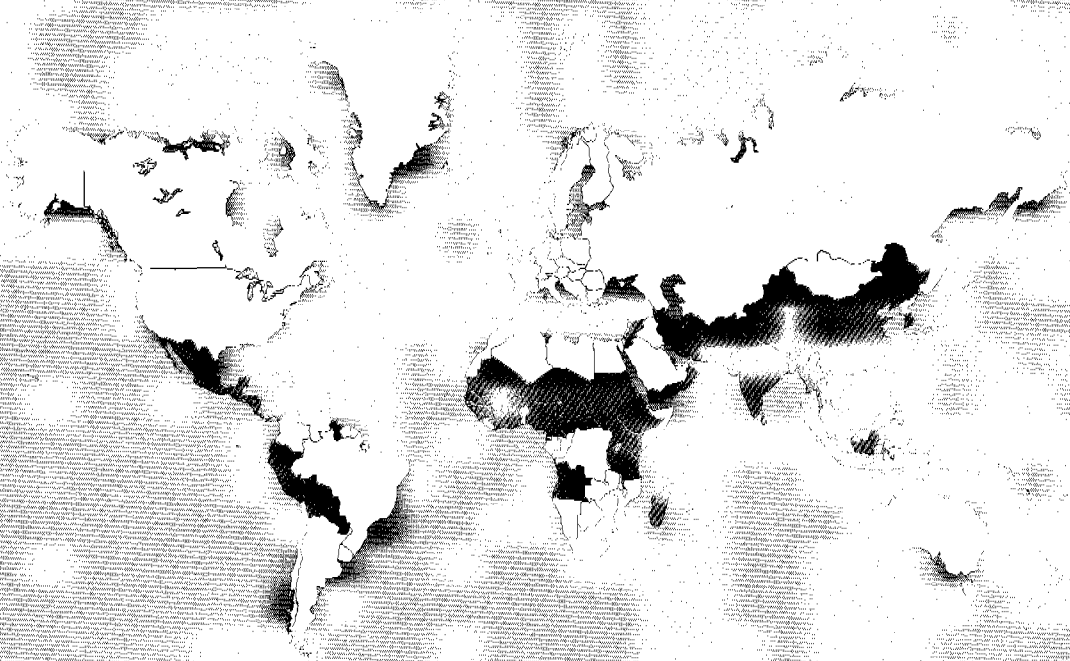


Water Supply and Sanitation Sector Monitoring Report 1990 (Baseline Year)



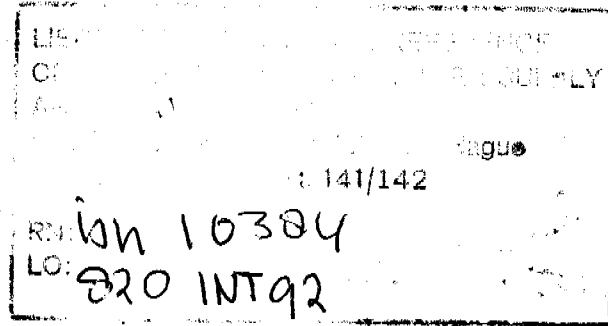
World
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(WHO)



Water Supply
and Sanitation
Collaborative
Council



United Nations
Children's
Fund
(UNICEF)



Water Supply and Sanitation Sector Monitoring Report 1990 (Baseline Year)

This publication contains maps, charts and tables developed from preliminary 1990 baseline data on sector coverage, management and funding, which were kindly provided by those countries listed in Table 1 on page 9. As 1990 was the first time that the WASAMS (Water and Sanitation Monitoring System) format was used by governments to assess the status of the sector, caution should be exercised in its interpretation due to the preliminary nature of the data. It is, however, hoped that both data quality, accuracy and reporting will improve over time as a result of the recent and future planned monitoring capacity building workshops (for country level personnel) being undertaken with WHO and UNICEF assistance.

The boundaries and colour maps used in this publication do not imply any judgment on the legal or other status of any territory, endorsement or acceptance of any boundary, or guarantee of the accuracy on the part of WHO and UNICEF.

Published November 1992.

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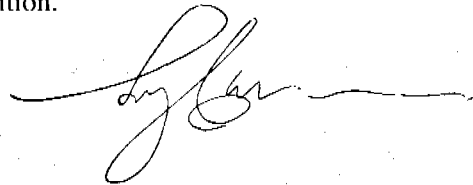
Foreword

Access to water supply and sanitation services which is basic to health and economic growth is far from satisfactory today. In fact, to continue in the 1990s with the same policies, resource allocations, technologies and implementation rates of the 1980s would result in a widening of the gap between the served and unserved in the rapidly expanding urban populations by the year 2000. Where facilities are available for provision of such services, they are more often than not inadequately managed. The resources and funds are limited for increasing coverage to the unserved. Despite the development and promotion of low-cost technologies, the better-off segments of the community have benefited more than the poorer, largely because of insufficient focus on the unserved. To be different in the '90s and beyond, stronger monitoring is necessary to be aware of the present position, to plan better for the future and to ensure that the available resources and future effort are carefully channelled to the more needy of assistance. Along with monitoring, greater collaboration and cooperation will be necessary among all concerned, both at country level and amongst external support agencies to further the development of sustainable services in the sector.

The Water Supply and Sanitation Collaborative Council has been a strong advocate of good and selective monitoring. The value of monitoring and collaboration as prerequisites for better planning and greater progress is appreciated more today and has received much

emphasis at major international conferences. Two Council member agencies who have been most concerned and committed to the promotion of better water supply and sanitation services have responded by joining forces to help developing countries to institute a good quality, high utility value, monitoring programme.

The World Health Organization (WHO) has the interests of global health, the United Nations Children's Fund (UNICEF) has the interests of the child (and the mother). The results of this collaborative effort are presented in this report in a very informative and also provocative way. Their messages are food for thought for planners and decision makers. WHO and UNICEF are to be thanked for a very valuable contribution together with those developing countries which actively participated in making it possible. The Collaborative Council is very pleased to distribute this report to all its members, and to others who are concerned with the sector not only for the value of the information it provides but also to acknowledge a good collaborative effort. The report will be produced annually to update the position.



Margaret Catley-Carlson
Chairperson
Water Supply and Sanitation
Collaborative Council

Better-off segments of the community have benefited more than the poorer, largely because of insufficient focus on the unserved.

