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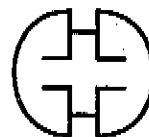
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INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION CONSULTATION

Interlaken, Switzerland — 13 to 16 October 1987



World Health
Organization



Swiss Development
Cooperation Agency

INTRODUCTION

This report presents the conclusions of the International Drinking Water Supply and Sanitation Consultation held in Interlaken, Switzerland, on 13-16 October 1987. Co-sponsored by the Swiss Development Cooperation Agency (SDC) and the World Health Organization (WHO), the Consultation was attended by 56 delegates representing some 30 external funding agencies (a full list of participants is annexed to the report).

It was the third and largest in a series of international consultations among support agencies active in the water supply and sanitation sector, following meetings in Königswinter, Federal Republic of Germany in October 1984, and Paris, France in May 1985. There have also been three regional consultations: one for Asia in Manila, Philippines, in October 1985; one for Africa in Abidjan, Côte d'Ivoire, in November 1985; and one for the Americas in Washington D.C., USA, in April 1986. The Interlaken Consultation further widened the extent of international collaboration, including for the first time a representative from the Kuwait Fund for Arab Economic Development who was able to bring critical perspectives from the Arab world into the discussions, based on experiences in Africa and Asia. Also, for the first time, the meeting had the benefit of participation from Non-Governmental Organizations, Helvetas and Aguasan, whose work with rural communities brought new insights to the Consultation.

The key objective of the Interlaken Consultation was to carry forward coordinated strategies and resource mobilization activities to the end of the International Drinking Water Supply and Sanitation Decade and beyond. A paper prepared by the World Bank entitled *Towards Equitable and Sustainable Development: A Proposed Strategy* and one prepared jointly by SDC and Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) entitled *Beyond the Decade* provided inputs for the discussions. Participants were asked to develop the *Global Sector Concepts* agreed at earlier consultations into coordinated actions which would further increase the momentum of sustainable water supply and sanitation sector development.

The three-part outcome of the meeting, described in this report, was unanimously endorsed by the participating agencies as a firm basis for future sector strategies and for bilateral discussions with government partners in developing countries.

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1. SUMMARY OF RECOMMENDATIONS

The outcome of the Interlaken Consultation divides into three parts:

(i) A Framework for Global Cooperation Beyond the Decade

The meeting proposed that a Collaborative Council should be established before the end of 1988 to coordinate accelerated and expanded sector activities through to the year 2000. The Council would have strong representation from multilateral and bilateral funding agencies and also include UN Agencies and NGOs involved in International Drinking Water Supply and Sanitation Decade (IDWSSD) activities. Measures would be sought to involve developing country representatives in the Council's activities. WHO's role as Secretariat for the IDWSSD Steering Committee would be extended to fit the needs of the Council.

Using the existing UNDP/World Bank programme as a focus, the Council's activities would expand beyond water supply, sanitation and hygiene education, to encompass other environmental issues such as wastewater reuse, solid wastes management, drainage, and hazardous wastes management. The aim would be to help developing countries to formulate sector strategies which capitalize on past experiences and the results of research and development work, by incorporating them into full-scale projects.

UNDP and other external support agencies (ESAs) are urged to provide core funding for the Council's programme. Definition of the proposed Collaborative Council's objectives, work plan, organizational framework, and funding requirements will be prepared by the UNDP/World Bank programme in consultation with WHO, and presented to all ESAs active in the sector for discussion by March 1988.

(ii) An Action Agenda for Participating Agencies

The meeting outlined a series of specific actions which could be taken by external support agencies to ensure that concepts and strategies agreed as essential to success are implemented in developing country programmes for the IDWSSD and beyond. The actions are divided into those which can be taken immediately and those which require further study or demonstration. Within the first category is a further subdivision into actions needed at the policy level, to adjust strategies or improve implementation, and actions to be taken at the country level, to ensure better follow up of agreed strategies.

Participating agencies were urged to begin implementation of the proposed Action Agenda immediately, and to report steps taken and progress achieved to a Sector Meeting of the OECD Development Assistance Committee, which participants hoped would be arranged for the end of 1988 following discussions with the OECD (DAC) Secretariat.

(iii) Amplification of Global Sector Concepts

Discussions in plenary sessions and working groups led to a review of the constraints and recommended actions listed in the WHO/GTZ publication "Global Sector Concepts for Water Supply and Sanitation". Amplifications of the Global Sector Concepts were formulated under six headings:

- Institutional and Human Resources Development
- Cost Recovery
- Balanced Development
- Operation, Maintenance and Rehabilitation
- Community Participation and Hygiene Education.
- Coordination and Cooperation

The Consultation urged ESAs in their internal policies and in their discussions with partners in developing countries, to adopt the Global Sector Concepts, as amplified by the Interlaken conclusions, as a basis for sector plans and programmes.

2. FRAMEWORK FOR GLOBAL COOPERATION BEYOND THE DECADE

The Consultation emphasized that, though the IDWSSD has not reached its coverage targets, there have been remarkable achievements. Collaboration among ESAs and with partners in developing countries has greatly heightened the level of priority of the water supply and sanitation sector in country and ESA strategies to serve the needs of low income communities. It has gained world-wide acceptance of low-cost technologies and established the importance of community involvement in project development and implementation. It has also catalyzed the establishment of substantial sector resources such as the UNDP/World Bank Programme and WHO programme support in line with Decade goals.

