on actual CLC activities, the Working Group initiated ten case studies: three in Asia (Indonesia, Pakistan and Sri Lanka); six in Africa (Burkina Faso, The Gambia, Ghana, Mali, Nigeria and Zimbabwe); and one in Latin America (Paraguay). These case studies yielded a wealth of information on CLC. The experiences documented in the case studies and discussed in the Kandy Workshop provide authoritative evidence for the Working Group's conclusions and recommendations to the WSSCC. They have been supplemented by two further documents produced after the Kandy Workshop: *Collaboration Beyond Government (An NGO Perspective on Country-Level Collaboration)* prepared by WaterAid; and *An Overview of CLC in Other Sectors* (notably forestry and transportation) prepared by the Swiss Development Corporation.

## 3. Highlights from the Case Studies

- 3.1 Part of the Working Group's mandate was to seek out CLC success stories. The case studies produced lots of individual successes involving particular CLC initiatives; they also helped to demonstrate some of the ways in which successful CLC can have a marked beneficial influence on sector planning and project implementation. These experiences have helped the

Working Group to frame its general recommendations for CLC advocacy and implementation.

3.2 Many of the individual case study experiences are readily replicable in other countries and for that reason the Working Group believes that Council members wishing to promote CLC initiatives in their own countries or agencies will gain considerable insight by reading the full case study reports. Some examples follow of the types of initiatives which have proved successful. In each case, a more detailed description can be found in the relevant Case Study Report.

### 3.3 *Zimbabwe's revitalized National Action Committee*

Like many other countries, Zimbabwe formed a National Action Committee (NAC) at the start of the International Drinking Water Supply and Sanitation Decade, but its effectiveness was limited in its early years. A transformation came about when the NAC was reorganized to coordinate implementation of the country's Master Plan for Rural Water Supply and Sanitation. One reason for the NAC's current effectiveness and resulting high profile is that it has a permanent secretariat — the National Coordination Unit (NCU). The NCU is located in the Ministry of Local Government, Rural and Urban Development (MLGRUD) and, though acting independently of the host ministry, is able to use MLGRUD's provincial and district structure to extend the NAC's influence to local levels. The Zimbabwe Case Study provides powerful evidence that a well-organized NAC can be a highly effective mechanism for CLC.

### 3.4 *Sri Lanka's regular donor consultations*

Many countries have been critical of the lack of follow-up after donor consultation meetings held to coordinate sector activities. Sri Lanka's answer has been to hold regular donor consultations (funded by an Asian Development Bank loan which stipulates the meetings as a covenant). Success is attributed to the informal nature of the gatherings, with no one agency dominating, to the security of funding, and to the regularity with which line agencies, ESAs, NGOs and consultants are able to get together to share experiences and ideas.

### 3.5 *Pakistan's National Policy Workshop*

Extensive preparatory research, plus the fact that the Workshop was held under the auspices of the Federal Government rather than a single operational ministry, helped to make Pakistan's 1988 National Policy Workshop a useful way of involving a wide range of sector agencies in developing a national policy for rural water supplies.

### 3.6 *Indonesia's demand-driven sector planning*

Collaboration among local government, central government, donors and benefiting communities is achieved in the Indonesian Integrated Urban Infrastructure Development Project. Planning is demand-driven, with the community making its own choices from a list of seven possible infrastructure improvements and then working with the local government and consultants to carry out surveys and manage the project.

### 3.7 *Guinea worm eradication programs in Ghana and Nigeria*

The internationally famous campaign to eradicate Guinea worm demonstrates how a single well-defined cause can mobilize collaborative action involving all levels of society. The Nigerian Task Force on Guinea worm eradication is one of several positive examples of the way that one sharp focus can bring together planning and implementing agencies, NGOs, the private sector and the public in a spirit of collaboration towards a common goal.

### 3.8 *Combating lake pollution in Paraguay*

With the encouragement of the National Environmental Health Service (SENASA) and the Pan-American Health Organization (PAHO), eleven Paraguayan municipalities meet once a

month to coordinate actions to eliminate pollution of Lake Ypacarai. The municipalities have accepted joint responsibility for pollution of the lake and have committed 1% of their annual budgets to support the coordinated activities and to involve government agencies in their clean-up efforts.

### **3.9 *Burkina Faso's "Water Club"***

Though it ceased to exist some time ago, the "Water Club" formed by a group of like minded sector professionals (national and expatriates) working in Burkina Faso in the early 1980s is a good example of the type of informal collaboration which has been found to exist widely in many developing countries. The comparatively small size of the country meant that the monthly meetings in members' houses provided an effective forum for discussing the water issues of the day. The case may also demonstrate the value of charismatic leadership in maintaining the momentum of such informal initiatives.

### **3.10 *Promoting hygiene education and environmental sanitation in The Gambia***

Revitalization of a moribund Water and Sanitation Working Group in The Gambia, with UNICEF support, has led to collaborative activities on a number of fronts, including the development of messages and materials for a coordinated hygiene education program, and the development and promotion of appropriate sanitation technologies. Multi-agency collaboration is being coordinated through regular meetings of the Working Group's sub-committees.

### **3.11 *Mali's information centre***

Among the achievements of Mali's "Advisory Committee", one of several committees established to coordinate sector activities for specific purposes, has been the establishment, with UNDP support, of a major information centre in the National Directorate for Hydraulics and Energy. The centre itself provides an additional focus for collaboration and information sharing among sector professionals, including expatriates.

3.12 These are only a few cryptic examples from the comprehensive Case Study Reports. They do, however, serve to illustrate the variety of CLC activities brought to the attention of the CLC Working Group. The reports also expose a number of weaknesses of CLC (or more frequently lack of CLC) in the case study countries, and these are addressed in the Working Group's recommendations for future advocacy by the Collaborative Council and for implementation of CLC by individual Council members.

## **4. Types of CLC**

- 4.1 The ten CLC case studies have revealed a wide range of activities which can be described as country-level collaboration — some 12 categories of CLC are described in the Sri Lanka case study alone. While the Council's previous emphasis has been primarily on improving collaboration among Government agencies, ESAs and NGOs, it is clear that there is also a need for collaborative mechanisms which ensure that community views are reflected in sector strategies and plans; exchange of experience and consideration of common problems among sector professionals within government agencies is also seen as a key issue in many countries.
- 4.2 Table 1 summarizes the different purposes of CLC and the mechanisms and tools which have been used to achieve it in the countries which provided case studies. The Working Group was impressed by the variety of mechanisms available, but noted that there was very little involvement of the consumer/community voice in the collaborative procedures. Collaboration does take place *among* NGOs in several countries, but there is not much experience of collaboration *between* NGOs and government agencies. Both groups recognize the need, but

**Table 1: CLC mechanisms employed in the ten case studies**

<b>Purpose of CLC</b>	<b>Mechanisms and tools for collaboration</b>
<b>Overall sector coordination</b>	National Coordination (Action) Committee, Water Resources Management Group, National Coordination Unit (secretariat)
<b>ESA-Government coordination</b>	Donor consultations, National workshops, Special topic conferences/seminars/ workshops, Consultative groups/Technical support teams, Technical reviews, UNDP donor meetings, PAHO/WHO consultations
<b>Sector &amp; Strategic Investment Planning</b>	Sector investment plans, Five-year development plans, Master Plan studies, Sector studies, Rapid assessment reports, Steering Committees, National Water Resources Committees, Working Groups, UNICEF National Program/UNDP-World Bank sector analyses
<b>Program and project planning and implementation</b>	Water sector round tables, Interagency coordinating committees (urban/rural), Regional coordinating councils, Environmental Action Programs, Emergency relief programs, Project management committees, Information reference centres, Directories and manuals, Workshops and seminars, Resource and equipment sharing, NGO forums
<b>Issues resolution/ problem solving</b>	Task forces, Demonstration projects, Action committees
<b>Informal collaboration</b>	Water Club, School/University batchmates, Engineering Institutions, Professional Associations, ESA meetings.

finding successful mechanisms seems to prove difficult. Some useful insights into this problem can be found in the WaterAid paper on NGO perspectives.

## 5. Guiding Principles

- 5.1 The CLC Working group recognizes that, even with the depth of material provided by the case studies, it has been able to capture only a small sample of the collaborative picture, even in the case study countries. Conclusions and recommendations are necessarily tentative, until there is more experience of monitored efforts to initiate CLC. Nevertheless, the evidence collected and the experience of Working Group members has enabled the Group to put forward a set of Guiding Principles for CLC activities, linked to the six purposes of CLC listed in Table 1. These Guiding Principles are spelled out in the Working Group's Main Report. After review and revision in Rabat, the Group recommends that these Guiding Principles should be issued by the Council as a tool for any members seeking to implement CLC activities in their countries.

## 6. Summary of Working Group Recommendations

### 6.1 CLC advocacy

The CLC Working Group's deliberations, and the evidence it has collected, fully confirm the Collaborative Council's declared position that fostering improved collaboration at the country level should be a priority area of action for the Council and its members. There is a mass of qualitative evidence that successful CLC leads to more effective planning, implementation and operation of sustainable water supply and sanitation systems, that it means more efficient use of available resources and can help to mobilize more resources, and that sector professionals benefit from the sharing of knowledge and experience with their counterparts in other agencies. The Group has not been able to convert the qualitative data into quantitative

cost-benefit analyses, but would like to see this exercise undertaken in a few carefully monitored cases, to reinforce the advocacy of CLC. In the meantime, the Group recommends that the Council should develop an advocacy flyer, based on the benefits of CLC detailed in the main report, and that this should be made widely available in as many languages as possible.

## **6.2 Further information**

The Working Group has been able to compile only a snapshot of present CLC practices. Considerably more data is needed to strengthen the preliminary Guiding Principles, and WSSCC members are well placed to contribute that data. The Group urges as many Council members as possible at Rabat to designate individuals within their agencies to act as Council contact points on CLC activities, who will report progress on CLC initiatives back to the Council six months before the next scheduled Council Meeting. The Council should then prepare a further report on these recent initiatives, so that its Guiding Principles and advocacy advice can be updated at the next meeting.

## **6.3 Facilitating CLC initiatives**

The WSSCC can act in a facilitating role for national WSSCC initiatives by maintaining a register of individuals in each developing country agency and each ESA who are willing to participate in CLC activities. This may be part of a wider WSSCC initiative to maintain registers of the special interests, resources and countries of interest of ESAs and the interests and needs of developing country agencies (an updated version of the Directories produced in the early years of the IDWSSD).

It is clear from the case studies that professional associations can provide effective communication routes for CLC. Through their expertise in the organization of workshops and conferences, and their regular contacts with members through journals and newsletters, specialist associations can stimulate the information exchange which is the prime purpose of CLC. Fostering of national professional associations, perhaps as offshoots of international associations participating in WSSCC meetings, would be a valuable Council initiative.

ESAs can also further the CLC cause by supporting CLC mechanisms financially. The Working Group was impressed by the experience in Sri Lanka, where ADB's financing of periodic donor consultations as part of project-related financial support had transformed the consultations into highly effective fora. Zimbabwe's successful National Coordination Unit also depends on external support to fund its secretariat function for the National Action Committee.

## **6.4 CLC as a platform for improved sector communication**

It has become clear from the CLC Working Group discussions and from contacts with other Working Groups that CLC mechanisms provide a useful platform for promoting and disseminating new sector approaches and sharing knowledge and experience among sector professionals. CLC recommendations should not therefore be taken in isolation, but seen as part of a communication strategy to raise awareness of such critical topics as gender issues, community management, sustainability, water resources conservation, applied research needs and mobilization of resources. Recommendations emerging from the Rabat discussions on other Working Group reports should be seen as potential agenda items for new and existing CLC fora in developing countries. With this in mind, the WSSCC may consider preparing a briefing document for national CLC participants, identifying the key Rabat recommendations which could be usefully promoted and discussed in future CLC fora. Similarly, the outputs of the other Working Groups may usefully recommend CLC as a means of furthering their own objectives in developing countries.



### **6.5 CLC and the changing role of governments**

The need for governments to change their perceived role from WSS service providers to facilitators and promoters was strongly recommended in the New Delhi Statement (1990). The case studies reveal little practical experience of this transformation. "Domestic Support Agencies" (DSAs) are critically important to sector progress. They include agencies which do not directly provide WSS services but, for instance, have responsibility for allocating water resources or finance, for providing training and institutional support, or for exploring technical and financial alternatives for water sources. These DSAs should be encouraged to be more active participants in CLC, so as to clarify and enhance their key roles in the sector.

### **6.6 CLC at regional and district levels**

Promotion of community involvement and community management will be a common theme in many of the Working Group reports. The desire to involve communities in sector policy formulation and program implementation is frustrated by lack of guidance on suitable mechanisms. Similar constraints seem to hinder greater collaboration between NGOs and government agencies. The CLC Working Group's case studies include a few examples of initiatives involving communities, but there is little by way of evaluation to judge their success. The CLC Working Group would like to see some monitored trials of CLC initiatives at community level, and urges Council members, particularly NGOs to consider whether they can join forces to initiate and assess trials in a few countries.