Executive Summary

Inadequate management of the water and sanitation sector during the 1970s and 1980s resulted in calls for enhanced sector monitoring from recent global international fora including the New Delhi Consultation, the World Summit for Children, and the International Conference on Water and the Environment. The United Nations General Assembly also recognized in its resolution 45/181 of 1990 that efforts would have to be stepped up during the 1990s to "monitor service coverage for both water and sanitation", and decided to review progress in the sector at its 50th session in 1995.

During the International Drinking Water Supply and Sanitation Decade (IDWSSD), 1981-1990, WHO collected information on water supply and sanitation coverage globally through its decade monitoring system known as DEMOS. Using this information, WHO produced a series of five publications showing the status of the sector every few years, the last and most recent being for 1990, entitled, "The International Drinking Water Supply and Sanitation Decade: End of decade review (as at December 1990) WHO/CWS/92.12". As part of the IDWSSD review process, WHO and others identified the need to strengthen monitoring at country level in recognition of the fact that past monitoring was a passive process which did not aim to influence sector development. For the 1990s, monitoring should play a pro-active role by being used as a management tool. To enable such an evolution, a limited number of relevant indicators has to be employed, the frequency of monitoring has to be increased (to at least once a year), and capacity for monitoring must be enhanced at national, sub-national and community levels. It was in response to those needs that WHO and UNICEF launched a Joint Monitoring Programme (JMP) in 1990. The last DEMOS report for 1990 and the 1990 "Baseline Year" JMP report, complement each other. Subsequent JMP yearly reports will provide country by country data in an annex report and also on computer diskette.

While past experience has shown that regular monitoring is crucial to effective management, it has also demonstrated the

difficulty in monitoring many sector indicators simultaneously. As a result, several recent meetings (attended by water and sanitation professionals from governments, external support agencies and others) resulted in the identification of three "core indicators" being proposed as the basis for enhancing sector monitoring in the 1990s. These indicators have been incorporated in a computer monitoring programme named WASAMS (water and sanitation monitoring system). They are *coverage, management* and *funding*. However, cognizant of the fact that at regional, sub-regional, and especially at country level, other specific indicators may be identified or required, the expansion of monitoring systems beyond the "core indicators" is thus foreseen and catered for in the programme.

The focus of WHO and UNICEF support through the JMP is to strengthen sector monitoring capacity at country level. Measures being taken to this effect include the organization of regional monitoring workshops; inter-ministerial meetings to strengthen sector coordination; establishment of national monitoring units (NMU) within the appropriate government structure(s); determination of realistic sector goals; and establishment of effective frameworks for sector monitoring. Governments are also being urged to build upon and optimize existing data collection systems rather than create new ones.

The manual completion of sector monitoring forms at country level is being computer aided via WASAMS for data aggregation, processing, analyses and reporting. This is being done initially at national level in order to obtain data for the baseline year. However, but more importantly, governments and other agencies involved in the sector are strongly encouraged by the JMP to simultaneously support (with resources and training) monitoring initiatives from the grass roots (community) level upwards.

In this report only the "core indicators" are analyzed; however, other achievements/constraints and activities related to global and regional promotion of the water and sanitation sector are also featured. This report is essentially aimed at policy and decision makers at

Inadequate management of the water and sanitation sector during the 1970s and 1980s resulted in calls for enhanced sector monitoring from recent global international fora.

The preliminary data available indicate that governments are subsidizing services to high-income populations by as much as 70 percent of the operation and maintenance costs.

the national level but also their counterparts in External Support Agencies (ESAs) with the objective of highlighting the importance of pro-active monitoring as a management tool for the 1990s. It also serves to focus on the inequities and disparities existing in the sector as we enter the last decade of the current century.

Through enhanced monitoring capacity at country level, it is hoped that similar reporting will take place. This should spur advocacy initiatives for increased resource allocation and restructuring aimed at more equitable sector development in the near future.

The 1990 "Baseline Year" report is the first in a series of yearly reports to be made throughout the 1990s. It will be used as a benchmark to monitor progress of sector goals towards "universal access" to water supply and sanitation. The report utilizes for the first time the WASAMS format which was used by 70 countries out of a total of approximately 130 who received the questionnaire in late 1990 to assess the status of their sector. An analysis of these questionnaires and subsequent recommendations are put forward.

The disaggregation of urban population into high-income (or more affluent urban) and urban marginal substantiated that a considerable disparity exists between high-income urban and marginal urban populations regarding their access to services. Likewise, the disaggregation of coverage into different levels of service has provided planners with more objective information whilst, at the same time, highlighting the existence of disparities in resource allocations. The latter indicates clearly that despite the aggressive promotion in the 1980s of an array of low-cost options to provide services to the unserved, these have yet to be seriously considered by governments and external support agencies.

There is broad-based evidence of inadequate policies on cost recovery which have led to large capital outlays for rehabilitation of high-cost systems, mostly to benefit the better-off. Governments tend to concentrate their sector investments on new systems and in the rehabilitation of existing systems in urban areas, with a clear bias towards high-cost systems. External support agencies (ESAs) almost match investments by governments in such areas. The ESAs do, however, also support programmes in rural areas.

The preliminary data available indicate that governments are subsidizing services to high-income populations by as much as 70 percent of the operation and maintenance costs. Meanwhile evidence exists indicating that marginal urban communities are very willing to contribute to operation and maintenance costs.

An alternative approach for the efficient utilization of scarce resources is urgently required. It is paramount that governments and ESAs see resource allocations to the sector in the context of economic investments for development, rather than social expenditures (see Box 3, page 15, and Box 6, page 24). Such an approach would necessitate the restructuring and reallocation of sector resources, and the forging of government and community partnerships for: capacity building at community level for management of services; the promotion and use of appropriate low-cost technologies; and the establishment of affordable backup support systems for spare parts and maintenance to ensure sustainability of services, especially in marginal urban and rural areas where most of the unserved reside.

A strong synergistic effect between sector *monitoring, planning, and advocacy* has been recognized as the basis to accelerate water and sanitation service coverage in the 1990s. Enhanced sector monitoring can pave the way for improved sector planning. It can also provide the basis for public information and advocacy campaigns from community level up to national level, which, in turn, can generate the momentum towards the attainment of objectives.