Towards the end of the Decade, it is clear that much remains to be done; that lessons learned during the Decade must now be applied on a much wider scale; and that the scope of activities which have already been expanded to include community participation and hygiene education should be further broadened to include such concerns as environmental protection.

There was broad realization that collaboration among ESAs involved in this sector is essential if the remaining unserved populations are to be reached and if the Health for All goals are to be achieved by the end of this century. It was concluded that a collaborative framework should be established to support expanded efforts in accelerating and widening the scope of activities through to the year 2000. The framework should not be based on a new institution, but a mechanism created by strengthening the collaborative role of existing institutions. At its centre should be a **Collaborative Council** in which multilateral and bilateral agencies are strongly represented. The Collaborative Council should also include other active participants in Decade activities such as the UN agencies and NGOs. Consideration should be given to how developing countries can be brought into the consultative process and participate in the Council's activities. The existing WHO Secretariat role with respect to the IDWSSD Steering Committee should be amended to relate to the needs of the Council. UNDP and other ESAs should undertake to provide core funding, to ensure stability for the Council's programme.

The Council's programme should incorporate water supply, sanitation, hygiene education and broader environmental protection concerns such as wastewater reuse, solid wastes management, drainage and hazardous wastes management. It should also be prepared to respond to specific regional needs such as those of the arid zones of the Arab States and sub-Saharan Africa. This may involve extension of activities to include demonstration projects on multi-purpose use of water sources.

The existing UNDP/World Bank programme should provide a focus for the Council's activities and be joined by other collaborating agencies such as WHO and UNICEF in responding to development programming requirements of the sector. It should respond to country and ESA specific priorities and requirements. It should also work in the broader area of sector strategies and policies in support of the implementation of large scale programmes.

Although research and development will form part of the Council's work, emphasis will be placed on capitalizing on past experiences gained and lessons learned by incorporating them into full scale development projects. Initially, there will be country and regional foci which will be identified based on needs and potential benefit criteria. The core group of countries will be expanded as the Programme progresses into the 1990's.

While concurring with the above concepts and recommendations, individual ESA representatives underlined that commitment to them would require further consideration and discussion. Proposals for funding for example, should be country (or in some cases regionally) focussed, because most ESA support is closely linked to expressed country priorities and requirements. Thus, requests for funding could not be general in nature but must be detailed to accord with well defined specific development objectives.

Immediately following the Interlaken Consultation, the UNDP/World Bank programme will prepare a descriptive document, based on its own Strategy Paper, the "Beyond the Decade" paper presented to the Consultation, and the outcome of the Consultation. The document will outline the Collaborative Council's objectives, work plan, organizational framework and estimated funding requirements. Preparation will involve inputs from WHO. The document will be informally presented to all ESAs active in the sector for discussion, comment and elaboration in

collaboration with developing countries. These informal presentations will be completed by March 1988, leading to the document's finalization, including the preparation of a detailed work plan and funding proposals for the entire Collaborative Programme.

The objective will be to establish the Collaborative Council no later than year end 1988.

3. INTERLAKEN ACTION AGENDA

After reviewing the *Global Sector Concepts* and the constraints hampering more rapid implementation of agreed sector strategies, the Consultation developed and endorsed the Interlaken Action Agenda. The agreed Actions represent initiatives to be implemented by participating agencies, to ensure united approaches to sector planning and to assist developing countries in the adoption of sector policies and programmes in tune with the endorsed concepts.

The Actions are complementary to those already included in the *Global Sector Concepts*. They have been divided into actions which can be taken immediately, and those which require further study or demonstration. Among the immediate actions, a distinction is drawn between actions involving policy changes within the agency, and those which affect the approach to individual projects or programmes.

A. Actions for Immediate Implementation

A.1. Policy-level Actions

POL.1 Extend the scope of project preparation and documentation, to ensure that proper provision is made for key sector approaches before loan/grant approval.

Four key components were identified by the Consultation as essential elements of project documents:

- (i) Provision for long-term maintenance, including availability and distribution of spare parts.
- (ii) Assessment of appropriate tariff structures and cost recovery procedures.
- (iii) The role and methodology for community participation and hygiene education, with specific emphasis on the role of women. Human objectives, including behavioural changes need to be specified.
- (iv) Provision for technical information exchange, to ensure appropriate project design and support, and to provide data for future projects.

POL.2 Incorporate conditions in loan/grant approvals making continued support conditional on implementation of the key sector approaches.

Agencies will also need to make provision for periodic monitoring of the way that the four components listed in POL.1 are being implemented. They must then be prepared to enforce conditions, if implementation is inadequate.

POL.3 Make institutional strengthening at all levels, including village level, a prerequisite of project implementation.

Agencies need to develop projects and provide technical assistance and funding support for institutional strengthening covering a range of critical activities, including financial management and personnel policy. Investment in new services should be deferred until institutional strengthening is under way.

- POL.4 Recognize in sector strategies the economic benefits to developing countries of standardization and local manufacture and link this to agency policies on tied aid.**

Where tied aid is in force, agencies are urged to ensure that potential suppliers of equipment, materials and services are fully aware of the critical importance of community management of water supply and sanitation facilities.