### **6.7 Developing country initiatives**

The WSSCC has always maintained that country-level collaboration on sector strategies, resource mobilization, program implementation, etc, is the responsibility of the host government. Nothing in the Working Group deliberations suggests any dilution of that principle. The only change in emphasis is a recommended reorientation of both CLC and sector planning in general towards demand-driven approaches, involving user communities to the maximum extent possible. Because this recommendation is so clearly in line with the general concepts of the New Delhi, Dublin and Rio conferences, the Working Group believes that WSSCC members in developing country agencies should, with full Council backing, seek to take the lead in establishing links with community associations, and to develop new bottom-up approaches to water and sanitation planning. This should also enhance the contributions from relevant DSAs.

### **6.8 The wider sector**

In many countries, the water and sanitation sector is showing the way in terms of interagency collaboration and government/donor coordination (this is confirmed in the Overview of CLC in Other Sectors). Global initiatives for future development of the sector are clearly going to be closely linked to Agenda 21 Action Programs, and that is going to mean close liaison with a wide range of other government agencies (agriculture, environment, urban and rural development, health, housing, transport, etc). The WSS sector has a chance to take the lead, if CLC groups take the initiative to broaden their own spheres of interest and involve other agencies in their discussions. ESAs and DSAs can facilitate this broadening of the sector, by encouraging their colleagues in other specialist fields to assess the CLC activities and achievements of the WSS sector and consider wider collaboration.

### **6.9 International feedback**

The Working Group's mandate was to consider country-level collaboration, and the case studies and ensuing recommendations reflect that brief. It is clear, however, that information exchange and sharing of experiences with other countries provide important inputs into CLC activities. To profit from these linkages, developing countries need to participate fully in

regional and international fora. Collaborative Council sponsorship of regional and global meetings can be an added incentive to countries to participate and to donors to support such participation. Past regional meetings supported by the Council have been effective in evolving sector goals and approaches, and the Working Group sees regional meetings as a useful adjunct to CLC activities, which the Council should continue to support.

#### **6.10 Simplifying ESA procedures**

The ESA Collaborative Council collected information on individual ESAs' procedures and conditions in relation to water and sanitation sector support. The Working Group's discussions support the belief that some agencies' approval and reporting procedures inhibit effective CLC. Recognizing the difficulties, the Group suggests one or two pilot efforts to simplify and rationalize procedures in countries which already have good CLC systems.

### **7. Follow-up**

7.1 The CLC Working Group believes that it has fulfilled the Council's mandate to develop guidance and recommendations for promoting and implementing enhanced CLC activities, and that the Group should be disbanded after Rabat. The Group's report does, however, see CLC remaining a crucial topic for the Council for a number of years. With this in mind, the Council will need to find suitable ways of continuing its support for CLC initiatives and updating its advice to members at each Council Meeting. Among the activities that will need to be organized/coordinated during the next two years are:

- publication and periodic updating of *Guiding Principles* for CLC, beginning with the Working Group's draft as updated by the Rabat discussions;
- preparation, publication and dissemination of an advocacy flyer;
- initiation and monitoring of specific CLC demonstration projects, particularly in relation to enhanced community involvement and government/NGO collaboration;
- in-depth analysis of selected CLC activities and new initiatives, so as to provide quantified evidence of costs and benefits;
- reporting to the next meeting on progress and future recommendations.

7.2 The Working Group will urge all Council members participating in CLC discussions in Rabat to be prepared to participate in appropriate follow-up activities, and will encourage NGOs, Professional Associations, ESAs, DSAs and research institutions to seek ways of continuing the development of effective CLC mechanisms and tools.



# Urbanization

## 1. The scale of urbanization

- 1.1 By the end of the century, 45% of the population of developing countries – some 2.25 million people – will be living in cities. Water and sanitation utilities and municipal governments have to translate the *quality of life expectations* of these huge numbers of people into functioning infrastructure, public policy, legal measures and social and community services. In recent years, the view has gained currency that urban growth cannot be reversed but that its effects must be managed. This task is especially difficult in developing countries, where large numbers of city dwellers live below the poverty line in underserved, degraded and illegal settlements.
- 1.2 The *peri-urban sector*, the term adopted by the Urbanization Working Group to describe the variety of these environments – squatter settlements, overcrowded tenements and boarding houses in inner cities, illegal subdivisions, etc – is often the dominant pattern of city living in developing countries. Rather than a deviation from the *normal* process of urbanization, or a transitory way of sheltering migrants, peri-urbanization must thus be acknowledged as a distinct process of producing cities, with its own features of constitution, growth and change over time.

## 2. The Working Group on Urbanization

- 2.1 Urbanization, and particularly the urgent needs of low-income urban communities, was one of seven priority issues identified by the Water Supply and Sanitation Collaborative Council at its meeting in Oslo in September 1991. The Council mandated a Working Group on Urbanization to assess the most suitable ways of achieving sustainable progress in the provision of water and sanitation services to the urban poor, and to report to the Rabat meeting in September 1993.
  - 2.2 The Urbanization Working Group had a total of 61 members, including participants from both developing and industrialized countries. Based on a comprehensive review of research work and experience gained in the sector, Group members saw the need to address two key areas of concern which have been largely neglected in the past, but which are fundamental to the achievement of sustainable water supply and sanitation coverage to the poor in developing country cities:
    - Lack of knowledge of the peri-urban sector, coupled with a failure to appreciate its importance, causes serious technological, economic and institutional mistakes; a better understanding of the peri-urban sector and availability of information on settlements to be served are crucial elements for the sustainable extension of service coverage.
    - Enabling sector institutions to recover both capital and operating costs and to gain access to financial resources is crucial. Indeed, the lack of cost consciousness and of mechanisms for cost recovery and economic sustainability on the part of water and sanitation utilities has so far all but precluded their access to long-term capital markets – the only way to finance large-scale extension of coverage.
  - 2.3 These two key areas of concern underlie the Working Group's call for action contained in this document. To address them, the Working Group has identified six inter-related strategic
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elements, and has developed a *basis for action* and *guidelines for immediate action* for each element. The elements are: security of tenure and other legal issues; people's participation; adequate cost recovery and resource mobilization; availability of technological options; institutional reform and capacity building; and water resources conservation and management.

### 3. Security of tenure

#### Basis for action

- 3.1 Full legal regularization of land tenure should not be considered a prerequisite for water and sanitation service provision. Local governments and utilities should work together to identify the minimum level of legal recognition of settlements that is necessary to guarantee security of tenure and to provide services. They should then gather data and information on peri-urban settlements in order to plan and design sustainable extension of service coverage.
- 3.2 Mutual recognition and the gradual upgrading of peri-urban settlements may then lead, in due course, to full tenure regularization. Indeed, tenure regularization can be seen as a step somewhere along the upgrading process which is based on mutual recognition.
- 3.3 Extension of basic services should be based on this *mutual recognition* between authorities and peri-urban settlement communities. Involvement of peri-urban communities, including their willingness to pay for services, and the commitment of local governments and WSS utilities to provide services to informal settlements should both be considered indispensable requirements.

#### Guidelines for immediate action

- 3.4 Governments should give utilities the legal right to provide WSS services to illegal settlements, by not subjecting this action to the unreasonable requirements of formal master plans.
- 3.5 WSS utilities should encourage and support the establishment, on the part of local governments, of a single *authority* or *office* with competence on land use and tenure regularization in informal settlements (permits, property titles, cadastral registers, etc), capable of speeding up the achievement of the minimum level of legal recognition necessary for providing services.
- 3.6 ESAs and governments should employ trained intermediaries (eg *paralegals* or barefoot lawyers) to work as legal aides and advocates at community level. NGOs can also take the initiative in addressing legal issues at local level, by employing paralegals. NGOs may also be used as intermediaries by ESAs, governments and utilities.
- 3.7 Institutions with useful information on informal settlements -- local governments, utilities, property registries -- should set up and jointly manage "interactive" cadastral databases to facilitate evaluation of land regularization applications and to coordinate information management among different sectoral spheres of competence.
- 3.8 Available computer applications for the acquisition, management and analysis of topographic, cadastral and socio-economic data on peri-urban settlements should be disseminated by ESAs, and subsequently by national sector agencies, to enable local governments, utilities and NGOs to plan and implement upgrading initiatives.

- 3.9 Governments should ensure women's access to security of tenure, for instance by removing existing obstacles to their signing contracts or deeds together with their male partners – or without them in the case of women-headed households.

## **4. People's participation**

### **Basis for action**

- 4.1 Partnership is an essential feature of the provision of water and sanitation services. To guarantee adequate project design and efficient and effective management, the partnership needs to include all the agencies involved (government agencies, utilities, banks, NGOs, grassroots organizations and consumer groups). Governments, with the support of ESAs, should provide the legal, institutional and policy framework necessary to facilitate this partnership and remove obstacles preventing people's participation, especially those hampering the full involvement of women.
- 4.2 Organizing effective people's participation in the development and management of water and sanitation services requires specific skills and outreach services from government agencies, WSS utilities, NGOs and grassroots organizations. ESAs should provide opportunities for capacity building specifically aimed at enabling these organizations to implement participatory projects.

### **Guidelines for immediate action**

- 4.3 Local governments and WSS utilities should establish specialized units or cadres to deal with peri-urban communities and should implement awareness and information programmes to encourage positive attitudes towards people's participation.
- 4.4 When formulating projects, particular attention should be paid to the instruments to be used – the *loci* of participation, the modalities of public meetings and consultations with community members, and the like – to ensure that women are involved and that their opinions are taken into account. Special patience and perseverance may be necessary to overcome women's resistance to participation, such as difficulties in expressing themselves before a male-dominated audience. The primary Environmental Care (PEC) approach may offer guidance on implementation of participatory processes in peri-urban settlements.
- 4.5 To assess the potential of any particular project activity, the implementing agency needs to identify the local resources available, not only in relation to technical and financial inputs, but also in terms of human resources – ie individuals and groups whose opinions carry weight in peri-urban communities and whose actions can affect their development.
- 4.6 ESAs need to revise regulations, conditionalities and programming requirements to facilitate people's participation in project planning and execution, since participatory approaches require flexibility in implementation and longer time frames.

## **5. Cost recovery and resource mobilization**

### **Basis for action**

- 5.1 Sound financial management of utilities is a prerequisite for gaining access to capital markets to finance new investments and to sustain WSS services. National governments, local authorities and WSS agencies need to change their policies on tariffs and cost-recovery in accordance with this principle.

5.2 It is necessary, however, to single out specific, demand-driven approaches to the question of cost recovery in the peri-urban sector, bearing in mind the prevailing social and economic situation and the specific mechanisms of the informal sector — income structures, employment levels, alternatives for savings and credit. In this context, development of methodologies to assess willingness and ability to pay of peri-urban communities is a crucial need.

### **Guidelines for immediate action**

5.3 WSS utilities need to adopt modern management practices and information systems, including appropriate cost accounting, customer account management, and a consumer-oriented approach (collection of users' complaints, information, suggestions, etc), to improve their efficiency and create an atmosphere of trust for potential investors.

5.4 Although full cost recovery should be the basic principle for sound financial management, it does not preclude the application by WSS utilities of cross subsidies between projects, consumer groups, or others.

5.5 Transfer of resources from central governments should be necessary only in special circumstances. In those cases, it should be directed at subsidizing the demand rather than the supply, thus ensuring adequate targeting to the urban poor and sound financial management of the utility. Government subsidies need to be specific, transparent and temporary.

5.6 ESAs should launch initiatives aimed at training NGOs banks and WSS utilities to make and recover loans in peri-urban areas (eg revolving fund schemes to allow households to connect to WSS networks). ESAs and governments should be willing to test incremental or gradual credit schemes, as well as the performance of groups of inhabitants and grassroots organizations in repaying loans ("solidarity guarantees").

5.7 Governments should remove the legal obstacles preventing women from gaining access to credit, giving them the same rights as men in the signature of loan contracts. Women's needs and opinions should be taken into consideration when devising repayment schedules and outreach mechanisms for credit schemes.

5.8 Recent research has shown that willingness to pay for improved water supplies is generally high. Nevertheless, willingness to pay needs to be assessed case by case and should form the basis of tariff systems and credit schemes. Both women and men should be consulted, to gain an understanding of the actual behaviour of households and their real willingness and capacity to pay. The key role played by women in building families' willingness to pay needs to be recognized.

## **6. Appropriate technologies**

### **Basis for action**

6.1 Appropriate technology for peri-urban areas does not mean simply low-cost technology. It means technology which is tailored to the specific conditions – the geomorphological features of peri-urban sites, the dynamics of growth and change in informal settlements, the effective demand for particular levels of service, compatible operation and maintenance requirements and, not least, affordability.

6.2 Developing appropriate technological options and design solutions for the complex and difficult physical and socio-economic conditions in the majority of peri-urban areas demands

a higher level of engineering skills than is traditionally required for rural and formal urban WSS services.