The gap between current service coverage and the ultimate objective of "universal access" is very large in many developing countries. Planning (and monitoring as a management tool) can therefore be of assistance to the sector only if goals are realistic. A sector monitoring framework is thus necessary to enhance the planning process. It comprises a situation analysis of sector policies, estimation of the resource base, selection of technology and strategy options and setting of sector goals.

The final portion of this report offers a conceptual framework for sector professionals, policy and decision makers (at all levels) to facilitate development of pragmatic plans of action from community level up to national level, i.e., national plans of action. ☉

I. Sector Overview

On 10 November 1980, the United Nations General Assembly proclaimed the period 1981–1990 as the International Drinking Water Supply and Sanitation Decade (IDWSSD). The primary goal then envisaged for the decade was the attainment of full access to water supply and to sanitation by all inhabitants in the developing countries by the year 1990.

In fact, the IDWSSD provided access for an additional 1,347 million people to safe water supplies, and sanitation facilities for some 748 million. However, despite these major accomplishments, over 1,200 million people, 30 percent of the developing world's population, still lacked access to safe water and 1,700 million (40 percent) were without adequate sanitation at the end of the decade, according to a World Health Organization (WHO) evaluation of IDWSSD, which was prepared in 1990. The majority of these deprived people reside in rural regions and in low-income, marginal urban areas of developing countries.

With this in mind, the developing countries and the External Support Agencies (ESAs) reached a broad consensus to continue the existing thrust of the IDWSSD beyond 1990 and to harness that drive to coincide with the goal of "Health for All by the Year 2000".

The United Nations General Assembly recognized that efforts would have to be stepped up during the 1990s if safe water supply and adequate sanitation facilities for all were to be the goal by the end of the century. General Assembly resolution 45/181 urged governments to stress key objectives, and agreed to review progress made in the provision of water and sanitation services at its 50th session in 1995.

One major constraint to achieving these goals in many developing countries is the large size and complexity of the water and sanitation sector. The problem is further compounded by the wide range of institutions and organizations that frequently vie with one another at the expense of collaborative endeavours, thus highlighting the urgent need for better coordination within the overall sector. Joint sector monitoring for enhanced planning and advocacy offers one approach

that might lead to improved coordination and cooperation throughout the sector.

Significant progress was achieved during the 1980s with the rediscovery and improvement of various simple and low-cost water and sanitation technologies. This progress could not have been achieved without community participation, especially the involvement of women in the decision-making, planning and management phases. Initiatives ranged from the UNDP/World Bank project on handpumps and publication of the UNCHS-HABITAT manual on "The Design of Shallow Sewer Systems" to the promotion of ventilated improved pit (VIP) latrines by the Blair Institute of Zimbabwe. Two nations which epitomized such an approach by dint of their large scale application of low-cost handpump technologies in the 1980s were India and Bangladesh. Their example notwithstanding, most developing countries have yet to convert and switch to the large scale use of low-cost technologies and community participatory efforts to accelerate service coverage among their unserved populations.

While the IDWSSD accomplished much in the period 1981–1990, continuation of a "business as usual" approach, drawing on the same policies, resources and technologies and involving the same rate of coverage as applied in the 1980s, could only prolong, beyond the year 2000, the goal of "universal access". By the year 2000, the gap between those with water and sanitation services and those lacking them will have increased significantly. This holds especially true for urban areas where population growth rates are highest and the disparity between rich and poor is growing.

Numerous appeals in the 1980s highlighted the urgent need to respond to the chronic lack of basic water and sanitation services for the rapidly expanding, low-income, marginalized urban populations. Little progress was made. These indigents frequently live under the worst environmental conditions imaginable, with insufficient or no access at all to safe water supplies and/or sanitary facilities. In addition, they often have to pay exorbitant prices for very limited quantities of water of questionable quality, at costs which can represent as much as 20 percent of a family budget¹. In

The primary goal then envisaged for the decade was the attainment of full access to water supply and to sanitation by all inhabitants in the developing countries by the year 1990.

The urgent need to improve and strengthen sector monitoring and information management has been put forward and documented on several different occasions.

stark contrast, services to their wealthier urban neighbours are heavily subsidized and of relatively high quality.

The health and productive capacity of millions of individuals and households, hundreds of thousands of communities, and some 70 developing nations is already seriously constrained in the absence of these vital water and sanitation services. To further postpone addressing these two basic needs might create a greater imbalance. The absence of a suitable, workable monitoring system to focus attention on those in need only serves to mask the disparities between the two groups. The introduction of such a monitoring system would also focus greater attention on the urgent need to optimize water and sanitation sector investments to redress the imbalance.

Main Lessons of the 1980s

Despite progress made in developing models for the sustainable development of water and sanitation programmes in rural and peri-urban areas, greater efforts are required to make them workable in practical terms, especially if the rapid acceleration of sustainable coverage is to be assured. Greater progress might also have resulted if systematic management principles had been applied to the water and sanitation sector during the 1980s.

General Lessons:

- Low-cost technology projects in developing countries receive as little as 4 percent of the estimated total annual external funding of \$3,000 million devoted to the water and the sanitation sector according to WHO statistics of the 1980s. Meanwhile the firm commitment of developing countries to such projects is indicated by a six-fold increase in their funding since 1980.
- Nearly all developing countries lack systematic action plans offering guidelines for methodical approaches to sectoral activities.
- Women's involvement in decision making, planning and management, crucial for effective community participation, has been neither systematically encouraged nor applied, but is, at best, pursued on an *ad hoc* basis.
- The promotion and acceptance of cost-sharing mechanisms, including cost recovery schemes for operation and maintenance, etc., face formidable resistance at

government and consumer levels in some countries, given the widely accepted norm to consider water as "a free commodity", and are difficult to put in practice at the community level.

- Maintenance still poses significant problems, regardless of the appropriateness of the technologies concerned. The problems relate mainly to sustainable funding for the provision of spare parts, lack of sufficient backup services, and poor support for capacity training at community level.
- The lack of trained professional and sub-professional personnel within the sector hampers efforts in the developing countries to upgrade the sector and related services.