- POL.5 Educate ESA staff, developing country partners, and consultants in both developed and developing countries, in appropriate technology choice and the Global Sector Concepts.**

The human resources base of ESAs and developing country implementing agencies should be extended beyond traditional engineering/economist skills, to encompass socio-cultural aspects of projects. These skills are particularly needed at the development stage — e.g. in project formulation missions.

- POL.6 Concerned ESAs establish a mechanism for sharing information on human resources development (HRD) activities and materials and combine efforts to avoid duplication.**

The Consultation identified the following agencies as having mutual potential benefit from sharing HRD information: WASH, WHO, IDRC, The World Bank, UNDP, UNICEF, IRC, CIDA, NORAD, SDC, and many other bilaterals. WHO is willing to take the lead in initiating information exchange. The aim should be to initiate activities before the end of 1988.

- POL.7 WASH and WHO collaborate to prepare guidelines for strengthening in-country training capacity, for use by ESAs in developing projects.**

- POL.8 The UNDP/World Bank Programme assemble information from appropriate collaborating agencies and prepare a framework for case studies and the development of "Transfer of Implementation Models" (TIMs) on themes listed in Section B. Identify supporting ESAs.**

The current work of WHO/SIDA on Human Resources Development Case Studies will provide inputs for the TIMs.

- POL.9 WHO identify supporting ESAs for studies on hygiene education, community participation and training listed in Section B.**

- POL.10 WHO, supported by collaborating ESAs, continue development of the CESI system, contacting interested ESAs to advise on data input procedures. ESAs establish an advisory panel to assist the CESI coordination Secretariat on further development.**

The next four actions depend on policy decisions by ESAs, though the actions themselves will be implemented at the country level.

- POL.11 WHO, supported by bilaterals, continue to organize national Decade Consultative Meetings designed to fix sector strategies and to develop programmes and projects suitable for donor support.**

These meetings, together with follow up meetings between individual ESAs and government partners, should promote national sector development based on the *Global Sector Concepts*. The programmes

should include provision for regular review of implementation, with the opportunity to correct imbalances between components for water supply, sanitation and hygiene education.

POL.12 Multilateral agencies, supported by bilaterals, encourage and assist in the organization of inter-ministerial meetings designed to identify constraints to accelerated development and to develop action plans for addressing the constraints.

POL.13 Sponsor seminars and workshops emphasizing the economic implications of sustainable projects, and the ways of achieving sustainability.

POL.14 UNDP reinforce the role of the UNDP Resident Representative as a focal point for national IDWSSD activities.

ResReps must be strongly encouraged to involve ESAs and host country officials in regular meetings and consultations on programme activities.

A.2. Project/Programme-related Actions

PRO.1 Support the implementation of priority projects presented by national authorities during Decade Consultative Meetings and developed in collaboration with national planning authorities.

PRO.2 Make maximum use of available community and private sector resources in project preparation, implementation and management.

The type of actions needed to make community management effective include:

- Allow time in the project cycle for adequate preparation of community participation activities.
- Provide support for community groups, particularly women's groups, encourage the participation of the UNDP/PROWESS (Promotion of the Role of Women in Water and Environmental Sanitation Services) programme in project activities, and provide resources for such involvement.
- Select technology on the basis of the maintenance capabilities of the users in rural areas or of the utilities in urban areas, allowing for enhancement of these capabilities through project support.
- Seek autonomy for urban utilities, with financial autonomy as a minimum requirement, and include measures for utilities to retain revenue for sector development.
- Encourage private financial institutions and the UNDP-International Finance Corporation project preparation facility to support local initiatives, and investigate the scope for private sector involvement in urban water supply management. Encourage governments to support community management of rural facilities.

PRO.3 Involve and support NGOs in project activities at the community level, including training and hygiene education.

PRO.4 Investigate the scope for water saving, water reuse, and rehabilitation, to defer new investment.

PRO.5 Promote and support the creation of revolving funds to stimulate project enhancement.

The Consultation stressed particularly the potential of revolving funds as a mechanism for financing rural and peri-urban on-site sanitation, and the scope for recovery of urban sewerage costs through water tariffs.

B. Actions Involving Further Study

STU.1 The UNDP/World Bank Programme, in collaboration with WHO, and with support from ESAs, document successful projects suitable for replication in other countries and prepare "Transfer of Implementation Models" (TIMs).

Analysis of case studies provided by participating ESAs will lead to guidelines and training materials. Separate models will be developed covering:

- (i) Institutional strengthening, including decentralization initiatives and improvement of district level competence, as implemented in Primary Health Care programmes. Collaborating agencies already identified include: WHO, GTZ, WASH and CIDA. The World Bank and WHO will be responsible for documenting experiences.
- (ii) Cost recovery mechanisms, including ways of raising rural funds. WHO has a number of case studies and cost recovery models which may form a basis for this TIM.
- (iii) Community-managed maintenance systems in rural and peri-urban areas.
- (iv) Private enterprise and NGO roles in the provision and maintenance of infrastructure and services.
- (v) Community participation and hygiene education.

The aim will be to develop a "menu" of successful strategies for design of demonstration projects in selected countries.

STU.2 Disseminate the results of TIMs studies and begin demonstration projects in selected countries.