### **Guidelines for immediate action**

- 6.3 ESAs and national sector agencies should help WSS utilities to develop guidelines for carrying out assessments of available technological options. It would be particularly useful to develop performance indicators linked to the various service levels, to help in the selection of those which best suit local circumstances and will ensure sustainability on the basis of efficiency in the use of inputs and in relation to evolving local realities.
- 6.4 Planners of WSS projects need to take into consideration that peri-urban settlements are economically productive areas – not just residential areas.
- 6.5 As the main criterion for technology choice, planners should endeavour to find out directly from the main users (normally women) what features the proposed service needs to have. They should pay special attention to the uses of water in household activities – usually carried out by women – such as laundry, food preparation, washing children, cleaning the house.
- 6.6 Extreme caution should be exercised when considering the transfer of technological options from the rural to the peri-urban context.
- 6.7 ESAs should assist national sector agencies in implementing training and awareness programmes to change the attitude of utility professionals towards the selection and application of appropriate technology options. It is necessary to overcome the rigid adherence to conventional standards that prevails in engineering culture and to encourage interdisciplinary work.
- 6.8 ESAs, NGOs and WSS utilities should avoid building communal or public WSS services (eg water points, public toilets) on sites that are difficult to access, or too distant from households, or that do not preserve the right to privacy. Such features are particularly detrimental for women and children, who should be the most frequent users of these services.

## **7. Institutional reform and capacity building**

### **Basis for action**

- 7.1 The first target of institutional reform and capacity building should be to make sector institutions work by enhancing their financial and administrative efficiency. Beyond the need to improve the capacity of WSS utilities to perform their traditional duties, however, there is an important challenge to develop new capacities to provide services under the specific conditions of peri-urban areas.
- 7.2 Policy frameworks need to be developed at national level to address the roles, responsibilities and support needs of sector institutions in the delivery and management of WSS services in peri-urban areas. This does not only mean achieving the optimum performance of individual agencies in the provision of peri-urban services, but also promoting and supporting the establishment of partnerships among agencies.

### **Guidelines for immediate action**

- 7.3 Human resources development (HRD) programmes should first of all aim at enabling utilities and sector institutions to attract and retain sufficient numbers of suitably qualified personnel, including those equipped to deal effectively with peri-urban service provision. HRD programmes should include:



- adoption of competitive, market-based salary levels and benefits;
  - establishment of adequate career structures, incentives and evaluation procedures;
  - provision of training opportunities linked to career progression;
  - retraining of available staff in customer relations and community liaison and development activities;
  - retraining of WSS personnel to improve their capabilities in dealing with the non-technical aspects of the delivery and management of services in peri-urban areas;
  - special emphasis on enhancing capabilities in sanitation and sewerage development.
- 7.4 Involvement of the private sector should be encouraged by national governments and actively sought by utilities, which should explore possibilities for creating new roles for private companies in the provision of WSS services.
- 7.5 ESAs and national sector agencies should actively encourage the establishment of inter-institutional and interdisciplinary working groups with spending and decision-making powers, as an innovative institutional arrangement to coordinate and promote upgrading of peri-urban areas and their integration into the city. In large cities or metropolitan areas, several such units could be created on a decentralized basis.
- 7.6 ESAs and national sector agencies should actively encourage WSS utilities and NGOs to develop mechanisms for NGOs to act as intermediaries or surrogate service providers to peri-urban communities when legal, administrative or other constraints prevent direct service provision by WSS utilities.
- 7.7 Local governments and WSS utilities, with the help of NGOs and citizens' groups should assess the existing roles, responsibilities and capabilities of agencies dealing with peri-urban WSS services in their locality, to help define possible institutional reforms.

## **8. Water resources conservation and management**

- 8.1 This theme has featured prominently in several recent international consultations (eg ICWE – Dublin, UNCED – Rio). Important new developments are under way in the fields of applied research and policy analysis on issues like solid waste management and water resources pollution, hazardous wastes, water requirements and waste generation by small-scale and cottage industries. The Urbanization Working Group has discussed and endorsed some key concepts from the international debate. These are summarized below and amplified in the Group's Main Report.

### **Basis for action**

- 8.2 Local governments, in partnership with other agencies, should be encouraged to develop an integrated approach to the delivery and management of environmental infrastructure – water supply, sanitation, solid waste disposal and drainage. In this context, extension of sanitation coverage to peri-urban areas needs to be recognized as a means of enhancing water resource protection.
- 8.3 Conservation and sustainable use of water resources require the development and implementation of a comprehensive framework of economic and regulatory instruments and incentives, as well as concurrent public information activities and enhancement of monitoring and surveillance capabilities.

## **Guidelines for immediate action**

- 8.4 Governments, with the help of ESAs, should explore practical ways of applying economic and regulatory incentives and instruments (eg the “polluter pays principle”) to protect water resources. In this context, monitoring and surveillance should be enhanced and undertaken systematically, to help prevent water pollution and improve water management.
- 8.5 WSS utilities should improve their own water conservation, through control of physical water losses, including leakage detection programmes, and improved measuring and charging mechanisms to reduce unaccounted-for water.
- 8.6 The fact that extension of sanitation services to peri-urban areas also protects water resources provides an added incentive for WSS utilities to explore ways of stimulating demand for sanitation and extend coverage, with the participation of the users.
- 8.7 Governments should adopt economic and regulatory incentives to enhance water conservation and urban wastewater reuse, as ways of easing water shortage problems and to facilitate collection and treatment of wastewater.

## **9. Matters requiring further research and empirical testing**

- 9.1 The Urbanization Working Group singled out a number of matters that need further investigation through research, collection and exchange of documentation, and empirical testing. These issues could be addressed in any future activities of the Working Group which may be approved at the Rabat meeting.
  - 9.2 ESAs, national and local governments and sector agencies, utilities and NGOs are urged to design and implement applied research and information dissemination programmes in relation to the following:
    1. Intermediate legal options for security of tenure in informal settlements.
    2. Simplified institutional arrangements and bureaucratic procedures for cadastral registration and settlement regularization.
    3. Rationalization of bureaucratic spheres of competence and procedures to grant legal title to tenure (or similar).
    4. Policies and mechanisms to provide services to vulnerable groups (eg renters) and protect their interests when undertaking legal recognition and settlement upgrading, without blocking these processes.
    5. Policy and legal instruments to facilitate service provision to settlements which, although they fall outside the territorial jurisdiction of local authorities, are part of the urban structure.
    6. Effective ways of sharing responsibility for projects (financial resources, labour, management, etc) and for the operation and maintenance of completed works among implementing agencies, WSS utilities and local communities (the desirable scope and level of community participation vary with the socio-cultural context).
    7. Feasibility of implementation and functionality of existing tariff systems in relation to the goal of full cost recovery.
    8. Comparative advantages of available mechanisms for equitable cost recovery (cross subsidies, single tariff with direct subsidies to poorest groups, and so on).
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9. Practical mechanisms and institutional arrangements for breaking down large loans from financing organizations into the small loans needed for participatory approaches in peri-urban settlements.
10. Application of economic penalties and incentives, such as those based on the polluter pays principle, to environmental conservation and sustainable use of water resources.
11. Requirements and constraints relating to private sector involvement (eg guarantees offered by local and national governments, low revenues of WSS services, cost recovery frameworks, clear and stable rules, etc) and effectiveness of the various degrees of private sector involvement, including full privatization, in extending and improving services for the poor.
12. Technical solutions for adapting WSS systems to the shelter and infrastructure conditions of the peri-urban sector.
13. Patterns and requirements of household activities – food preparation, laundry, personal hygiene, house cleaning – in relation to water use, so that women's needs can be taken into consideration when formulating projects.
14. Guidelines for the practical application of participatory principles.

# Operation & Maintenance

## **1. The importance of operation and maintenance**

- 1.1 Operation and maintenance (O&M) of water supply and sanitation facilities in developing countries have been consistently neglected. The result is that costly facilities do not perform or are not maintained as intended and so fail to provide the services for which they were constructed.
- 1.2 In urban areas, where coverage has increased significantly in recent years, O&M inadequacies may mean that 50% or more of the water produced is “unaccounted for” or wasted. This situation cannot be tolerated when the inhabitants of urban fringes still lack public facilities and are therefore exposed to high health risks. These unserved populations frequently have to pay a high price to water vendors for inadequate quantities of unsafe water. Improved O&M by water utilities means that many more people can be served and revenue increases as a result.
- 1.3 On the rural side, national governments and external support agencies (ESAs) find that 30-60% of rural water supply facilities are non-operational at any one time, with dire consequences for the health and living standards of affected populations. Better management of water supply and sanitation (WSS) services and adequate operation and maintenance are key objectives in the desire for more rapid and more sustainable sector development.

## **2. The Working Group on Operation and Maintenance**

- 2.1 The Working Group on Operation and Maintenance was formed in 1988 under the sponsorship of the World Health Organization (WHO). In September 1991, at its meeting in Oslo, the Water Supply and Sanitation Collaborative Council (WSSCC) identified O&M as one of seven key issues to be addressed in the period before its next meeting in Rabat in September 1993. The O&M Working Group was formally adopted as a WSSCC Working Group and asked to prepare a report for the Rabat meeting.
- 2.2 The Working Group consists of some 80 professionals from ESAs and water agencies in developing countries. It has an advisory committee of about 10 members which converts the ideas, principles and priorities established by the full group into action plans for joint implementation. A full list of Working Group membership is annexed to the Group's Main Report.
- 2.3 The overall objective of the O&M Working Group is to contribute to the improvement of the performance of operation and maintenance in the WSS sector through the fostering of optimum management of existing assets, mobilizing of international and national resources for improved O&M, and development of tools to support action in this regard.

### **3. Guiding principles for effective O&M**

- 3.1 Four overriding principles have resulted from the Group's discussions and the documents that have been prepared under its direction. They are:
1. The provision of water is a service and requires a service-oriented attitude by the agencies involved. To ensure long-term sustainability, water should be managed as a commodity in the same way as any other resource. Its use and exploitation should be on financially sound and cost-effective bases, subject to the same controls as other resources to ensure its conservation, protection and wise utilization.
  2. The supply of water to consumers should normally be based on the principle of effective demand, which can be defined as the standard of service that users are willing to maintain, operate and finance to ensure adequate public health standards and, on occasions, to support economic activity. Effective demand has to satisfy the priorities of the community at large.
  3. Water systems should be managed and operated following the principles of good business practices. The form of management will vary depending on the local situation; ie rural, urban, semi-urban, location, demographic structures, etc. To be most effective, the responsible agency should be autonomous from government but manage the system under technical, financial and administrative guidelines set by national governments. The agency should operate in a fully transparent way and be fully accountable to its consumers.
  4. Sanitation is an undervalued item in the sector and emphasis is required on sanitation development and on forging closer links between water supply and environmental sanitation (solid and liquid waste management) in the planning of new programmes.
- 3.2 The O&M Group also recognizes the legitimate concerns of governments to satisfy the basic needs of disadvantaged segments of the population. Governments may require agencies to provide service at lifeline tariffs for such groups, or to institute temporary subsidies to promote public health and economic development.

### **4. Emerging issues**

- 4.1 At its most recent meeting in June 1993, the O&M Working Group reviewed the activities, documents and tools already developed for improving O&M in the WSS sector and developed plans for future strategies and actions. As part of its analysis, the Group listed four key issues for which further tools need to be developed and better use needs to be made of existing tools. The four issues are:
- Community management for improved O&M
  - Environmental sanitation
  - Influence of appropriate technology on O&M
  - Optimization of water supply and sanitation facilities
- 4.2 The Group also noted a priority need to develop realistic and achievable strategies to enhance the role of women in O&M. In this regard, the Group cautions that suggestions for involving women should not increase their already substantial workload or to impact negatively upon them in other ways.

## **5. O&M tools**

- 5.1 The programme of the O&M Working Group has been directed towards developing tools (documents, training packages, guidelines, etc), to assist sector agencies in the adoption of strategies to improve O&M. Some of these tools have been completed; others are under development; all need to be promoted and brought into use quickly and extensively. The specific tools commended by the Group are described in paragraphs 5.2 to 5.8
- 5.2 **Selected case studies on O&M of WSS systems**  
Several case studies covering different aspects of management of existing facilities and sustainability of WSS systems were prepared by individual Group members and presented at the Group's meetings. Case studies have also been presented at workshops which, though not planned or organized by the O&M Working Group, were strongly influenced by the emerging O&M conceptual framework. The case studies, which have provided the basis for the Group's report, are available as individual documents (listed in the Main Report). Support is sought through the Council for a compilation document, which would make the valuable experiences recorded in the case studies more readily accessible.
- 5.3 **Tools for assessment of the O&M status of urban and rural WSS systems**  
Two sets of tools and guidelines are being prepared to cover the specific needs of urban and rural systems. The aim is to give WSS agencies and ESAs a ready means of evaluating the current O&M status of their projects and programmes. Preparation of the tools is being undertaken by WEDC and IWSA.
- 5.4 **Guidelines for the management of O&M of Urban WSS systems**  
Prepared by WHO, this document seeks to assist urban WSS institutions and ESAs to formulate and implement technical and institutional strategies to strengthen O&M.
- 5.5 **Training course package on leakage control**  
Prepared by the UK Water Research Centre (WRc), this training package uses a logical and "user-friendly" approach to train water practitioners at a range of levels – from senior managers to leak inspectors. Modules can be varied in content, depending on the depth of knowledge required by a particular trainee.
- 5.6 **Guidance materials on optimization of drinking water treatment plants**  
Under development by WHO, this document is a practical approach to improving water treatment plant performance. It summarizes several decades of field experience and deals both with procedures to optimize treatment plant capacity and with measures to improve quality control of the treated water.
- 5.7 **Training course package on management of O&M of rural WSS systems**  
Prepared by IRC and field tested by GTZ in Namibia, this package has been devised to raise the level of training in O&M and to optimize scarce resources for training activities in developing countries. It is intended to help professionals dealing with the management of O&M to prepare and carry out training courses at regional and national level. It provides hands-on material for conducting courses, which can be adapted to local situations and make use of local people.
- 5.8 **Models of management systems for the O&M of rural WSS facilities**  
Prepared by WASH under the sponsorship of USAID, this document describes models of O&M management systems for rural WSS facilities in eight countries (Botswana, Yemen, Sudan, Belize, Tunisia, Indonesia, Benin and Costa Rica). It offers guidance to planners and designers in selecting the most appropriate management system.
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- 5.9 The Group's Main Report also details activities such as training courses, workshops, seminars and guidelines which, though not developed directly by the Group, have derived from the tools, guidance or support of Group members. The Main Report also lists further tools which the Group would like to see developed in the future, to help address the emerging issues it has identified.
- 5.10 As well as stressing the need to develop new tools, the O&M Working Group sees a major task in the future in promoting and facilitating the application and use of the tools and materials already available. Strategies need to be developed for applying the tools at the country level, and WSS agencies and ESAs need to incorporate use of the tools into their programmes.