Specific Monitoring Lessons:

- Most developing countries are ill-equipped to monitor many sector indicators simultaneously, especially if the indicators are themselves not easily measurable to begin with.
- In many countries, crude "guesstimating" of sector status, usually by one centralized department/ministry, acting independently of other partners in the water and sanitation sector, has inhibited or discouraged the use of sector monitoring as a management tool.
- The sector has not effectively used simple measurable indicators suitable for the kind of "pulse taking" essential to providing planners and decision makers with relevant information.
- The devolution of responsibilities, monitoring included, to the community level is not being actively pursued in spite of the strong correlation between such action and sector sustainability. Through enhanced monitoring it is possible to make optimal use of such data for more equitable resource allocation, planning and management.

Need for Enhanced Sector Monitoring

The urgent need to improve and strengthen sector monitoring and information management has been put forward and documented on several different occasions. The *New Delhi Consultation* sponsored by the United Nations Development Programme (UNDP), the *World Summit for Children* organized by UNICEF, the *Declaration of Puerto Rico* spearheaded by the Pan American Health Organization

(PAHO), all of which took place in September 1990, and the *United Nations Secretary-General's report to the 45th General Assembly in 1990* on the "Achievements of the IDWSSD 1981-1990", all indicated the need to "monitor service coverage for both water supply and sanitation". As recently as January 1992, the need to enhance sector monitoring was again raised, this time at the *International Conference on Water and the Environment* (ICWE) convened by the World Meteorological Organization (WMO), on behalf of the United Nations Administrative Committee on Coordination and the Intersecretariat Group for Water Resources (ACC/ISGWR), in Dublin.

Efforts to monitor the sector in the 1980s lacked the means to regularly and systematically track progress in the use of low-cost technologies, allocation of sector funding, or sustainability through community involvement. Therefore, it is essential to devise broadly representative and acceptable indicators to serve as yardsticks by which progress can be measured, if the water and sanitation sector is to meet the goals set for the 1990s.

If monitoring is to function as a management tool, it should reflect the following three steps in a cyclical manner:

Assessment of the current sector situation;

Analysis of the constraints affecting sector acceleration and the identification of potential ways to overcome these limitations;

Action in response to the foregoing assessment and analysis.

The current monitoring initiative permits *assessment* of the current sector situation, *analysis* of the constraints and opportunities for overcoming these, and *action* based on the assessment and analysis. While allowing for the disaggregation of statistics on service coverage for "high income" (urban) and "low income" (marginal urban) and rural populations, the system also provides an indicator for assessing technology application and community involvement.

Response to the Needs

Given the clear-cut demand for improved sector monitoring, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), responding to the General Assembly's decision to review progress in the sector at its 50th session in 1995, decided to incorporate the strengthening of sector management through monitoring into their joint

water and sanitation activities which were already in progress. The two agencies launched a **Joint Monitoring Programme (JMP)** for the sector in 1990.

The JMP was established primarily to provide support to developing countries based on the demand for enhancing monitoring capacity at country level. This initiative is a first step in what is envisaged as a much broader participatory venture involving other multilateral and bilateral agencies, governments, non-governmental organizations (NGOs) and, most importantly, the **communities themselves**.

Sector monitoring is linked to sector-action-planning comprising the establishment of realistic goals and the mechanism and strategies to achieve these. Monitoring involves the strengthening of national data collection processes and networks, and also systematic assessment, analysis and responsive action, including corrective and timely measures to tackle problems. Thus monitoring is placed within the broader context of country-level sector management and capacity building.

Meeting the challenge of "universal access" to water and sanitation by the year 2000 necessitates frequent and systematic monitoring of a limited number of measurable core indicators to track progress.

By gradually working from the national level downwards and simultaneously from community level upwards, the calibre of acquired data can be expected to improve in accuracy over time.

Aggregation of all information can be undertaken by computer at central level. In time, such aggregation and local data processing, analysis, and reporting might also be decentralized. This would enable provincial, as well as national authorities to regularly appraise sector performance and subsequently take remedial actions as necessary and appropriate. Sector monitoring would thus become closely linked to both sector planning and information management.

Enhanced sector management would mean that existing resources would be more efficiently used. This outcome can be used for advocacy at national and international levels, to attract more resources for acceleration of sector coverage. ☉

¹ *Urban Example – Prospective for the Future* (Water Supply and Sanitation to Urban Marginal Areas of Tegucigalpa, Honduras), UNICEF.

Efforts to monitor the sector in the 1980s lacked the means to regularly and systematically track progress in the use of low-cost technologies, allocation of sector funding, or sustainability through community involvement.

II. Strategies of the Monitoring Mechanism

Starting With Simple Core Indicators

As previously noted, a simple monitoring approach would facilitate regular and systematic sector management at several levels. Responding to this need, the JMP facilitated a series of meetings attended by water and sanitation professionals from Governments, External Support Agencies (ESAs) and others. Their discussions yielded the following three "core indicators":

Coverage: Quantifies the population served with different systems ranging from household water and sewerage connections, to hand-pumps and improved pit latrines.

Management: Seeks to quantify the contribution made by users, beneficiaries or communities to operation and maintenance (O&M) costs. This management indicator attempts to put a monetary value to community inputs for operation, maintenance and

management. Although it is recognised that such a proxy indicator cannot satisfactorily reflect the total spectrum of community inputs, it is however, hoped to improve the monitoring of community management over time.

Funding: Used to estimate the total funds invested in the sector and to determine the proportion of investments made in low-cost technologies. Information obtained from data on funding will assist decision makers to monitor whether investments for the unserved populations are adequate and what policy changes are needed.

Information management systems fall into three broad categories (see Box 1). The initial purpose of this report aims to provide policy makers and planners with a macro picture of the sector using the three core indicators. It is hoped that through this process the needs of the sector will be firmly established on the

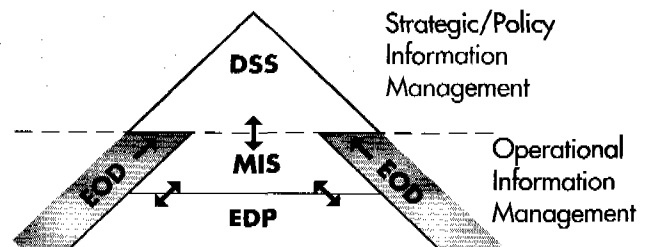
BOX 1

Information Management Systems Fall into Three Broad Categories

- **Electronic data processing (EDP)** is, simply put, the electronic processing of routine operations such as billing, water loss computation, inventory, personnel, etc. The objective is to achieve an increased efficiency of existing operations.
- **Management information systems (MIS)** entails the aggregation of information from the EDP level for operational decision making — that is, project level management and enhanced metering, technology choice, reallocation of resources at project level, etc. MIS requires specific and detailed information.
- **Decisions support systems (DSS)** are designed to facilitate the process of decision making at the strategic and policy making level. DSS are not necessarily directly related to existing and ongoing operations or institutions; they also seek to provide information on areas not covered by ongoing operations. This implies that a significant portion of the information generated at the MIS/EDP levels is of little use at the DSS level. Additionally, information from non-registered or non-formal agencies, such as those operated by church groups, local NGOs, etc., may also feed into DSS. One could add to this extra-operational category of data (EOD) socio-economic, demographic and epidemiological information.