STU.3 WHO, in collaboration with PROWESS and WASH, and with ESA support, assemble and evaluate training materials and methodologies for particular user groups, such as women, artisans, extension agents, and community based technicians.

The aim will be to develop recommendations and guidelines for use by ESAs and developing countries in planning and implementing HRD programmes at the community level. Work should begin immediately, with dissemination continuing to 1990.

STU.4 Evaluate the cost and impact of community participation and hygiene education on selected projects and select one coordinating agency to collect and disseminate the results.

STU.5 WHO, with assistance from ESAs and the use of case studies, develop standard performance indicators for maintenance activities and guidelines/criteria for rehabilitation.

The dual-focus project, funded by WHO, SIDA and USAID, combines personnel training and organizational development and will provide relevant reference material.

STU.6 WHO seek support from ESAs for a feasibility study into further development of the CESI system.

4. AMPLIFICATION OF GLOBAL SECTOR CONCEPTS

The WHO/GTZ publication *Global Sector Concepts for Water Supply and Sanitation* was endorsed by the Consultation as a tool for guiding sector strategies of ESAs and developing country partners. Discussions in working groups and plenary sessions led to amplification of the six concepts. In the summary which follows, the issues raised at the Consultation are presented alongside the appropriate extract from the WHO/GTZ publication, under the headings:

- Institutional and Human Resources Development
- Cost Recovery
- Balanced Development
- Operation, Maintenance and Rehabilitation
- Community Participation and Hygiene Education
- Coordination and Cooperation

CONCEPT No. 1: INSTITUTIONAL CHANGES

Constraint

Institutions responsible for water supply and sanitation sector activities in developing countries are frequently inefficient and financially weak.

Actions Needed

1. Institutional Structures

The International Drinking Water Supply and Sanitation Decade (IDWSSD) strategy involves emphasis on underserved populations, particularly those in rural and urban fringe areas. Institutional structures and modes of operation need to be adapted to suit this new emphasis. A major change, for many countries, will be decentralization and/or privatization of responsibilities for water supply and sanitation activities, and substantial participation of communities in all stages of projects.

External support agencies should, therefore, substantially increase resources devoted to "software" inputs, such as institutional reforms, management and staff training, awareness campaigns and hygiene education. Relevant models for integrated sector programmes at district level should be pursued with ministries responsible for coordinating rural development (e.g. Ministry of Community or Rural Development or similar), with technical input from existing or strengthened water supply and sanitation sector ministries.

2. Technical Cooperation

Strengthening of institutions' sector management planning and project preparation capacities is necessarily a long term process. It requires uniform development strategies from external support agencies, as well as reliable and continuous performance by managerial and technical staff in the institutions. It is therefore essential that the external support agencies provide national institutions with support for human resources development, including management training, through financial and technical cooperation. In addition to providing their own support programmes, the external support agencies should encourage activities of Technical Cooperation among Developing Countries (TCDC).

3. Appropriate Technology Research and Application

Participation of benefiting communities has been shown to be vital, if water supply and sanitation projects are to be sustainable and replicable. Appropriate and socially acceptable technologies can save investment and bring down operation and maintenance costs, so making it more viable for communities to take a direct part in all project activities. External support agencies are urged to expand their research and development (and application) programmes in that direction, and to help, to the extent possible, to promote local manufacture of water supply and sanitation equipment. It is recommended that the leading UN agencies active in the sector (UNDP, The World Bank, WHO) should intensify the elaboration of engineering design criteria guidelines for the sector, emphasizing regional differences where these are applicable.

The Role of External Support Agencies

- increase resources for public awareness campaigns and hygiene education.
- Encourage decentralization and/or privatization of water supply and sanitation institutions, or certain functions of these institutions, and promote collaboration with rural development ministries on integrated programmes.
- Involve benefitting communities in project identification, planning, design, implementation, operation and maintenance.
- Establish harmonized strategies to be adopted by all agencies active in particular countries or regions.
- Provide support for institutions' management and staff training (as well as for education in community participation and hygiene awareness) through technical cooperation. TCDC should be encouraged.
- Expand R&D programmes and encourage local manufacture. Press for standardized engineering design criteria relating to appropriate water supply and sanitation technologies.