## **6. Recommendations**

6.1 The Working Group recommends a series of actions to be taken by the WSS sector as a whole (sector agencies in developing countries and ESAs), and a further series of actions to be taken by or on behalf of the WSSCC itself.

### **6.2 Actions by the WSS sector**

1. All WSS sector agencies should make use of the tools developed by the O&M Working Group. ESAs can help by using the tools to prepare tailored guidelines for engineers responsible for planning and designing WSS systems, to encourage the incorporation of O&M concerns in systems design.
2. ESAs and national institutions should organize workshops to promote maximum exchange of information on O&M and to raise awareness of the issue.
3. Sector decision makers and ESAs should promote and support moves towards viable autonomous agencies able to manage water and sanitation systems on a fully self-financing basis.
4. ESAs and national governments should support the strengthening of agencies' capacities to sustain adequate O&M activities.
5. Monitoring systems O&M costs and performance need to be developed and implemented at country level.
6. Systematic collection of O&M financial and performance data should be initiated through national and global programmes, based on standard guidelines.
7. Performance indicators need to be developed which properly reflect O&M requirements.
8. A collaborative programme needs to be implemented to determine the costs of adequately operating and maintaining different types of WSS systems.
9. Studies should be conducted to determine the cost savings and/or efficiency improvements which can result from improved O&M and the use of locally or regionally manufactured spare parts.
10. In some situations, legislation may be needed to restrict the discharge of pollutants or the use of materials which may cause O&M problems.

11. Country-level collaboration among ESAs and government agencies should include efforts to achieve common policies, unified approaches, compatible technologies and standardized equipment, which can have a major impact on O&M requirements.

### **6.3 Actions by or on behalf of the Collaborative Council**

1. The Council and its members can make a major contribution to improved O&M by promoting use of the available tools and incorporating them into country projects.
2. As experience develops in use of the tools, there will be a need to update guidelines and add new tools. Council members can provide valuable feedback on use of the tools, either to the Council Secretariat or to the O&M Group.
3. Though the O&M Group has developed a significant number of tools and proposed a strategy for achieving improved O&M worldwide, there remains a great deal of work to be done. Detailed proposals for future activities are included in the Group's Main Report. The WSSCC has an implicit responsibility to see this task through, and it is strongly recommended that this may be best achieved by extending the mandate of the O&M Working Group for a further biennium.
4. In implementing its activities, the O&M Working Group has been severely constrained by lack of funds. In particular, funds are needed to ensure a better representation of developing country members in Group meetings and in the preparation of tools. The O&M Working Group recommends that the Council should adopt a strategy to overcome the financial constraints that its Working groups have to contend with in carrying out their tasks effectively.





# Applied Research

## 1. The Role of Applied Research

- 1.1 Applied research is the creative lifeblood of water supply and sanitation development. It is an essential tool both for translating priority country needs into fundable agency programmes and for adapting new concepts into sustainable water and sanitation services. Applied research is a link between ideas and action — a bridge between concern over stubborn problems of unserved needs and the provision of services to meet those needs.
- 1.2 Prospects of achieving the water supply and sanitation sector's goals for the 1990s and beyond will be enhanced if the sector addresses four key issues relating to applied research:
- **More applied research.** Substantial sums are being invested in water and sanitation projects. Lack of applied research means that a significant proportion of the investment is being wasted. Investment in applied research should be paid for several times over by more efficient and better designed and implemented projects.
  - **Higher quality research.** More research alone is not enough. There is a need to improve the quality of both current and future applied research. This will require a recognition that applied research is a serious undertaking which should be directed by professional researchers with the participation of those affected by the research activities.
  - **Better focused research.** Applied research needs to shift from an excessive supply-side orientation to one which responds to demand. Research activities should serve the needs of the users of water and sanitation services, not those of researchers and funding institutions.
  - **Better application of research results.** There is a gap between researchers and field practitioners which prevents full use being made of research findings. Only by bridging that gap can we ensure that the full benefits of applied research reach the intended beneficiaries.

## 2. The Working Group on Applied Research

- 2.1 At its meeting in Oslo in September 1991, the Water Supply and Sanitation Collaborative Council (WSSCC) identified Applied Research as one of seven priority issues to be addressed by Working Groups. The Working Groups were asked to formulate their own terms of reference and to report to the Rabat meeting of the Council in September 1993 with recommendations for actions to address the critical areas they identified.
- 2.2 The Applied Research Working Group had a total of 26 members. It included both women and men coming from industrialized and developing countries, and from a variety of disciplines and types of organizations. They included researchers, implementors and funders. A subgroup was formed to ensure that gender issues were dealt with adequately.

2.3 A Core Group set the general goal of the Working group as:

*To promote support for an increased level of applied research,  
particularly in identified priority areas; and*

*To enhance the quality of the research process and improve  
dissemination and application of research findings*

2.3 The group set itself five specific tasks:

- a) Report on the process of applied research in water supply and sanitation
- b) Report on improving the quality of research proposals
- c) Report on priority areas for applied research
- d) Report on problems and issues related to the funding of research
- e) Recommendations for GARNET (the Global Applied Research Network established as a result of initiatives by the Applied Research Working Group of the former Collaborative Council of External Support Agencies)

2.4 Group members prepared discussion papers on tasks a), b), c) and d) and these were discussed and modified during Working Group Meetings in October 1992 and March 1993. The full texts of the resulting papers are included in the Working Group's Main Report, and form the basis for the conclusions and recommendations in this Executive Summary.

### **3. Conclusions and Recommendations**

#### **3.1 Initiate more applied research**

The main constraint on additional research is funding. It follows that initiatives to undertake more applied research will depend crucially on support from funding sources, principally external support agencies (ESAs). The Working Group therefore directs four recommendations for implementing more research at the ESA members of the Council:

- ESAs should examine their allocations to applied research, to test whether they represent a fair proportion of their total investments in the sector;
- ESAs should make it easier for applied research proposals to be prepared, by providing protocols for such proposals, identifying contact officials and defining their main areas of interest;
- ESAs should encourage the inclusion of an applied research component, whenever appropriate, in new project proposals;
- Mechanisms need to be found for joint financing of research projects by different funding sources.

#### **3.2 Achieving higher quality research**

The quality of research is partly dictated by the formulation of the original proposal and partly by the quality of research organizations and researchers available to carry it out. Both issues are addressed in the Working Group's recommendations for improvement:

- Building the capacity of researchers and research institutions in developing countries should be an important consideration in the drafting of research proposals and in their evaluation by ESAs;

- Research proposals need to be developed with the help of guidelines. An example of such guidelines is contained in the Main Report of the Applied Research Working Group;
- A two-stage proposal process, in which a short pre-proposal is followed up later by a full proposal would assist developing country agencies in bringing forward practical research proposals for the support of ESAs. ESAs can encourage this process and help developing countries to formulate proposals which meet their particular requirements and which are directed to the right person(s) within the ESA for review.
- Research institutions in the industrialized countries should work more closely with those in developing countries in the preparation and implementation of applied research.

### 3.3 Focusing on priority needs.

The Working Group sees a clear need for applied research to be oriented much more towards the needs of users in developing countries, rather than the academic interests of research institutions. In general, more emphasis is needed on non-technical issues – especially gender issues and a demand orientation to service delivery – but more research is also still needed on specific technologies, particularly those relating to liquid and solid waste management. The Group identified six specific priority areas for future research:

- Hygiene behaviour and mobilization of community support for and participation in sustainable water and sanitation projects in rural and low-income urban areas;
- Extension of existing methodologies for determining willingness to pay for water supply into sanitation and solid waste services;
- Alternative financing and cost-recovery mechanisms;
- Development of realistic methods and indicators for determining the impact of water and sanitation improvements (health, economic, and environmental impacts);
- Determining the optimum roles of public and private sector agencies in the planning, design, production, installation, operation, maintenance and monitoring of water and sanitation schemes;
- Choice of an appropriate mix of technologies to suit urban areas with high, middle and low income neighbourhoods.

### 3.4 Better application of research findings

If best use is to be made of investment in applied research, the findings have to be widely disseminated and project implementors need to be encouraged to adopt new practices once these have been verified by applied research techniques. Achieving these improvements will involve changes in the way research is conducted and promoted and more support from ESAs for dissemination of research results and implementation of innovative technologies.

Specifically, the Working Group recommends:

- All participants in applied research should be involved in the research process from the earliest possible time;
- ESAs should support the dissemination of applied research results and the application of those results in the field. There is a need for constant interaction between applied research activities and implementation projects;

- A greater proportion of programme funds should be invested in projects using the low-cost and sustainable technologies that have already been developed;
- Ways need to be found to institutionalize closer dialogues among researchers, implementors and policy makers.

#### **4. Recommendations on GARNET**

4.1 The Applied Research Working Group considers that the *Global Applied Research Network* (GARNET) is basically a very good idea. However, GARNET has not been in operation long enough for a full assessment to be made of the real demand for such a network of researchers in the water and sanitation sector. Also, some operational problems were only recognized during an external review conducted in October 1992. The Working Group's recommendation is that the GARNET initiative should continue, and the Group makes the following suggestions regarding its future operation:

- GARNET should be a network of researchers whose primary function is to promote *current and proposed research*.
- Because of limited available resources, it is better to define GARNET's role somewhat narrowly and thereby ensure doing a good job, rather than trying to do too many things.
- The list of topics covered by GARNET should be carefully reassessed and probably reduced to the most important ones.
- The activities of the Topic Network Coordinators should be monitored regularly by the Global Network Coordinator.
- The target group of GARNET should not be confined to researchers but should also include professionals and ESAs who are interested in knowing what kind of research is being conducted in the sector.
- There is an urgent need for a brochure explaining the role of GARNET and its relationship to its users and other networks.

#### **5. The future of the Applied Research Working Group**

5.1 The Applied Research Working Group believes that it has fulfilled the mandate given to it by the Collaborative Council in Oslo. Nevertheless, the general objectives of the Group — to improve the quality of research and the use of research findings, and to facilitate the research process — will remain as key aims for the Council and for the sector as a whole. Without a Working Group specifically dedicated to Applied Research, there is a danger that the Group's messages and recommendations will be lost in the normal pressures of funding, building and operating water and sanitation facilities. The Group also feels that it has much to offer other working groups — and much to learn from them. The cross-cutting inputs of the Working Group on Gender Issues were seen as outstanding examples of useful interaction among working groups. A future Working Group on Applied Research could play a similar role.

5.2 The Working Group was also acutely aware of the difficulties in continuing any group. The justification for continuing has to be based on a potential to do something essential. That requires funds to be available, especially those needed to support the participation of members from developing countries. It also requires a dedicated and hard-working coordinator and Working Group members willing and able to carry out activities on behalf of the Group.

5.3 On the basis of these considerations, the Working group recommends the following:

- A Working Group on Applied Research should continue under the Collaborative Council after the Rabat Meeting.
- Members of the Working Group on Applied Research should also participate in other working groups to the extent possible.
- Funding agencies should provide a basic level of financial support to ensure the effective operation of the Working Group.
- The Working Group should have a balanced membership, with special consideration given to developing countries and non-governmental organizations.
- The new Working Group should follow the general objectives of the current Working Group but should develop its own set of activities and workplan.

5.4 **Examples of future activities for the Applied Research Working Group**

The new Working Group should build on the work and findings of the current group in moving towards an overall improvement in the quantity, quality, focus and application of applied research in water supply and sanitation. The potential activities listed here are not prescriptions for the new Working Group, but examples of useful activities that could be undertaken.

- Design of workshops for training researchers in developing countries.
- Development of practical impact indicators.
- Promotion of applied research considerations in other Working Groups.
- Development of mechanisms for improving dialogues among the players in the applied research process (researchers, policy makers, implementors, end users, etc).
- Preparation of case studies on the applied research process.
- Development of a training package on the preparation of applied research proposals.
- Improvement of linkages between researchers and implementors.
- Review and updating of research priority areas.
- Consideration of the key issue of how to deal with liquid and solid industrial wastes.