The following diagram may help to illustrate the inter-relationship between these categories of information management systems.

Conceptual Diagram of Information Management Systems



- EDP:** Electronic Data Processing*
- MIS:** Management Information Systems*
- DSS:** Decisions Support Systems
- EOD:** Extra Operational Data (JMP Terminology)
- * Operational Information Management

The Water and Sanitation Monitoring System (WASAMS) developed by the JMP is intended as a DSS.

political agenda for responsive positive action. This acknowledges the fact that information alone does not necessarily lead to change. Therefore, follow-up action by sector professionals, other partners and communities from grass root level upwards is necessary to facilitate change.

The "Open-ended" System

The Water and Sanitation Monitoring System (WASAMS) currently operates manually via (hard copy) questionnaires. However, its computerization is now refined to provide an "open-ended" facility, or simple user-friendly utility for developing country-specific indicators and their parameters. This in-built open-ended monitoring system allows the "core" indicators to remain unchanged whilst simultaneously facilitating the inclusion, on a demand basis, of specific indicators identified at regional, sub-regional, country, sub-national and community levels. It is thus foreseen that the expansion of monitoring systems beyond the "core" indicators can be facilitated at all levels.

Strengthening Country-level Capacities for Sector Monitoring

Currently, several countries are being supported in their efforts to strengthen and enhance country-level monitoring. Measures include organizing regional monitoring workshops; facilitating interministerial meetings to strengthen sector coordination; setting up national monitoring units (NMUs); assessing and analysing the sector status; setting sector goals, and establishing a framework for sector monitoring.

Several countries, including Burundi, Jamaica, Togo and Nigeria have already established NMUs and are proceeding with sub-national data collection to facilitate future planning. Moreover, the participants of the last three Regional Monitoring Workshops (held in Jamaica, Swaziland and Benin) recommended and put forward a set of generic guidelines for sector monitoring at country level (see Annex V).

Data Collection Mechanisms

An array of data retrieval systems already exists that can be utilized at country level. These systems include census, household surveys, sentinel sites that comprise fixed sites for routine household level data gathering, and

routine reporting through government administration networks. Ideally governments should optimize such systems for sector data collection rather than create new ones. Consequently such systems should be adjusted for relevance to the data collection needs of the water and sanitation sector and should be designed to respond to the same relevant questions required by the sector, given that such surveys are conducted at different times, with different geographical spreads and possibly with varying degrees of accuracy.

Harmonizing the different existing data collection systems would help overcome an enormous hurdle. Moreover, the cost effectiveness of data retrieval would have been greatly enhanced. Complementary or alternative monitoring mechanisms should also be considered wherever needed.

Data Processing, Analysis and Reporting

While computerized data aggregation can be undertaken initially at the central level, responsibility for such data collection should be encouraged and supported at sub-national and community levels to facilitate an upward flow of relevant data to national level. This approach would also apply to data analysis and reporting. Annual reporting would keep policy and decision makers abreast of progress made regarding targets set for any particular year. The system would also facilitate decision making on sector funding, generating relevant information, as needed, including more accurate and reliable data as to which areas might be in greatest need. However, monitoring via (hard-copy) questionnaires will take place until computerized systems are established at country level, and will continue to be used at the sub-national level for some time. Nonetheless, if affordable, the use of simple computers should be strongly encouraged at sub-national levels in order to enhance monitoring capacity at the lowest possible tier. Therefore computer programmes should only be considered as tools to support monitoring in this context.

External reporting beyond the country, while limited to the "core indicators", would feature in the proposed annual reporting system, which would also register other achievements and activities related to global and regional promotion of the water and sanitation sector. ⑥

Annual reporting would keep policy and decision makers abreast of progress made regarding targets set for any particular year.

III. Analysis of Baseline Year Results

Representativeness of 1990 Data

Data used in this 1990 global report were derived from material provided by Governments who participated in the global reporting effort, and are indicated in Tables 1 and 2.

The baseline year of 1990 was the first time in which the Water and Sanitation Monitoring System (WASAMS) format was used by countries in assessing the status of their sector. Of the approximately 130 countries to receive the questionnaire in early 1991, 70 countries responded; a return rate of 54%. Many of the others were unable to complete the questionnaires because they had insufficient sector data, a clear indication of the need for country level support to improve sector monitoring and information systems. The 1990 data are based on the sector status as at 31 December 1990. The annual report on subsequent years will also be based on the situation as at 31 December of each year.

The ability of countries to complete the different parts of the questionnaire, i.e., Coverage, Management, and Funding, varied considerably. Most countries were able to complete the questions on coverage, while

around 75 percent of those reporting were unable to provide much information on the funding and management aspects of the sector at this point in time (Table 3).

For comparability at global level, the analysis in this report is made according to the United Nations (UN) Economic Commission Regional sub-divisions (Table 2).