INSTITUTIONAL AND HUMAN RESOURCES DEVELOPMENT

1. Institutional Development (ID) and Human Resources Development (HRD) are closely linked. HRD activities such as workshops, manpower planning and materials development have to be tied to institutional goals. Training will only be effective if trained staff have incentives, tools and equipment and career prospects.
2. Institutional Development has a long time frame - perhaps 10 to 15 years. This does not suit the conventional project cycle of agencies such as the World Bank, as no visible results occur in time. There may be scope for bilaterals, who stay in countries over long periods, to undertake ID programmes in order to prepare better projects for Bank assistance.
3. Governments may resist ID programmes, which commonly recommend a relinquishing of central control, and may involve firing of staff. Also, ID accomplishments can be short-lived when political changes take place or countries are forced by economic problems to cut staff or facilities. More successful programmes establish self-sustaining capabilities within institutions, allowing them to operate without central control. The lower the level at which water supply and sanitation operations can become self-sustaining, the greater the chance of success.
4. Field Agents have proved successful in Togo, providing an operational link between the government agency and village water committees. The Field Agents encourage village participation in all project stages, including health improvements.
5. Training of community-level operators and maintenance staff is crucial to the reliability of completed projects and therefore to their replicability. Training schemes should be designed so that women can play a full part. They should not require trainees to travel away from home, and should ensure that the programme fits the local cultural setting.
6. Effective collaboration with community organizations is frequently hampered by attitudes of central level staff. Engineers in urban-based institutions have the wrong training to equip them for the important non-technical aspects of community water supply and sanitation training and ID needs.
7. Experience suggests that it is preferable to strengthen existing institutions rather than creating new ones. Progressive strengthening may mean that project designs have to be tailored to changing institutional capabilities.
8. Institutional change at the grass roots level can sometimes be accomplished more readily by NGOs. Bilateral agencies should seek ways of supporting NGO activities in ID and HRD at the community level. A collection of successful ID and HRD case studies should include programmes conducted with NGO support.
9. Donors need to monitor institutional changes intended to accompany technical projects and should be prepared to apply pressure if appropriate changes are not taking place. It is important in this context that ID schemes should be designed to work within known political constraints.
10. A considerable number of tools exist to assist with ID and HRD, including publications from the WASH project and from WHO.

CONCEPT No. 2: COST RECOVERY

Constraint

Cost recovery is generally ineffective

Actions needed

1. Cost Recovery Objectives

The cost of water supply and sanitation services must be borne, or at least shared by the beneficiaries, to ensure adequate operation, maintenance and expansion of installed facilities. Cost recovery is a crucial step towards the financial viability and, eventually, autonomy of sector agencies. Full cost recovery involves recuperation of investment costs as well as those for operation and maintenance.

To achieve any degree of cost recovery, developing country governments must have the political will to require consumers to pay for water supply and sanitation services. The population's willingness to pay must be motivated where necessary, by public awareness campaigns which make clear the benefits deriving from the services provided. In dialogues with recipient countries, external support agencies need to emphasize the need for maximum cost recovery. Project designs and technical cooperation activities should be based on the principle of cost recovery.

2. Urban Policy

In urban areas, developing countries, with the aid of external support agencies where required, should establish a cost-recovery strategy based on the criteria of: making drinking water and sanitation accessible to all segments of the population; ensuring the gradual financial autonomy of the water supply and sanitation agency; and discouraging the waste of water. Full cost recovery (operation and maintenance, depreciation of equipment, and debt servicing) is a long-term objective to be reached preferably by cross-subsidizing tariffs. No single group of the population should be privileged by external subsidies (e.g. for household or yard connections) while other groups in the project area have no access to any reliable water supply. In the short run, operation and maintenance costs, including replacement of equipment, should be recovered as a minimum target. In all cases, water supply and sanitation costs should be affordable by all consumer income groups. Revenues of water and sanitation agencies should remain in the sector.

3. Rural Policy

In rural areas, income levels are generally low. Wherever possible, beneficiaries should contribute towards construction, operation and maintenance costs of new services, through a mixture of cash payments, labour, and the supply of local materials, as part of the process of community participation. Before projects are prepared, governments and donor agencies should discuss with communities the implications of operation and maintenance costs and provision of labour, and the choice of technology should be appropriate for available resources. In some special cases, particularly in Africa, a transition period may be necessary, during which operation and maintenance costs are co-funded by external support agencies. However, the objective should be that beneficiaries should gradually assume responsibility for the full costs of operation and maintenance. Financial contributions for replacement of equipment is a longer term objective.

The Role of External Support Agencies

- Emphasize in all dialogues with recipient country governments, the crucial importance of cost recovery in sustainable and replicable programs.
- Encourage the establishment of strongly progressive, cross-subsidizing tariffs.
- Support public awareness campaigns which stress the benefits of water supply and sanitation services and so promote willingness to pay.
- Promote and support urban project designs based on full cost recovery from affordable technologies. Back sector agencies in strategies to achieve self-sufficiency and financial autonomy.
- Use early community participation in rural areas to establish commitments to contribute cash, labour and materials for construction, operation and maintenance of appropriately designed facilities.
- Extend support where necessary into the operation and maintenance phase of projects, but always with the long-term aim of establishing community responsibility for recurrent costs.

COST RECOVERY

1. There is a widespread agreement that inadequate cost recovery remains a serious constraint hampering accelerated progress. Achievement of full cost recovery, though an ultimate goal, may take different times to achieve in different countries and from area to area in the same country.
2. As well as developing appropriate tariff structures, countries need to keep down construction and maintenance costs, to make community contributions affordable. Installed systems must also be reliable, or users will soon become unwilling to pay. Adoption of appropriate standards helps to reduce costs by avoiding overdesign.
3. Technology choice has an important impact on the potential for cost recovery. As the Lesotho example showed, contributions required from consumers rise dramatically when motorized pumping is used. The system is more costly to maintain and less reliable.
4. Before tariffs are raised, all potential cost savings must be assessed. Staff reductions, leak repairs, and improved collection procedures may be effective ways of boosting net revenue. Starting tariffs can be based on previous prices paid to water vendors, or on the calculated savings produced by a more convenient supply.
5. The rapid turn from loss to profit in Lusaka Water and Sewerage Department required strong political commitment to correct past deficiencies. It will also require a lengthy continuing involvement of the consultant, though a possible move to private management may speed things up.
6. The relationship between willingness to pay and system reliability applies as much to sanitation as to water supply. People will be willing to pay to use clean community latrines, but will soon stop paying if the condition is allowed to deteriorate.
7. ESAs normally give priority to physical targets or expenditure levels in assessing progress of projects. More emphasis on qualitative aspects and process development would encourage better allowances for community participation and hygiene education.