# **Information Education and Communication (IEC)**

## **1. Why IEC?**

- 1.1 Water supply and sanitation (WSS) programmes depend critically for their success on an effective Information, Education and Communication (IEC) component. During the past decade, even some of the best designed programmes have failed or have produced meagre results because intended users, policy makers or staff in neighbouring sectors were not adequately consulted, informed, educated or mobilized. At the same time, inspirational success stories about the role of effective communication abound in the health and nutrition fields, and indeed in the WSS field itself.
- 1.2 The International Drinking Water Supply and Sanitation Decade (IDWSSD — 1981-1990) ended with the job less than half done, and with a host of lessons about the approaches necessary to achieve faster and more sustainable progress in the future. The Earth Summit in Rio de Janeiro in June 1992 added new dimensions to the sector's already daunting challenges. In meeting these new challenges, while maintaining the momentum of the Decade, the sector needs an IEC strategy to achieve heightened participation of all potential partners, increase its efficiency and effectiveness through coordination of efforts, and raise awareness among key decision-makers of the importance of WSS to the economic, social and physical health of communities.
- 1.3 A well planned communication strategy supports sector development in four important ways:
  - by generating dialogues with men and women in communities, to find out what they believe, what they want, and what they are able to sustain; and by involving them in finding a range of solutions from which they can choose;
  - by ensuring that sector people work together effectively and learn from each other what works and what does not;
  - by working with allied sectors, notably health, agriculture and environment, so that each understands the other, and that complementary efforts are co-ordinated.
  - by mobilising key sectors of society – policy makers, government officials, non-government agencies, the media and others – in support of the WSS sector and its goals;
- 1.4 The basis of this strategy is a “communication culture” developed initially by sector professionals and field workers then spread to allies in other sectors and to the development community as a whole. IEC thus becomes a support for the implementation of key sector approaches, such as community management and participation, cost recovery and participatory hygiene education. At the same time, it helps to generate political will, to change policies and to mobilize resources. That is why the WSS sector needs a comprehensive IEC strategy to be implemented as of now.

## **2. The Working Group on Information, Education and Communication (IEC)**

- 2.1 At its meeting in Oslo in September 1991, the Water Supply and Sanitation Collaborative Council (WSSCC) considered a report from a Core Group on IEC which had been established by the predecessor Collaborative Council of External Support Agencies. The Core Group had argued that increased effort was needed to improve communication, which in turn would lead to more effective community participation, hygiene education and sector promotion. The



Group had developed a framework for formulating communication strategies in developing countries and globally. The WSSCC saw a need to develop implementation mechanisms and mobilize resources for communication activities at all levels. The Council therefore decided to establish a Working Group “to develop communication and other IEC strategies on behalf of the WSSCC, and to mobilize resources for implementation of approved strategies”.

- 2.2 In the two years since the Oslo Meeting, the Working Group has held three meetings, involving a total of 29 people, between them representing some 22 agencies. Five individuals from developing countries took part in the Group’s discussions, and women were generally well represented.

### **3. A Communication Culture?**

- 3.1 The term *Communication Culture* (para 1.4) merits some explanation. It reflects one of the sector’s most important messages: that success depends on an effective partnership, involving user communities, implementing agencies, support agencies, NGOs and private sector organizations. It involves listening and learning, and looking at situations from the viewpoint of other people. Effective ways of developing the partnership approach, and of enabling users to influence the decision-making process, are important in all the sector issues discussed by the Council’s different Working Groups. They are at the heart of IEC strategies, which is why the Working Group reiterates the need for a communication component to be included in national sector strategies and in individual water and sanitation projects.
- 3.2 Many of the new approaches which form the basis of the sector’s drive for accelerated and sustainable progress involve changes in orientation of sector staff. The community-driven focus of strategies for the 1990s means that *staff need to combine social and communication skills with their traditional technical expertise*. People who work in the water and sanitation sector are proud of their existing skills, but are often unsure how they can put the new communication approach into practice. They are used to practical methods of working. They need new skills to help them to approach and convince political leaders, to listen to and learn from men and women at community level, and to approach their counterparts in the health or planning sector to bridge any gaps that could be hampering their work. These skills can be acquired in the same way as their existing skills – through training and practice. The Working Group wants to see IEC skill development built into education curricula and training courses for sector professionals and believes that this can be encouraged by the WSSCC including such a recommendation in a comprehensive guideline on capacity building for sustainable water and sanitation programmes.

### **4. The case for IEC initiatives**

- 4.1 The earlier Core Group had made a powerful case for concerted action to improve IEC on the grounds that the sector needed to enhance its image, increase the flow of resources, and improve its performance in achieving sustainable progress towards universal coverage. The new Working Group took this as read, but saw a need to present the case for IEC in a way which would help its promoters to convince their target audiences – politicians, the media and the public, as well as other sector professionals – of the importance of investing in improved communication in the sector. The result is a series of case studies of national communication programmes in water and sanitation and related sectors. These have been published as a single document which analyses the approaches and the achievements of each programme in a way which makes it possible for others to identify elements which would be relevant in their own future strategies. The case studies in the present document include:

- Campaign to eradicate Guinea worm disease in Nigeria and Ghana  
At the end of 1992, both countries reported a dramatic drop in cases: 68% in Nigeria; and 81% in Ghana.
- Rural sanitation programme in India  
Following initial IEC efforts, it was decided to spend US\$1.9 million each year to increase understanding of WSS issues at every level from state decision makers to rural villagers.
- Diarrhoeal diseases programmes (Egypt, Swaziland, Honduras, Nicaragua)  
In Egypt, 90% of doctors now prescribe ORS, and 7 in 10 mothers can mix it.
- Water and health in Northern Ghana  
Better communication has brought increased knowledge, improved pump maintenance, 5000 trained community water organizers and safe water for 75% of the population.
- Bringing facts for life to the Philippines  
In one of the poorest provinces, immunization rates rose from 12 to 85%.
- Rural sanitation in Lesotho  
Rural villagers have each invested US\$75-150 in having their own latrines built.
- Rural communication programme in Mexican agricultural programme.  
An internal rate of return 75% higher than planned is attributed to a communication system which required only 1.5% of the project investment.

- 4.2 The volume of case studies is additional supporting documentation for the Working Group's recommendations and is a document which the Group would like to see the WSSCC publish as part of an IEC tools package. The dossier of potential case studies is still growing: already the Working Group has gathered information on the successful sanitation promotion programme in Bangladesh, and forthcoming initiatives in Nigeria and Guinea Bissau will certainly merit documentation and widespread dissemination. Updating of the case study volume is a task which the Council will need to consider when assessing how to follow up the IEC initiatives after Rabat.
- 4.3 As a further way of raising awareness, the IEC Working Group has prepared a 6-page leaflet entitled *Towards a Communication Culture*. The Group considers that this leaflet, which is included as an annex to its Main Report, could become a valuable advocacy document for IEC. As well as distilling the principles and the benefits of improved communication in a concise and persuasive way, the leaflet uses the highly successful campaigns for child immunization and Guinea worm eradication as examples to demonstrate the powerful impact of well-organized communication efforts. The Working Group is recommending that, following discussion and possible review at Rabat, the leaflet should be published by the WSSCC as part of a package of tools to support future IEC initiatives.

## 5. Country-level communication strategies

- 5.1 Following on from the framework developed by the earlier Core Group, the IEC Working Group sought to define the steps needed in establishing a communication strategy for the sector in a developing country. The outcome of these discussions is contained in a second publication which was produced by the Working Group in 1991. This *Resource Booklet for Communication in Water Supply and Sanitation* sets out five basic phases in the development of a communication strategy: Situation analysis; Planning and programming; Message development, pretesting and revision; Implementation, monitoring and assessment; and Evaluation.
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- 5.2 For each phase, the booklet gives guidance on the type of activities needed to ensure that the communication strategy contains the right messages for its target audiences, makes best use of available communication resources, and is effective in bringing about the desired behavioural and attitudinal changes. It is a cyclical process, in which messages and approaches are continually updated to reflect experience gained during implementation.
- 5.3 The booklet also contains a comprehensive list of the basic ingredients of messages to be used in a communication strategy, dividing them according to the three possible target groups: policy makers; sector professionals; and user communities. The IEC Working Group has endeavoured to bring this list of messages up to date, reflecting for instance the increased emphasis on environmental sustainability and integrated water resources management which have emerged since the 1992 Earth Summit. Selecting and formulating the right messages for and with a particular target group is a critical part of the communication process and the Working Group believes that the list in the Resource Booklet would benefit from a review by the Rabat meeting. It is therefore suggesting that consideration of the key messages should feature in the Rabat Working Session on IEC (see also *A Common Vision* later in this Executive Summary).
- 5.4 An updated version of the booklet is being made available at the Rabat Meeting, together with additional recently assembled information. Once it has been finalized following the Rabat discussions, the Working Group believes that the Resource Booklet will be another useful tool for sector professionals seeking to implement communication strategies and recommends that it should be published by the WSSCC.

## **6. Implementing IEC at the country level**

- 6.1 Responding to its mandate to mobilize resources for communication activities, the IEC Working Group helped the WSSCC Secretariat to formulate a proposal to the Netherlands government for support for a preparatory project to initiate IEC activities in West Africa. The proposal, which at the time of writing is under positive consideration by the Netherlands government, was developed with partners in Guinea Bissau and Nigeria. It includes a West African Regional Workshop to be held in Nigeria, and a country workshop in Guinea Bissau. The Workshops would develop proposals for specific target-oriented communication activities. UNICEF has also committed support for IEC activities in both countries. The UNDP/World Bank Programme's West African Regional Water and Sanitation Group in Abidjan, Côte d'Ivoire, is working on ways to link IEC initiatives with its proposed sector work in Benin. A variety of other organizations, including national NGOs and international professional associations are seeking ways to support IEC initiatives.
- 6.2 In **Nigeria**, implementation of Agenda 21 is being directed by a National Committee, with the Federal Environmental Protection Agency as coordinator. The water sector has developed an Agenda 21 programme proposal, which includes an IEC component, and the Water Supply Directorate has selected a member of staff (a woman) to have specific responsibility for communication. The WSSCC/Netherlands Government proposal is being merged with UNICEF initiatives on IEC. The IEC initiatives will be attached to a monitoring unit already established with UNICEF support. The main focus will be on reaching communities, but this requires preparatory steps to convince decision-makers at all levels. Efforts will be made to involve the media in the regional workshop. National workshops to promote Nigeria's rural water and sanitation strategy will include IEC messages. These workshops are intended to foster improved communication with local government authorities and through them with community water committees.

- 6.3 In **Guinea Bissau**, the water and sanitation sector is leading the Rio follow-up process. The existing interministerial WSS committee is being integrated into the National Environment Committee, which is chaired by the head of government. A new sector Master Plan has been produced, incorporating the lessons of the Decade, including the need for improved communication. The IEC pilot project is being seen as a valuable initiative to help to introduce a communication component in a number of forthcoming projects, including a World Bank-financed urban WSS project. It is anticipated that the IEC pilot project will also help with intersector coordination and integrated management of water resources, and that it will stimulate unified actions among the different donors active in Guinea Bissau.

## 7. Global activities

- 7.1 Reflecting the WSSCC's priorities, the IEC Working Group's main focus has been on developing implementation measures for national communication programmes. The international aspect of IEC is also important. Raising the profile of the sector and securing a fair share of resources for WSS programmes requires concerted promotional activities at the global level. The WSSCC is the most appropriate agency to coordinate these promotional efforts. Indeed, it can be argued that sector promotion and advocacy are the most important functions of the Council.
- 7.2 The 1992 Earth Summit in Rio de Janeiro and the resulting international activities focused on Agenda 21 provide both a challenge and an opportunity for the WSSCC and individual members to attract world attention towards the economic and social imperatives of WSS investments.

### ***A Common Vision***

- 7.3 A prerequisite of any global sector promotion is a universally accepted *Common Vision* for the sector incorporating a set of global goals. Elements of the key messages the sector will wish to promote are included in the Working Group's Resource Booklet. These need to be updated to reflect the important messages from New Delhi, Dublin, Copenhagen and Rio de Janeiro and packaged into a clear concise message with a catchy title or slogan which can be used to capture public and media attention as part of a concerted global campaign. The IEC Working Group has not completed that task, but sees it as an important outcome of the Rabat working sessions that the Collaborative Council should be able to reach agreement on ways in which the Common Vision can be finalized and promoted.
- 7.4 Once the messages are agreed, a wide range of promotional activities can be undertaken by individual agencies and by the Council itself. Among the forthcoming opportunities for sector promotion are:
- World Water Day.** Part of the follow-up to the Rio Summit has been the designation of March 22 each year as World Water Day. UN initiatives are already well under way to prepare a global information plan in readiness for the 1994 events. The Collaborative Council is well placed to influence planned activities, provided there are clear and concise messages and well coordinated proposals from Council members.
  - Ministerial Conference.** The Netherlands Government is convening a ministerial conference on drinking water supply and environmental sanitation at the end of March 1994 (the plan is to start on World Water Day). This may provide a good opportunity for the Council to coordinate sector promotion activities such as a combined event with the NGO International Secretariat for Water and the distribution of any Council-

endorsed publicity materials recommended by the Rabat meeting. It is presumed that World Water Day information packs will also be available for ministers attending the meeting.