Although the majority of reporting countries had least difficulty in completing the first part of the questionnaire dealing with coverage, many were unable to provide disaggregated information for urban high-income and marginal urban populations (Table 4). This was not surprising, given that past monitoring practices had omitted any breakdown of urban population into such categories. Initial difficulties in defining and quantifying these categories were not unanticipated. The indicative definitions proposed by the JMP for this breakdown are:

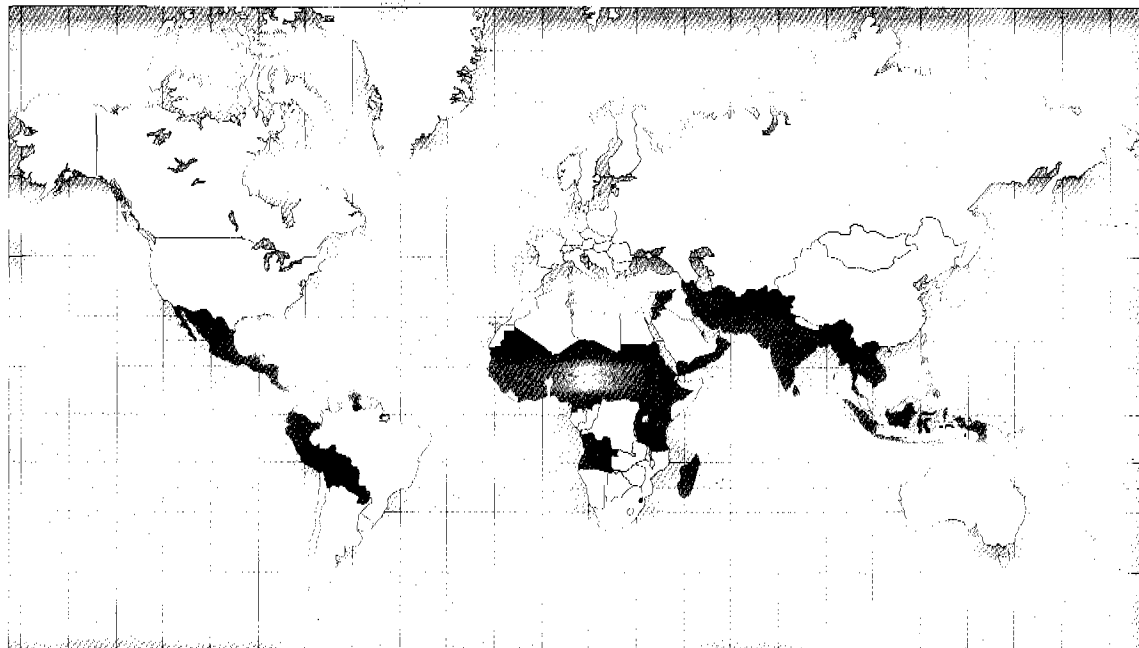
Urban (High-Income) Populations: are populations perceived locally to have access to a good standard of dwelling expressed in physical terms, safe water supply and sanitation; and other services such as health and public transport.

MAP 1

WASAMS - 1990

Countries Reported

For a complete list of countries, see Table 1.



Marginal Urban Populations: are populations that clearly do not fit into the previous category and who have relatively poor access to such services.

Similarly, several countries were not able to provide coverage information broken down by technical categories that could be equated to different levels of service. This probably reflected previous monitoring practices, which only allowed for reporting of "total" urban water supply and sanitation service coverage rather than providing details on the "level of service" (Table 5).

Although most countries were unable to provide data on sector investment in absolute terms, about 40 percent of reporting countries did provide estimates of the proportion of capital investment provided by government, external support agencies, communities and others involved in the sector. A similar proportion of respondents were able to provide comparable information on the operation and maintenance cost of water supply systems.

Undoubtedly, 1990 was a "watershed" in regard to past monitoring practices. Despite the incomplete reporting of the data obtained for the "baseline year 1990", substantial insight into previously uncharted territory is now being opened up for enhanced sector management.

The enormous potential of this new thrust, particularly at country level, has already been recognized by nations such as Togo, Nigeria, Philippines, Jamaica and others. Togo, for example, not only completed the WASAMS questionnaire for the national level, but was able to do so for each of its five administrative/ political sub-national regions, and has thus already started to utilize the monitoring system as a management tool for improving sector planning.

Disaggregating sector statistics for urban high- income and marginal urban settings as indicated should help focus attention on the inequities currently prevailing in most cities of developing countries. This could, in turn, provide the potential elements to improve living conditions for many millions of marginal urban dwellers in the course of the 1990s.

Planners frequently overlook the fact that a major proportion of the financial resources for water and sanitation programmes is to be found in marginal urban settings. One clear

TABLE 1

Countries Reporting
by UN Economic Commission Regions

Africa	Latin America & Caribbean	Asia & Pacific	West Asia
Angola	Barbados	Afghanistan	Jordan
Burkina Faso	Belize	Bangladesh	Oman
Burundi	Bolivia	Bhutan	Syrian Arab Rep.
C. Afr. Republic	Brit. Virgin Is.	Burma	Yemen
Cameroon	Costa Rica	Cambodia	
Chad	Dominica	China	
Comoros	Ecuador	India	
Côte d'Ivoire	El Salvador	Indonesia	
Djibouti	Guatemala	Iran	
Equatorial Guinea	Guyana	Laos	
Ethiopia	Haiti	Maldives	
Gambia	Honduras	Pakistan	
Ghana	Jamaica	Philippines	
Guinea-Bissau	Mexico	Korea	
Kenya	Montserrat	Sri Lanka	
Madagascar	Nicaragua	Thailand	
Mali	Panama	Vietnam	
Mauritania	Paraguay		
Nigeria	Peru		
Rwanda	St. Kitts and Nevis		
Senegal	Turks & Caicos Is.		
Sierra Leone			
Sudan			
Swaziland			
Tanzania			
Togo			
Tunisia			
Uganda			

TABLE 2

Level of Reporting by Region
by UN Economic Commission Regions

	Africa	Latin America & Caribbean	Asia & Pacific	West Asia
Percentage of Countries Reporting	58	46	39	33
Percentage of Population Represented	66	37	90	2

indicator in support of this is the exorbitant proportion of such household incomes currently expended by families for low quality basic services in the sector. It is hoped that planners and decision makers will make use of the JMP funding indicator to identify such community-level potential for the acceleration of sector coverage.

Analysis of 1990 Baseline Data

Coverage

The Need for Increased Focus Upon Marginal Urban Areas

A cursory look at global figures reveals that, globally, 83 percent of the urban population of developing countries have access to safe water supply. However, the JMP disaggregation shows a hidden inequity: the fact that there is a 95 percent service coverage rate for the urban high-income group compared to only 64 percent coverage for the marginal urban population. The same principle can be applied to sanitation, given that high-income urban residents appear to have the same levels of service coverage for both water supply and sanitation.

Data disaggregation along these lines could help planners and policy makers better focus resources on the needs of pockets of urban populations whose situation was previously masked by the overall coverage statistics. This takes on an added urgency given the soaring urban population growth rates predicted for the 1990s.