CONCEPT No. 3: BALANCED DEVELOPMENT

Constraint

Imbalances exist between the provision of water supply and sanitation; and between sector inputs in central urban areas and those in urban-fringe and rural areas.

Actions Needed

1. *Promotion and Education*

The severe neglect of sanitation services in comparison with water supply reflects insufficient appreciation of the value of sanitation. This in turn results from a lack of hygiene education. Sanitation also lags behind because sanitation projects have a lower prestige value than those for water supply, and because traditional design standards for sanitation result in prohibitively high investment and running costs. In many ways, similar factors have caused rural sector developments to trail behind those in the urban sector. Correcting these imbalances calls for the application of appropriate technology and for emphasis in public awareness campaigns of the complementarity of water supply and sanitation in the achievement of health benefits — one of the fundamental elements of the International Drinking Water Supply and Sanitation Decade.

2. *Project Planning*

Maximum benefits are obtained when water supply, sanitation and hygiene education form part of integrated programmes, preferably under the responsibility of a single executing agency. Water supply and sanitation agencies need to strengthen their resources, with the help of external support agencies, to equip their managerial and technical staff to promote, design and implement sanitation components of projects. Development of appropriate and socially acceptable sanitation technologies has progressed a long way in recent years, and efforts are now needed on all sides to see that suitable sanitation components are incorporated in future urban and rural water supply programmes.

The Role of External Support Agencies

- Ensure that hygiene education campaigns emphasizing the complementarity of water supply and sanitation are included in sector programmes receiving donor support.
- Bring to the attention of programme planners and designers the sources of information on low-cost and socially acceptable sanitation technologies.
- Raise the proportion of technical cooperation and funding support given to integrated projects, and to the expansion of national water supply agencies' capacities, to enable them to cope with liquid and solid waste disposal activities.
- Re-emphasize the key Decade concept of precedence for the underserved urban and rural populations, and encourage recipient countries to balance investments accordingly.

BALANCED DEVELOPMENT

1. The concept of balanced development set out in the Global Sector Concepts requires broader definitions. While water supply, sanitation and hygiene education represent the core of recommended development programmes, additional components may be desirable in different circumstances. Among components which may form part of an integrated package are:

- surface water drainage
- food production
- solid waste disposal, recycling and reuse
- water resource protection and demand management
- community development

2. Problems caused by weak institutions and divided responsibilities may be aggravated if the package has too many components. A compromise is needed between completeness and simplicity. In different environments, the sequence of implementation may vary. The World Bank Sector Development Teams favour community development as a start point in rural areas, followed by the provision of water supply. Sanitation and hygiene education follow once cost recovery from the water supply system generates funds. In urban areas, where people generally have access to some form of water supply, even if it is less than satisfactory, sanitation is seen as the most important early component, alongside community development.

3. Weaknesses in the Ministry of Health at the national level in many developing countries can hamper integrated programmes implemented through high level institutions. On the other hand, the strengths of primary health care in districts offer good opportunities for practical intersectoral collaboration. Recent country experiences have led to new emphasis on strengthening district health systems as a means of focussing resources on local priorities. Thus, the potential of the district as an entry point for development of water and sanitation merits serious consideration.

4. To reinforce the arguments for balanced development, examples are needed which demonstrate the greater investment efficiency of the right kind of integrated programmes. Evidence should also be sought of failures resulting from imbalances between sector inputs in water supply and those in sanitation and /or hygiene education.

CONCEPT No. 4: OPERATION, MAINTENANCE & REHABILITATION

Constraint

Operation, maintenance and rehabilitation receive insufficient attention, and the problem is aggravated by application of inappropriate and often too sophisticated technologies (which are neither affordable nor manageable).

Actions Needed

1. *Optimising Use of Resources*

Premature failure or poor performance of existing water supply and sanitation systems sets back progress towards Decade goals and represents wasted investment. In a worldwide economic climate unfavourable to social sector investments, it is of utmost importance that developing countries and external support agencies can point to successful programmes which bring long-term benefits. More attention to the needs of operation and maintenance is vital, and begins with selection of technologies and management systems which are appropriate for available resources. Rehabilitation of existing systems should be considered as a necessary precedent of major investments. It may often serve as a substitute for new installations, or a way of postponing them.

2. *Policies and Budget Provisions*

With the encouragement and support of external support agencies, water supply and sanitation sector agencies need to review policies and staffing resources, to ensure that they cater for the operation and maintenance needs of existing and future systems. Assignment of O&M and training responsibilities to adequately equipped and trained communities will usually be a desirable policy change, but must be accompanied by the right internal structure, including decentralization.

Operation and maintenance needs and costs must be evaluated in the project planning and design stages, with due budgetary allowances made in project costings. External support agencies may be willing in some circumstances to continue support into the operation and maintenance phase, particularly in the field of training and institutional development, but programmes must be designed with the long-term aim of self-sufficiency.

Programme planning and project appraisal by external support agencies should include comparison of proposed new projects with alternative (or supplementary) investments in rehabilitation.