- **The Carter Foundation (Global 2000).** The highly successful global campaign to eradicate Guinea Worm will be coming to a well-publicised climax in 1995. It is possible that the Foundation may be willing to direct its considerable organisational skills and high-profile ambassadors towards another sector-related campaign with clear and achievable targets. The Council is encouraged to establish contact with the Carter Foundation and to pursue the possibility of future collaboration.

## **8. The next steps**

- 8.1 The IEC Working Group's activities have stimulated a strong interest in introducing communication into WSS projects. As well as the proposed pilot project in West Africa, agencies in Brazil, India and Indonesia have expressed a wish to participate and tentative discussions have been held with representatives from a number of other countries.
- 8.2 There is clearly a demand building up, which the support community should be ready to convert into early implementation. Further initiatives are likely to result from the West Africa Regional Workshop and these too will require donor support. Hence, there will be a growing need for financial and technical support in addition to the UNICEF, Netherlands and earlier UNDP funding. The guidelines contained in the Resource Booklet should enable realistic projects to be formulated or communication components to be incorporated in existing projects and programmes.
- 8.3 The need for a concerted global promotion strategy is also urgent. The end of the International Drinking Water Supply and Sanitation Decade (IDWSSD) and the global endorsement of Agenda 21 demand a new and dynamic response from the water and sanitation sector. Action is needed to formulate the right approach. The WSSCC needs to ensure that it is represented in the new UN promotional initiatives resulting from Agenda 21, and there is also a need to take advantage of planned or opportunistic promotional events by interested agencies.

## **9. Summary of Working Group recommendations**

- 9.1 The IEC Working Group believes that it has been successful in building up a momentum for IEC action programmes in developing countries. The initiatives already under way and the additional ones which are expected to follow hard on their heels will need technical and financial support. They should also be monitored and evaluated in a coordinated way, so that the preliminary guidance contained in the Working Group's recommended tools package can be amplified and updated as experience grows. The Working Group has been able to develop a series of guidelines which it can confidently propose to the Council as the best way forward for the 1990s.
- 9.2 Since the Working Group began its work, the IEC concept has become very much more widely recognized as a crucial element of sustainable development strategies. Demands for public awareness raising and enhanced political commitment featured prominently in the outputs of the International Conference on Water and the Environment in Dublin in January 1992 and were endorsed and given added weight by incorporation in the Earth Summit's Agenda 21. The IEC Working group believes that the WSSCC as a whole and its individual members can take advantage of the post-Rio mood for change and raise the profile of the

water supply and sanitation sector as a critical part of sustainable development and environmental improvement programmes for the 21st century.

### **9.3 Recommended actions by individual Council members**

- Promote the creation of a Communication Culture among your colleagues and your agency as a whole. Encourage the organization of communication workshops or seminars, and the implementation of IEC activities starting in your own agency.
- Establish a communication unit or an information unit within leading sector agencies, to promote and coordinate IEC initiatives alongside sector monitoring and other information management activities. Ensure that feedback from monitoring contributes to the IEC process through authoritative public information and advocacy planning. (Link this recommendation with relevant proposals from the Working Group on Information Management).
- Review existing projects and programmes and seek opportunities to introduce a communication initiative (eg a communication workshop or training course). Incorporate IEC components, based on the guidelines in the IEC Resource Booklet, into forthcoming projects. ESAs are urged to look favourably on requests to support such initiatives.
- Include communication components in any training activities or workshops initiated as part of sector capacity building.
- Bring the Council recommendations on IEC and the tools package to the attention of sector coordinating bodies such as national action committees, and to any national agencies established to implement Agenda 21 programmes. (Link this recommendation with any coordinating mechanisms proposed by the Working Group on Country Level Collaboration).
- See yourself, your colleagues and your agency as ambassadors for the sector. Promote the sector's Common Vision, its goals and achievements in discussions with colleagues and in wider fora. Let the Collaborative Council know about successful projects and programmes and about opportunities for sector promotion.

### **9.4 Recommended actions by the WSSCC**

- Endorse the IEC Working Group Report, as amended by the discussions in Rabat, and distribute the amended report to as wide an audience as possible, with a Council recommendation that sector agencies and donors recognise the crucial role of IEC in development strategies. Promote capacity building and training and endeavour to include a communication component in national sector strategies and in individual water supply and sanitation programmes.
- Publish and make available a guideline package on IEC, including the three tools recommended by the IEC Working Group: the leaflet *Towards a Communication Culture*; the *Resource Booklet for Communication in Water Supply and Sanitation*; and the book of *Case Studies*.
- Initiate and coordinate the production of publicity materials promoting a *Common Vision* for the sector into the 21st century. Liaise with UN agencies involved in publicity activities associated with Agenda 21, and seek to ensure that water supply and

sanitation imperatives are appropriately represented in promotional literature, posters, displays, etc.

- Note that language is frequently a barrier to effective communication and that there is a big demand for information and promotional materials in languages other than English. Ensure that IEC tools and other publications issued by the WSSCC serve the needs of users whose working language is not English (French, Spanish, Portuguese and Arabic versions of key documents would all be valuable, if donor support can be found for their production).
- Monitor progress on the IEC pilot project and on any additional IEC initiatives arising from the workshops in Nigeria and Guinea Bissau. Advise and assist national agencies seeking support for communication activities.
- Make contact with the Carter Foundation, to investigate the possibility of collaboration in promoting fresh aspects of the WSS sector targets following on from the Guinea worm campaign.
- Take note of the linkages between IEC and other working group issues, as outlined in the Group's Main Report, and integrate IEC in all WSSCC Working Groups. In Rabat, IEC Working Group members will attend sessions discussing other Working Group reports, to help emphasize these crucial linkages.
- Ensure that future IEC materials recognize the special communication requirements of women and those living in peri-urban areas.
- Promote the inclusion of IEC in any discussions of sustainable development issues.
- Monitor and evaluate existing and new IEC initiatives in a coordinated way, so that the preliminary guidance contained in the Working Group's recommended tools package can be amplified and updated as experience grows.

9.5 The WSSCC is the most appropriate body to coordinate these activities, and the Council will need to decide on the right mechanisms to undertake these roles. It will also need to obtain financial support from ESAs to fund its promotional activities. The options which may be considered are:

1. Continue the IEC Working Group with a revised mandate and terms of reference. The new tasks would relate to the coordinating role of the Council, as detailed above, and the mandate would include authority to seek funding for new IEC initiatives, including the monitoring and evaluation of ongoing programmes, and for global promotion activities in support of the Common Vision.
2. To designate one sector agency to undertake these coordinating activities on behalf of the Council, with the same mandated authority as suggested for the Working Group and with the requirement to report back to the Council at the next meeting.

9.6 While the IEC Working Group has fulfilled much of the mandate given to it at the Oslo Meeting, Group members see an evolving role for such a Group in the future and would like to see the Council mandate extended. Clearly such a decision will be dependent on the Council's considerations in Rabat of the priorities to be given to ongoing and emerging sector issues. Participants of the IEC Working Group express their willingness to continue, and the Group recommends that the Council pursues option 1. If option 2 is favoured because of the need to limit the Council's administrative load, the Group recommends that IRC should be designated as the lead agency, and suggests that a Core Group of advisers should also be convened to assist in fulfilling the Council's mandate.

9.7 Part of the IEC Working Group's mandate was global advocacy. As a result of the Working Group's activities, the ground has been prepared for action, but the right global approach still needs to be worked out. If the Working Group's mandate is extended it would be possible to include development of a global promotion programme as part of the group's future activities. It may also be possible to involve a private sector agency skilled in marketing of development issues to undertake the global promotion campaign on a self-financing basis. In that case, the WSSCC would need to direct and render support to the agency, with or without support from the Working Group.



# Information Management

## 1. The Value of Information

- 1.1 Experience has clearly shown that effective information management — that is, the capacity to make the most of existing information resources — is essential to optimum performance in water supply and sanitation, and in water resources management.
- 1.2 Reliable, up-to-date and accurate information is vital to policy makers and planners, in choosing project and programme approaches; to financial planners, in ensuring the optimum use of funding resources; to trainers, in support of institutional human resources development and community management; to communities, in knowing how best to improve and expand services; and to technicians and project staff in implementing all stages of sector projects and programmes.
- 1.3 Information is not a luxury. It performs the same key function in the water and sanitation sector as in other sectors. As in other sectors too, quality information has an intrinsic value

### Types of information and IM tools

**Project and sector information** is information about national sector coverage, the progress and impact of projects and programmes in the sector. It is used mainly by policy makers, national planners and donors to identify problems and opportunities for action at the national level. This kind of information is commonly collected, processed and made available by means of sector monitoring and evaluation systems, including computerized monitoring systems such as WASAMS. WASAMS stands for Water Supply and Sanitation Monitoring Systems and has been interactively developed by country level sector staff and supported by the WHO/UNICEF Joint Monitoring Programme. An example of a project information system is provided through the EHMDAC system. EHMDAC stands for Environmental Health Information for Management of Development Activities. It is being developed by WHO, as a follow-on to the earlier CESI system.

**Management information systems** generally deal with either **operational information** or **administrative information**. In the water and sanitation sector, operational information includes hydrogeological and hydrological data, service applications, records of consumption, cost recovery data, borehole records, well records, design and construction records, operation and maintenance data and water quality data. Administrative information includes personnel, equipment and stores records and financial data. Management information is most often used by personnel of the institution concerned, but operational information may also provide input to sector-wide monitoring and evaluation systems.

**Technical information** includes information about technical developments, social aspects, approaches to community financing, methods and results of health impact assessments, and so on, and is often recorded in books and documents of various kinds. All sector professionals need technical information to help them keep up-to-date with new developments and approaches, and many of them also generate technical information about their own experiences which could be of benefit to others.

To facilitate the management and exchange of information, several IM tools have been developed. These include: the *Interwater Thesaurus* to index information materials for retrieval and to ensure compatibility in exchanges of computerized data, the *Interwater Glossary of Terms* to facilitate translation between languages, and the 1993 version of the *Directory of Secondary Sources of Information on Low-Cost Rural and Urban Water Supply and Sanitation*. All these tools are published by IRC.

which can, in appropriate circumstances, be reflected in its recognition as a marketable commodity.

*An interesting example of the importance and value of information occurred recently in Peru. Initially, reporting about the cholera outbreak was suppressed for economic reasons. Later, information about the costs in lost exports and tourism triggered off powerful anti-cholera campaigns in Latin America, urging the public to take preventive measures by chlorinating water, ensuring personal hygiene and building latrines. As a consequence, the director of Peru's campaign stated that "100,000 to 150,000 Latin American children did not die of acute diarrhoea .. public awareness and medical preparation made the difference" During an emergency meeting of leaders in Buenos Aires in March 1992, ten South American nations participated in drawing up a plan to invest US\$200 billion over 12 years to upgrade water, sewage and basic health facilities for Latin America's poor.*

*Source: How the cholera scare is waking Latin America, New York Times, March 8 1992.*

- 1.4 The key importance of good quality data and information to the successful attainment of sector objectives has been acknowledged by many international and regional meetings since the Mar del Plata Conference in 1977. Most recently, Chapter 18 of Agenda 21, endorsed by the United Nations Conference on Environment and Development (UNCED), identifies weaknesses in information management in the sector and suggests activities designed to improve the sharing of experiences, the dissemination of information and the development of interactive databases. The major focus is on integrated water resources management, where lack of information can exacerbate problems caused by conflicting demands for water both among water users in different sectors and between countries sharing water resources.
- 1.5 Chapter 40 of Agenda 21, dealing with *Information for Decision Making*, emphasizes that, in sustainable development, everyone is a user and provider of information in the broad sense, which includes data, information, appropriately packaged experience and knowledge. Actions are proposed, first to bridge the data gap between developed and developing countries, and second to improve the availability of information which already exists. Although the water and sanitation sector still lags behind some other sectors in the development of information management capacities, there are signs of a growing awareness on the part of sector policy makers and managers both of the need for improved information provision and of the contribution which it can make to sector development. However, while sector managers are becoming aware of the need to manage information provision more effectively, they often do not know how to go about it.

## **2. The Information Management Working Group**

- 2.1 At its meeting in Oslo in September 1991, the Water Supply and Sanitation Collaborative Council established an Information Management Working Group, with a mandate to develop, on its behalf, strategies and activities to further capacity building in information management in the sector. The IM Group held three meetings involving 48 people from both developed and developing countries. The aim of this document is to identify the main factors affecting the establishment and operation of information and data management systems in sector institutions, and to provide guidance as to actions to be taken by sector managers and policy-makers in this regard.

### 3. Benefits of Information Management

- 3.1 Lack of information, in the form and at the level and time it is needed has affected planning at country, regional and global levels and has led to inappropriate policies and budgeting, over design, under design, errors in choice of technology, poor financial management of operation and maintenance and a host of other problems. Reliable information has become a critical area because of current constraints experienced with funding and other resources – particularly water, trained manpower and time.