Meeting Basic Needs Through More Aggressive Promotion and Use of Appropriate Low-Cost Technologies

The existence of service disparities and inequities are even further substantiated when the initial results of the global disaggregation of access to water supply by technology are examined (Figure 1). Urban high-income populations have close to 80 percent access to domestic connections in comparison to a rate of less than 30 percent access for the combined marginal urban and rural populations. The disaggregation of coverage into different levels of service has provided planners with more objective information while substantiating further the existence of disparities in resource allocations.

Generally speaking, the low-cost options which were aggressively promoted during the 1980s have yet to be seriously considered as a means to accelerate sustainable service coverage. Although boreholes with handpumps, a technology aggressively pursued during the IDWSSD, constitute the largest single means of water supply to rural people, some countries have access to even less costly options such as protected springs, rainwater harvesting and gravity flow systems.

TABLE 3

Reporting by Information Category

Proportion of Questionnaires Completed	Number of Countries Reporting		
	Coverage	Management	Funding
0%	1	50	32
1 - 10%	0	3	14
11 - 20%	9	4	6
21 - 30%	8	1	3
31 - 40%	7	2	2
41 - 50%	16	4	4
51 - 60%	1	1	0
61 - 70%	2	6	0
71 - 80%	3	0	1
81 - 90%	2	0	0
91 - 99%	5	0	0
100%	17	0	8

TABLE 4

Respondents' Ability to Provide Disaggregated Data on Urban Water Supply and Sanitation Coverage by Marginal and High-Income Populations

Region	Number of Reporting Countries	
	Providing Urban High-Income/Marginal Urban Breakdown For Water Supply	Providing Urban High-Income/Marginal Urban Breakdown For Sanitation
Africa	15	15
L. America & Caribbean	9	9
Asia & Pacific	8	8
West Asia	3	3
Total	35	35

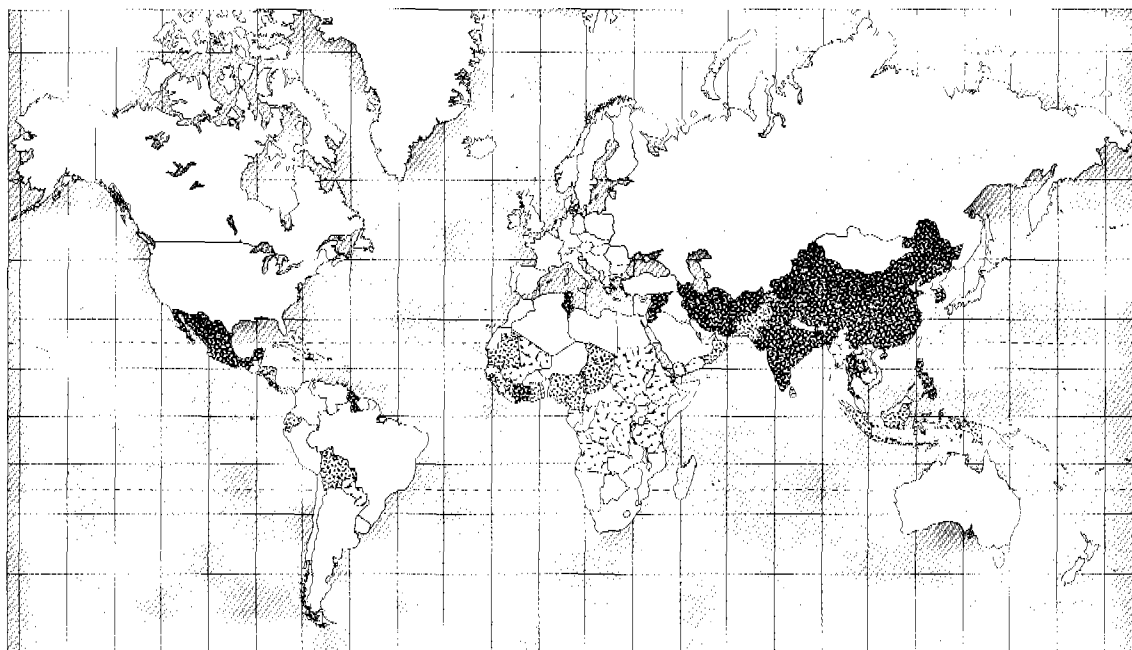
In the case of sanitation, a large range of technologies is being used to provide services to urban high-income populations (Figure 2). The claim that small-bore sewer technology has been applied in the urban high-income areas to a significant extent needs scrutiny, given some possible difficulty in this particular case with terminology. The definition adopted by the JMP, for example, defines small-bore sewers as follows:

“Normally of 4 to 6 inches in diameter and buried at shallow depths (less than 1 metre) below the surface. Such systems are usually designed for low-income populations in unplanned settlements where the population

density usually exceeds 200 persons per hectare.”

JMP statistics indicate that household connections to septic systems are used almost as frequently by urban marginal populations as are simple pit latrines. This is surprising considering the much higher cost of septic systems in comparison to small-bore sewers. However, the driving force behind such a decision for the individual householders may be their ability to manage the system, rather than the cost.

In rural areas, simple pit latrines are almost 13 times more common than VIP latrines despite aggressive advocacy and promotion of