The Role of External Support Agencies

- Ensure that project or programme proposals take account of operation and maintenance needs, and that financial and human resources are available.
- Compare proposed investments in new projects with alternatives for rehabilitation of existing systems which are disused or underperforming.
- Assist sector agencies in developing countries to establish policies and institutional structures which provide for adequate operation and maintenance of existing and proposed new facilities.
- Extend programme support, where necessary, beyond completion of construction, to help equip agencies and communities for their O&M tasks.

OPERATION, MAINTENANCE AND REHABILITATION

1. Maintenance is seen by the external support community to be the top priority issue in water supply and sanitation sector development. Inadequate maintenance leads to wasted investment and costly renewal or rehabilitation of broken down facilities.
2. Maintenance commitments need to be evaluated when the project is being formulated, so that provision can be made in loan conditions for future upkeep. In some urban situations, donors may have to anticipate a long term provision for support of maintenance, to protect capital investment. In rural areas, community management of maintenance, if properly designed and equipped, makes maintenance affordable. Initial donor support for maintenance has the advantage that new users receiving reliable supplies will recognize the benefits quickly and react promptly when the system does fail or need repair.
3. While proper maintenance saves money, the backlog of poorly maintained systems is a costly inheritance. Rehabilitation will normally be more economic than replacement, particularly if there is a large amount of work to justify purchase of expensive equipment for operations such as concrete pipe lining. The right balance needs to be struck between rehabilitation to provide improved service to existing consumers and provision of new services to those with no supplies.
4. In developing countries, maintenance generally has a low priority and there are few effective policies. Where success has been achieved it is almost invariably through private sector involvement in urban areas or community management in rural areas. However, there is no standard recipe. Each system has to be designed with the involvement of a committed community. The close involvement of women is a common element of successful village-level maintenance.
5. Donors have the options of building maintenance requirements into loan conditions, including the possibility of retrospective evaluations of completed projects. Not all donors favour this approach as a standard routine, as it could mean that governments pass over responsibility to the donor to sort out maintenance problems.
6. Technology choice has a major impact on maintenance needs, but donors' desires for easily sustained projects may be frustrated by lack of awareness among consulting engineers of maintenance issues. Local manufacturing of spare parts improves the prospects of maintenance being carried out in a timely way.

Constraint

Community participation and hygiene education efforts are inadequate.

Actions Needed

1. Community Participation

The International Drinking Water Supply and Sanitation Decade has produced compelling evidence that participation of benefitting communities in all stages of water supply and sanitation projects is a prerequisite of success. Too many projects prove unsustainable when central agencies assume all decision-making and managerial responsibilities and then prove unable to meet the long-term commitments. A sense of **ownership**, engendered by full involvement of the community in planning, design, construction, operation and maintenance, is the best way to provide for satisfactory upkeep of installed facilities.

Involving **women** in each project stage is particularly important. As the prime users and beneficiaries of improved water and sanitation services, women have continually proved also to be the most diligent in ensuring that those services are properly maintained.

2. Hygiene Education

Motivation of communities to participate in water supply and sanitation activities is most readily accomplished through hygiene education programmes and public awareness campaigns which stress the benefits to be achieved from such improvements. Hygiene education is clearly also important in its own right, as a method for **maximizing health benefits** from the provision of improved water and sanitation facilities.

3. Software and Training

Community participation in water supply and sanitation activities can only be fully effective if it is supported by measures to equip community members to undertake tasks and duties expected of them. Software programmes or components need to include training for community workers to give them the capacity to take on responsibility for the upkeep and management of water supply and sanitation systems, and the provision of necessary **support structures** (spare parts supplies, power/fuel availability, technical advice). External support agencies are committed (Concept No. 1) to increasing resources for hygiene education and public awareness campaigns, and to providing technical cooperation for training at all levels.

The Role of External Support Agencies

- In providing programme support, ensure that the balance of "software" and "hardware" is correct, and that training of community workers is part of the package.
- Use hygiene education programmes to motivate community members to participate in all project phases, with special emphasis on the role of women. Bring the benefits of water supply and sanitation investments into health education messages promoted through other sector agencies.
- Provide technical cooperation to establish — where possible — the support system necessary for community management of completed installations to function effectively.
- Ensure that project proposals have considered and properly reflected the views of the community on technology choice, service level, affordability, and operation and maintenance commitments.