*A major water supply development proposal for the Northern Areas in Pakistan, prepared for the World Bank, was redesigned using experiences from Nepal including the use of ferro-cement construction work for reservoirs and a substantially greater share of high density polyethylene pipe instead of galvanized iron piping. Over 15% cost reduction was obtained on a US\$11 million construction component.*

- 3.2 Key to capacity building efforts is the importance attached to information by a sector institute. Information management will only be successful if a senior management staff member is charged with responsibility for its development and upkeep. The personal interest of the Commissioner has for instance seen to it that the Water Development Department in Uganda is gradually developing its capacity to reach informed decisions on the use of the country's water. The attitude of senior staff towards information is also important in encouraging other staff to make the best use of available information and not just take things for granted.
- 3.3 If information is crucial to decision-making, then it should be self-evident that the way in which the information is collected, validated and disseminated is a job for professionals and cannot be lightly left to untrained staff. Information professionals and subject specialists are essential for quality control and to ensure that information products and services become available that meet the needs of all users be they decision-makers, politicians, consumers, design engineers, site supervisors or community management organizers.

*The SAINEA regional water information system based at CIEH in Burkina Faso is headed by a hydrologist with many years of field experience. Integrity of data and consolidation of information is thus greatly improved.*

- 3.4 Water resources are under great pressure due to competing needs for water for human consumption, irrigation, hydropower and industry. The situation is further compounded by population pressure, population density and pollution. To be able to use our water resources better it is imperative that data on groundwater on surface water and on pollution and economic activities are collected and integrated in district, provincial and national plans for water development. Adequate information management provisions have to be made, so that the sector can access and generate the data it needs for a sustainable utilization and management of water for human consumption and to ensure environmentally sound ways of drainage and human waste disposal.

*The Bilan d'Eau (water balance) project of the Ministry of Water in Burkina Faso is an information activity that will soon become an important tool to assess the potential of economic development in water scarce areas. Information from its database and documentation unit shows that water for some of the secondary towns is so limited and costly to develop that a mix of water supply technologies is necessary to ensure fair and affordable services. At the same time, the information offers insights on strategies for water supply development and conservation.*

- 3.5 Any human activity requires orientation on issues, exchange of information and experience, planning, execution and monitoring of the activity. Each of these steps in turn generates information that needs to be integrated into the common knowledge base. Lack of a capacity

to handle that information and the ability to learn from experiences leads to a decline in performance and increases the risk of outright failure.

- 3.6 Readily available current information on experience and methodologies, both from national and external sources, is thus indispensable to decision-making. Sustained access to potable water and improved sanitation requires sustained access to reliable information resources accumulated, tapped and managed in a professional manner.

*Upon independence Namibia needed to change its centralized water supply set-up into one that would ensure more equitable access to water and sanitation facilities. Namibia accessed extensively existing information and experiences from elsewhere to ensure a greater community management orientation to the sector. Testing and monitoring of community financing, operation and maintenance, technology options viable at community level, hygiene education, etc, now takes place to ensure learning from experience by communication of information among sector partners.*

#### **4. Support for Information Management**

- 4.1 Sector staff in general complain about non-availability of information. Recent and sound information about products, technologies and approaches is difficult to come by. If it is available, it may not be accessible due to lack of a common or organized documentation unit in which information can be pooled, or due to lack of funds to obtain information regularly. Or maybe, it is simply not offered in the right format.
- 4.2 It logically follows that specific capacities need to be built and strengthened within institutions, through programmes and projects that stimulate the collecting, consolidating and access to information e.g. for project/sector planning and management, on technology choice and community involvement approaches, on human resource development, on monitoring and evaluation techniques, and for use in public and political awareness raising.
- 4.3 The resources required to make significant improvements in information management in the water and sanitation sector are relatively modest; what is most urgently required is a clear commitment, on the part of both national governments and external support agencies, to providing these resources.
- 4.4 Support is needed not merely within the short life-span of a technical assistance project, but over longer periods of time sufficient to ensure that information management capacities are firmly established. Only then will it be possible to fulfil the undoubted demand for more and better information among sector policy-makers, managers and technicians, local communities, women's groups and NGOs who are promoting better water and sanitation facilities to improve the quality of life of poor and underprivileged people in many parts of the world.

##### ***Information policies and plans***

- 4.5 To implement solutions to information management problems, sector managers and policy-makers need to formulate and adopt realistic and clearly-defined policies, objectives and strategies for information management. In addition, the general policies and plans of sector institutions, or of the sector as a whole, should make adequate provision for the necessary information support and incorporate policies, objectives and strategies for information management.
- 4.6 Information policies and plans may be concerned with the establishment, operation and evaluation of systems for recording and collecting hydrometric data, scientific and technical

databanks and databases, management information systems, monitoring and evaluation systems (including computerized systems such as WASAMS), libraries, documentation centres, archives and bibliographic databases, networks for the communication of scientific data and information, conferences, meetings and training programmes, the publication of periodicals and newsletters, statistical bulletins, bibliographic bulletins, and so on.

*The Water Development Department of the Ministry of Energy, Minerals and Environmental Protection in Uganda has identified the establishment of a capacity in effective information management as a key to developing the sector coordinating role which it has been assigned by the Government of Uganda. The Department has initiated its information development plan and is proving that the setting up of an information system can be initiated in-house when management is committed to mobilizing its own resources and is ready to convince its partners in sector development, including external support agencies, that it is imperative to contribute to developing information resources for better management.*

*Further external professional and financial support is required, as illustrated by the finding of the Uganda Water Action Plan that the present information base within the Water Development Department is totally insufficient for rational water resources development and management decisions. A number of actions to improve data collection and information management have been identified, including the rehabilitation of the gauging network.*

- 4.7 Information policies and plans should be based on a thorough study and analysis of the existing information situation and on close consultation with information users, information specialists, managers and policy makers. Their implementation will require an appropriate organizational structure for information management to be established within the institution. This should function in close cooperation with other policy-making bodies and within the framework of existing sectoral or national information policies.

### ***Organizational structures***

- 4.8 In most institutions in the water and sanitation sector, information management is carried out by isolated and often incompatible units such as libraries or documentation centres, design offices with collections of engineering drawings, units concerned with hydrological databanks, monitoring and evaluation systems, registries, water supply databases, and so on. These units are often located at the lower levels of the administrative hierarchy.
- 4.9 In such cases, there is a need to ensure first that data and information from different sources can be integrated into mutually compatible information systems, and second, that this information can be disseminated effectively to different groups of users in different ways, in accordance with their needs. This also calls for the establishment of cooperative links with other information systems in the water sector and elsewhere, to avoid unnecessary duplication of effort and resources and reduce costs.
- 4.10 This in turn requires that overall responsibility for information management be located at a senior level within the institution. This responsibility should be assigned either to a sector professional with training and qualifications in information management or information science, or to an information specialist with training and qualifications in an appropriate sector-related discipline.

## **5. Technical operations and tools**

- 5.1 Another fundamental task of information management is to collect, select and obtain data and information relevant to the needs of users and to process and store them for subsequent retrieval. Emphasis should be placed on data and information generated within the parent institution and in other institutions in the country.

- 5.2 It is important to take steps to ensure the quality of information and data, including validation of data, preservation of materials and elimination or archiving of redundant or obsolete information. Many appropriate information management tools exist, such as thesauri and classification schemes. They need to be applied and maintained to ensure compatibility with other information systems and so facilitate the sharing of data and information.

### ***Information products and services***

- 5.3 To help users to obtain the maximum benefit from the available information it may have to be analyzed and repackaged into various types of information products, such as synthesized reports or abstract bulletins, and made available through different kinds of information services, such as selective dissemination of information (SDI) services, enquiry services, photocopying services, and so on. Other kinds of services, such as translating documents or preparing fact sheets, may also be needed. Users need to have easy access to the information system itself, to its information resources and to its information products and services.
- 5.4 Another important task is to make users aware of the existence and availability of the information sources, products and services which are being provided. This may involve various kinds of publicity and promotion as well as familiarizing users in the use of the facilities provided.

### ***Resources for information management***

- 5.5 The most decisive resource, in terms of the effective and efficient supply of information, is that of staff. Different kinds of information professionals, with appropriate training and qualifications, are needed for the different kinds of information unit in sector institutions, such as the registry, the hydrological data section, the library or documentation centre, and so on. All information personnel, at all levels, need training in management and in interpersonal relations to enable them to communicate effectively with users and among themselves, and in order to administer their units effectively. Information personnel at all levels should be encouraged to be innovative, flexible and responsive to changes in the mandate of the parent organization.
- 5.6 An information unit needs space to house its collections of documents and other information sources and allow users to consult them, as well as to provide adequate working space for its staff, and equipment to help them to work effectively. By nature, information systems expand and this has to be taken into account when planning space and resources.
- 5.7 To establish an effective information system, and afterwards to maintain it in an adequate condition to meet the needs of users, it is necessary to provide, within the budget of the parent

#### **IM institutions and networks**

Several institutions are actively developing mechanisms for sharing information and for capacity building in IM. Many of these agencies have been operating since Mar del Plata (1977), and have assisted numerous country-level activities. Important work is being done by regional institutions such as CEPIS (Peru) in the REPIDISCA network, ENSIC/AIT (Thailand) in ENSICNET, CIEH (Burkina Faso) in SAINEA, CEHA (Jordan) in CEHANET, and IRC in LUSINFO (Portuguese) and NGEau (Europe). INFOTERRA, coordinated by UNEP, GARNET maintained by WEDC, IDRC, WASH, WHO, FAO, and the International Training Network of the UNDP/World Bank Program all provide important information resources

*Source: Directory of Secondary Sources of Information on Low-Cost Rural and Urban Water Supply and Sanitation (IRC, 1993), where all the acronyms are explained.*

institution, a budgetline item for information management, including adequate provision for both recurrent and capital expenditure.

- 5.8 Provision for meeting the costs of information support should as a matter of course be included in the budgets of any externally-funded projects in the water and sanitation sector. Part of this financing should be designated as a service contribution to the general information management effort of the institution managing the projects.
- 5.9 Financial provision is needed for: staff salaries and other expenses; collecting and processing scientific, administrative operational and monitoring data; buying and subscribing to documents; furniture, equipment and consumables; the maintenance of the premises; and producing and distributing information products and services. It is important to include a foreign exchange component for acquiring foreign information sources.

## **6. Conclusion and recommendations**

- 6.1 Effective information management in water and sanitation institutions is an essential part of sector strategies and an indispensable tool for decision- making. Only through availability and use of quality data and information, tailored to the specific needs of users will the sector be able to make the most of its resources, to the benefit of all mankind.
  - 6.2 Managing information clearly entails much more than just spreading it around. Information is a resource; communication is the process, that allows assimilation of information thus enhancing the knowledge of people and their capacity to make the right decisions. Communication of information involves establishing adequate skills, channels and mechanisms to encourage interactive packaging, promotion and extension to meet the needs of a diverse clientele. Capacity building for information management hence involves building an enabling environment of policy, people, and national sector institutions.
  - 6.3 The Water Supply and Sanitation Collaborative Council in collaboration with national governments, external support agencies, professional sector associations and non-governmental organizations will promote the need for developing capacities for information management in sector institutions at all levels.
  - 6.4 ***To become effective in information management, leading water and sanitation agencies at the national level should:***
    - formulate official information policies for the sector in general and for their own institutions
    - promote the formulation of information policies by other sector institutions
    - take steps to ensure that all general plans and projects for the sector make appropriate provision for the development of information management capacities
    - establish appropriate organizational structures and mechanisms for information management, including mechanisms for the formulation of information policies and plans, ensuring that such plans make adequate provision for:
      - establishment of appropriate organizational structures for information management
      - identifying target groups of information users and assessing their information needs
      - identifying existing sources of data and information relevant to the needs of users.
-

- establishment of effective mechanisms for collecting, processing, storing, retrieving and disseminating data and information at all levels, particularly from local or national sources
- human resources, physical facilities and financial support
- ensure that overall responsibility for information management is assigned to a senior manager within the institution.
- apply and maintain appropriate information management tools to validate information and ensure its relevance, and to facilitate the exchange of information.
- provide information products and services tailored to the needs of users and promote their effective use through publicity and the familiarizing of users with the products and services available
- take steps to designate, recruit and train the various types of staff required by the different activities in the area of information
- provide appropriate and adequate premises, equipment and consumables for information management
- establish an adequate and separate budget for information management, including both recurrent and capital expenditure and a foreign exchange component.
- monitor and evaluate information management activities

## **7. Follow-up**

- 7.1 In seeking to implement improved information management strategies, governments, NGOs and sector planners will require assistance in defining the scope of their sector information activities, in capacity building and training, and in developing and providing appropriate information materials. A network of WSS information development institutions is active at regional and national level (see Box on Page 6). These same institutions may be called on by the Council to provide the necessary support for country-level activities, and the Working Group suggests that IRC should act in a coordinating role to facilitate such support.
- 7.2 There is also a need for continued monitoring and evaluation of IM activities, so that tools and guidelines can be improved through experience. The Working Group again recommends that IRC should be asked by the Council to coordinate monitoring and evaluation activities, with assistance from other members of the informal network.