COMMUNITY PARTICIPATION AND HYGIENE EDUCATION

1. There is widespread recognition of the principle that community participation is important, and plenty of examples exist of successful approaches. However, many attempts are still partial at best, and so fail to achieve optimum results.
2. Methodologies for enhancing the participation of women need to be developed further, and more widely applied. Frequently women's central role in water supply and sanitation is unknown, or the community participation approaches used do not reach them. Yet successful projects, like the women-led Kwale project in Kenya, demonstrate that participation can be obtained and illustrate some of the benefits this can lead to, like the generation of maintenance funds.
3. Community participation is frequently viewed as a means of conveying messages from the top down. Flow of information in the other direction is equally important. Success comes when projects respond to the needs and wishes of the community. A problem solving approach has been successful in several instances.
4. Hygiene education is frequently overlooked both in national policy and project implementation. Methodologies need to be developed and further applied. Weak cooperation among sector agencies inhibits inclusion of hygiene education, reinforcing the recommendation that water supply and sanitation interventions are most effective when initiated at the community or district level.
5. Basic engineering training does not equip or motivate the professional engineer to initiate hygiene education or community participation activities. This requires specialized skills, as well as deep cultural understanding. Optimum use of local groups should be encouraged. These may include grassroots NGOs, or specialists who happen to be of the same culture as the beneficiary population, e.g. Moslem women.
6. Project objectives must go beyond purely technical goals for installation of services. They should include, for example, levels of use, and health and socio-economic effects. At present, the need for a lengthy preparation time is either overlooked or seen as a disincentive. If the wider objectives are kept in mind, the need for start-up activities should become self evident.
7. From scarce data, it seems that the cost of community participation may add from 3 % to 17 % to project costs. Estimated gains from improved reliability are higher, particularly if wider benefits are taken into account. For promotion purposes, more cost/benefit data are needed. Projects must include a budget line for support of community participation and hygiene education activities.

CONCEPT No. 6: COORDINATION AND COOPERATION

Constraint

Coordination and cooperation is inadequate among external support agencies, between these agencies and the national water supply and sanitation sector agencies, among the sector agencies themselves, and between the water and sanitation sector and related sector programmes.

Actions Needed

1. Country-level Coordination

It is the prime responsibility of the developing country itself to coordinate sector activities. The International Drinking Water Supply and Sanitation Decade has helped through the concept of National Action Committees, which are performing this role successfully in a number of countries. As the Decade focal point at the country level, the UNDP Resident Representative should also assist the government, through regular meetings with the locally-represented donor community to discuss sector issues. The aim should be to have a single water supply and sanitation strategy for each of the rural and urban subsectors, which is known to each agency operating in the sector, and to the external support community. The subsectoral strategies should be formulated so as to complement one another.

2. Intersectoral Coordination

Just as water supply and sanitation improvements produce benefits in other sectors — most notably the health sector, but also agricultural and industrial production — so, it is helpful to coordinate activities with other sector programmes such as housing and urban and rural development, where water and sanitation components may be introduced into investments with other prime purposes. Integration should mean better use of scarce resources, and, with proper planning, can bring enhanced benefits in all sectors. The process of coordination between sectors can be facilitated by external support agencies, who commonly have dealings in more than one sector.

3. Standardization

One symptom of uncoordinated activities between governments and donors is a proliferation of different types of equipment and services, often the result of tied aid. External support agencies have an important role to play by placing more emphasis in discussions among themselves and with governments of developing countries on arrangements for standardizing on equipment and services supplied as well as for introduction of appropriate technologies. The Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD) has available draft guidelines entitled *Minimum Conditions for Effective International Competitive Bidding (DAC 86-23)*, which contain useful advice.

4. Information Exchange

The World Health Organization is establishing a *Country External Support Information (CESI)* system, which will collect from and disseminate to donors and recipient governments information on ongoing and planned projects in the water supply and sanitation sector. The system will depend on accurate and timely inputs, and external support agencies are urged to collaborate fully in the build-up of the system, which aims at streamlining sector inputs and so maximizing their benefits.

The Role of External Support Agencies

- Promote cooperative efforts among sector agencies in developing countries, through UNDP and other aid coordination meetings.
- Encourage integration of water supply and sanitation projects and programmes with plans in other sectors.
- Coordinate with other external support agencies policies of standardization for particular countries or regions. Avoid unnecessary proliferation of equipment types resulting from tied aid, and support the introduction of technologies appropriate for the specific situation of the country concerned.
- Provide timely and accurate information for WHO's monitoring of project plans and progress, and use the proposed CESI system as a basis for sector planning.
- Continue participation in global and regional discussions among groups of external support agencies, to use agreed sector strategies, publicize the findings to as wide an audience as possible, and convince the working level in each organization to acknowledge the new concepts and approaches.

COORDINATION AND COOPERATION

1. There is a widespread feeling of dissatisfaction with the effectiveness of UNDP Resident Representatives as national IDWSSD focal points. UNDP recognizes the problem and accepts a need to make ResReps more active in stimulating and monitoring coordinated sector activities.
2. While Decade Consultative Meetings have been successful in bringing together donors and different sector agencies in developing countries, follow up of resulting sector strategies and priority projects has been disappointing. Country-level meetings should include clear objectives to identify constraints and develop action plans and timetables for overcoming them.
3. The CESI system is providing an important data base through which ESAs can share information and gain a better perspective of national and global activities. Its future success will depend on a continuous feed of updated information from ESAs, and that implies that the amount of data to be fed into the system should be kept to the minimum, consistent with its intended uses.
4. Technical information exchange in the sector is generally patchy and poorly coordinated. Improvement would come if new projects included plans and a budget line for collecting, storing and disseminating information, according to common guidelines.

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Annex 2 — Supporting Documentation Available from WHO

The following documents were produced during the consultation and are available from the sources indicated.

From WHO

- 1. Papers presented in Plenary Sessions**
- 2. Reports of Working Groups**
- 3. General Understanding of Cooperation and Participation in the CESI Exchange Network**

From SDC

- 4. *Beyond the Decade***

From the World Bank

- 5. *Towards Equitable and Sustainable Development: A Proposed Strategy***