# Gender Issues

## 1. Gender Issues in Water Supply and Sanitation

- 1.1 The broad field of gender issues focuses on the roles and tasks of women *and men* and examines the ways in which they interact to make decisions and share responsibilities. It seeks to counter past attitudes which, though well-meaning, have tended to treat *the role of women* as a separate issue. They have thereby undervalued the many positive influences that women can have on water supply and sanitation (WSS) programmes when they share in decision-making and in the planning, operation and upkeep of WSS improvements.
- 1.2 The focus on *gender* recognizes the fact that full benefits only accrue from WSS improvements when men are encouraged to become more involved with activities such as hygiene education and sanitation, and women have more influential roles in, for example, management committees, financial arrangements, and maintenance of installed facilities. Project contributions of time, labour and money need to be shared fairly, and not expected of women alone.
- 1.3 Gender considerations are crucially important at community level, where the partnership approach depends on all potential beneficiaries having a say in development activities. But gender issues arise at all levels and, if women are to make their full contribution to sector development, they need to be involved also in professional and managerial roles at all levels. Because it is the potential scope of women's involvement and influence that has been neglected in the past, it is necessary for any discussion of gender issues to concentrate primarily on ways of stimulating and facilitating greater participation by women in appropriate sector activities. This should not detract from the key point that the roles and responsibilities of women and men need to be considered together.
- 1.4 The WSS sector is closely linked to other sectors such as environment and health and to goals for sustainable urban and rural development. Gender issues is a crucial theme in all these areas, forming part of a holistic and integrated approach. This has been recognized at several international conferences, notably those at New Delhi and Dublin, and at the Earth Summit in Rio de Janeiro.

## 2. The Working Group on Gender Issues

- 2.1 At its meeting in Oslo in September 1991, the Water Supply and Sanitation Collaborative Council (WSSCC) identified Gender Issues as one of seven priority issues to be addressed by Working Groups. The Working Groups were asked to formulate their own terms of reference and to report to the Rabat meeting of the Council in September 1993 with recommendations for actions to address the critical areas they identified.
- 2.2 At a September 1992 meeting of working group coordinators, Council staff and the Council Chairperson, it was decided that the best way to address gender issues in the sector was to include them in the work of each of the other working groups. Accordingly, members of the Gender Issues Working Group joined the other groups. The group agreed that its own tasks would be to prepare a gender review of the other groups' work and a sourcebook containing guidelines and other tools for gender analysis in the WSS sector. This report summarizes the

current situation relating to gender issues in the sector, outlines the sourcebook, discusses interaction with other groups, and provides recommendations for the future.

### 3. The Current Situation

- 3.1 **Women's involvement** in WSS sector activities springs from their traditional roles. Women are most often the users, providers and managers of water in the household and may also be managers at local or community level; they are usually the guardians of household hygiene; they may have a great deal of knowledge about water sources; women and children will probably be the main users of any new or improved water systems; and women may be the main disseminators of new hygiene messages. A considerable amount of literature exists on women's roles in the WSS sector (see the reference list at the end of this report). As Siri Melchior, former Manager of the UNDP/PROWESS programme states, ". . . women are not a special interest group in water and sanitation, they are a mainstream interest group . . . without their involvement, projects risk being inappropriate, and failing."
- 3.2 **Benefits** women may receive from improved WSS facilities can be classified into health and socio-economic categories. Water sources which are closer to homes and which provide an adequate supply will decrease collection times, leading to gains in both time and energy. These gains may be applied to a variety of activities, including leisure and income generation. Women may spend more time with their families or may improve the family's economic status through income generation. More convenient water can also reduce physical strain due to walking and hauling water long distances. Better quality water which remains uncontaminated helps to decrease water-related diseases. For some women, access to adequate sanitation ends their need to suppress urination or defecation until nightfall. Adequate sanitation also brings health benefits.
- 3.3 There can be a variety of **constraints** to gender sensitive programming. There is often a lack of knowledge about women's and men's roles in the sector. Projects may be designed in an inflexible manner, using a 'blueprint' approach. Gender planning may be marginalized, separated from mainstream planning. Hardware and software aspects of projects may be poorly integrated. There may be an inadequate number of female staff, limiting village women's involvement in areas where they may not meet with male staff. The time, duration and location of training may not take women's needs into account. All these aspects can be diagnosed, and corrected, using published guidance documents. Sadly, that happens only rarely at the moment.

### 4. Learning from experience

- 4.1 There has been a rich collection of experience with women, water and sanitation during the last decade and many lessons have been learned. Now we tend to speak more about gender issues in the sector, rather than *Women in Development* (WID) issues. It has been recognized that water and sanitation are issues for men, women and children. To achieve effective sanitation programmes, men too must support and adopt improved hygiene practices. They must also take a fair share of the contributions in time, labour and money which so frequently are expected of women at present.
- 4.2 Women's and men's involvement should begin during the first stage of the project cycle. If not, it is more likely that the future users will be excluded at later stages as well. It is far more effective to involve community men and women in decision making about technology, levels of service, payment methods, and other choices, rather than attempting later to have them use

systems not suited to their needs. Where projects have not involved women, the result has sometimes been lack of access of poor women to improved facilities. If communities will not use the types of technology being installed, hygiene education will have no impact.

- 4.3 The quality of participation is as important as the amount. Inclusion of women (and men) on management committees may not in itself provide for their effective participation. The way in which committee members are chosen, whether they receive appropriate training, and what their actual committee roles are all affect their degree of involvement and influence. Culturally sensitive approaches are also vital.
- 4.4 Many projects are designed assuming that men are responsible for the 'public sphere' and women for the 'private sphere'. Experience shows that such a distinction should not be made. Women may have a major say over management of water in the home, but they may also manage communal facilities and press community leaders for improvements. Men's support may be needed for improved household latrine systems. Men's and women's roles in these areas may also change. For example, women may well become more involved in community management of systems. If women's public roles are not recognized at the project planning stage, they may well be left out of traditional areas of responsibility.
- 4.5 Experience with women in maintenance roles has shown that while some costs may be higher (women may need more training and their restricted mobility reduces the number of pumps they can maintain), their effectiveness in regular and preventive maintenance is better than men's and overall costs of repair campaigns are lower. Possible negative impacts on the women themselves have to be taken into consideration. Though women benefit from more dependable supplies, their participation in maintenance activities may cost them time and labour. Activities need to be planned around women's and men's existing workloads and scheduling needs.

## **5. Further work**

- 5.1 A recent study of more than 100 rural water supply projects indicated that women's participation, along with four other factors, is highly associated with project effectiveness. It also revealed that, despite the rhetoric about women's involvement in many project documents, only 17% of the projects surveyed scored high on actual participation by women. So, although much has been written and many models have been formulated, the burning issue now is how to institutionalize and replicate successful experiences. Appropriate project implementation mechanisms need to be developed, tested and refined. There is also a need for support from the policy level, so that consideration of gender issues becomes integrated into regular programming processes.
- 5.2 There are also more specific tasks required in the near future. More quantitative data are needed concerning women's time gains from improved WSS services. What are the contexts in which time gains can be expected and how can future designers use this information when planning projects? What are time gains used for (economic, social, family or other purposes), and why? It cannot be assumed that time saved will be used for income-generating activities; sometimes women do not have the skills or the market access for these activities.
- 5.3 More emphasis could usefully be put on measuring the health and social impacts of inadequate WSS facilities, for example by measuring calorie wastage and skeletal damage in women who haul water long distances, and by counting the number of children who miss school in order to collect water.

5.4 More training materials are needed for sensitizing managers and developing techniques to overcome constraints hindering women's participation. Many training materials focus on working in participatory ways with communities in general, omitting the ways in which women might be involved and how constraints to their involvement might be overcome.

## 6. Gender Issues Sourcebook

6.1 The *Gender Issues Sourcebook* produced by the Working Group is a compilation of tools and other resources for gender-sensitive programming. It can be used by different types of development agencies in diverse geographical locations. As a sourcebook, it provides ideas and methods which can be adapted to local contexts. Users can add other tools they have found or adapt the tools in the book.

6.2 The Sourcebook has been organized into four sections:

- The *Introduction* includes a note on how to use the sourcebook and an overview of gender issues in the WSS sector.
- The *Tools* section is divided into different types of tools — guidelines, checklists, terms of reference, charts, and community level tools. Tools are arranged in order according to the stages of the project cycle. A brief *Introduction to the Tools Section* lists all the tools and the sources from which they have been adapted. It also suggests some possible uses. Two *Tool Selection Matrices* help the user to find all the tools pertaining to a particular stage of the project cycle, or those relating to categories such as training, personnel or budgets.
- The *Resources* section contains a list of bibliographies covering the topic of women, water and sanitation and a list of agencies with particular expertise in gender issues in the sector.
- The *References* section identifies further reading and support for the choice and use of tools.

## 7. Review of other Working Groups

7.1 Members of the Gender Issues Working Group participated in each of the other groups to help ensure that gender issues would be adequately addressed. The Group also reviewed the final products of the other groups. A separate report discusses their findings.

7.2 The method of joint membership and product review has seemed to work well. Even though members of the Gender Issues Group did not join the other Groups until mid-way through the two-year cycle, the subject of gender issues has been raised during the other group meetings and included in many of the final reports.

## 8. Recommendations

8.1 Gender issues are particularly pertinent to the Rabat theme *Making the most of resources*. WSS projects and programmes need to take advantage of all resources available to communities, and that means ensuring that both men and women have the opportunity to contribute fully in all stages of project planning, design and implementation. Artificial divisions of roles, and particularly the exclusion of women from decision-making and management responsibilities, are counterproductive and militate against the aim of producing sustainable projects which are effectively used by all sections of society. This message, along

with the tools available to implement gender-sensitive programming, need to be promoted in all appropriate sector literature, workshops, seminars and conferences. That requires continuous inputs from the Collaborative Council, or from designated agencies, to maintain the profile of Gender Issues after Rabat.

- 8.2 Gender issues, as opposed to “women in development”, is an emerging field. Methods of designing and implementing gender-sensitive projects need to be further elaborated, tested and refined.
- 8.3 Objectives and goals have been formulated by the Gender Issues Working Group to provide members of the Collaborative Council with suggestions as they attempt gender-sensitive programming. The Group recommends that agencies should:
- Endeavour to increase the number of women sector professionals, managers and project participants and to ensure that women are involved in the full range of sector activities (water supply, water conservation, sanitation).
  - Review and refine current policies and organizational procedures to make them supportive of gender-sensitive programming. Evaluate current tools (guidelines, checklists, etc). Refine these and develop new ones where required. This may involve, for example, developing and testing indicators and data collection methods for measuring women’s and men’s participation. Monitoring and evaluation tools may also be further tested and applied.
  - Promote awareness of gender issues at community, national and international levels through documenting experiences with gender-sensitive programming, and develop communication channels for effectively disseminating lessons learned. Individual agencies are encouraged to complete case studies which can be compiled and disseminated, thus providing a growing dossier of experiences in different geographical regions and covering different sizes and types of projects.
  - Mobilize resources (financial and human) needed for the integration of gender issues into the regular programming process. This includes the articulation of effective fund-raising strategies.
  - Promote training in gender issues at all levels — agency, government and community. Test and refine existing tools and develop new tools where required.
- 8.4 If the Gender Issues Working Group continues, its members will serve on other Working Groups, as they have done recently. If the Gender Issues Working Group is disbanded, the Council should seek to ensure that future working groups include two or three members specifically responsible for highlighting gender issues and ensuring that the topic is fully considered, both in the groups and at future Council Meetings.

## 9. Reference List

9.1 The conclusions and guidance contained in this Summary Report are necessarily brief. Much more detailed advice and lessons from experiences are contained in a growing amount of literature on particular aspects of gender issues in WSS. The sourcebook produced by the Gender Issues Working Group contains comprehensive references to appropriate documents. The following documents amplify the arguments and approaches outlined in this Summary Report:

- Mary L Elmendorf & Raymond B Isely, *The Role of Women as Participants and Beneficiaries in Water Supply and Sanitation Programs* (USA: USAID, WASH Technical Report No. 11, December 1981)
- Siri Melchior, *Women, Water and Sanitation, or Counting Tomatoes as Well as Pumps* (USA: PROWWESS/UNDP Technical Series, May 1989)
- Mary Elmendorf, *The IDWSSD and Women's Involvement* (WHO, on behalf of the Steering Committee for Cooperative Action for the International Drinking Water Supply and Sanitation Decade, July 1990)
- Christine van Wijk-Sijbesma *Participation of Women in Water Supply and Sanitation, Roles and Realities* (The Hague, The Netherlands, IRC International Water and Sanitation Centre, Technical Paper 22, 1985)
- Hilary Syme, *Women, Water and Sanitation: A Guide to the Main Issues and Existing Resources* (Canada: Canadian International Development Agency, April 1992)
- Deepa Narayan-Parker, *Pegasus* (USA: PROWWESS/UNDP, 1989)
- Christine van Wijk-Sijbesma and Eveline Bolt, *Women, Water and Sanitation: Annual Abstract Journal*, issues one and two (The Hague, The Netherlands, IRC and PROWWESS/UNDP-World Bank Water and Sanitation Program, 1991 and 1992)
- Deepa Narayan, *Popular Participation in Rural Water Supply Projects* (USA: UNDP-World Bank Water and Sanitation Program, forthcoming, 1993)