MAP 2

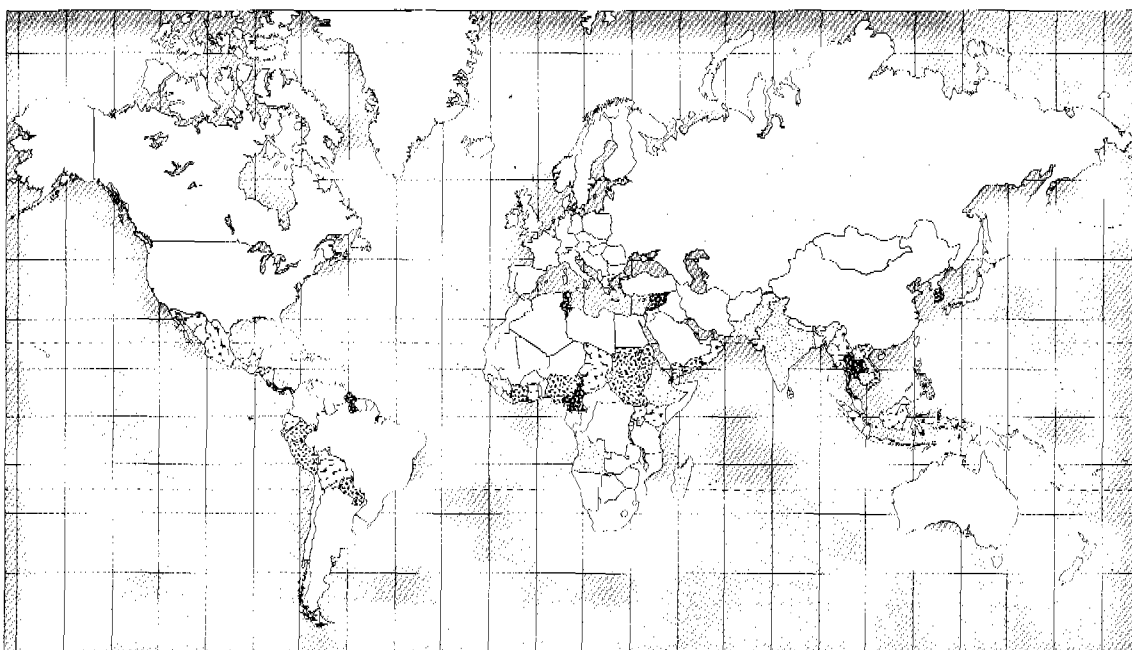
Safe Water Supply

Total population with access to functioning safe water supply.

Source: WASAMS - 1990

Legend

- Not Reported
- ░ 0% to 25%
- ▒ 26% to 50%
- ▓ 51% to 75%
- 76% to 100%



MAP 3

Sanitation

Total population with access to adequate excreta disposal.

Source: WASAMS - 1990

Legend

- Not Reported
- ░ 0% to 25%
- ▒ 26% to 50%
- ▓ 51% to 75%
- 76% to 100%

For Maps 1 and 2, as there is no standard regional or global definition for coverage, this varies from country to country.

Initial analysis of the 1990 baseline data available reveals that Governments are subsidizing high-income populations by as much as 70 percent of O&M costs.

the latter during the 1980s. Although the VIP offers a higher level service, its higher price may not be affordable to the unserved majority. Two possible solutions can be envisaged to accelerate adequate sanitation service coverage in rural areas, namely, reduction of VIP latrine costs, through a more aggressive use of local construction techniques and materials, and/or upgrading the simple pit latrine to greatly reduce odour and fly nuisance.

Again, analysis of JMP 1990 data shows enormous disparities in service coverage, which may indicate, among other things, inadequate policies on cost recovery which have

led to large capital outlays for rehabilitation of high-cost systems, mostly to benefit the better-off.

Service implementation rates would have to be accelerated by between 1.5 to 4 times the levels of the past decade if "universal access" is to be attained in the foreseeable future. Clearly an alternative approach is urgently required.

Such an approach would necessitate policy changes in favour of realistic cost recovery, especially for the high-cost/high level services. Subsequently, a significant proportion of the capital generated through such means should be redirected towards the sustainable acceleration of service coverage to the unserved.

Management

Community Contribution to Operation and Maintenance Costs

The importance of sustainability became more and more apparent as the 1980s moved to a close. Reflecting this new-found emphasis, the JMP adopted a proxy indicator for community involvement in management of services. This indicator specifically attempts to highlight community contribution to operation and maintenance (O&M) costs.

Initial analysis of the 1990 baseline data available, on this indicator, reveals that Governments are subsidizing urban high-income populations by as much as 70 percent of O&M costs. Meanwhile, in marginal urban and rural communities, Governments are contributing almost up to 40 percent of the total O&M costs for a lower level of service, i.e. half as much as for their wealthier neighbours (Figure 3).

The lessons of the 1980s indicated a strong correlation between sustainability of services and cost recovery and suggest that the latter becomes more effective as responsibility is devolved to the communities. The sustainability of conventional high-cost urban systems which largely benefit the more affluent populations therefore comes into question, given the high level of government subsidies allocated to the better-off in urban areas who should be able to afford such basic services.

Funding

Investments in the Sector

The sector information provided by governments for 1990 indicates that Governments concentrate their water supply investments in

TABLE 5

Respondents' Ability to Provide a Breakdown of Service Coverage by Different Technologies

Region	Number of Reporting Countries	
	Providing Service Coverage Breakdown by Different Technologies for Water Supply	Providing Service Coverage Breakdown by Different Technologies for Sanitation
Africa	22	25
L. America & Caribbean	16	16
Asia & Pacific	14	12
West Asia	3	2
Total	55	55

TABLE 6

Global Access to Water and Sanitation

Sub-Sectors	Percentage of Population with Access to Safe Water and Adequate Sanitation			
	Water Supply		Sanitation	
	WHO 1990 ⁽¹⁾	JMP 1990	WHO 1990	JMP 1990
Urban		95		95
Marginal Urban		64		45
Urban Total	82	83	72	65
Rural Total	63	67	49	22 ⁽²⁾

(1) Refers to the "Decade Monitoring Report" by WHO, where 1988 sector data were extrapolated to 1990.

(2) Refers to the large discrepancy in relation to the earlier WHO extrapolations for 1990 is most probably due to the absence of JMP rural data from China.

urban areas in new systems and in the rehabilitation of existing systems. There also seems to be a special bias favouring new high-cost systems. External Support Agencies (ESAs) almost match investments by Governments in urban areas. However, there is evidence that ESAs attempt to compensate to some extent, at least for this bias, by also supporting programmes in rural areas (Figure 4).

Although communities do not contribute significantly to capital investments for water supply, marginal urban and rural populations contribute proportionally more than do their more affluent urban neighbours. Indications are that investments by "other" actors, presumably the private sector, etc., tend to favour urban dwellers more than rural populations.

For sanitation, Government and ESA capital investments, alike, also favour more affluent urban populations (Figure 5). Conversely, marginal urban and rural communities appear to contribute a higher proportion of capital investments than do Governments for new and rehabilitated systems. As in the case of water supply, members of the more affluent urban group seem to be contributing proportionally less than their poorer neighbours.

Given the proportionally higher contribution by marginal urban and rural populations, it is not unreasonable to deduce that the demand for sanitation among these groups, particularly the latter, may possibly be higher than previously assumed.

Indications are that contributions by "other" actors, presumably the private sector, etc., tend to favour urban dwellers more than rural populations.

Percentage

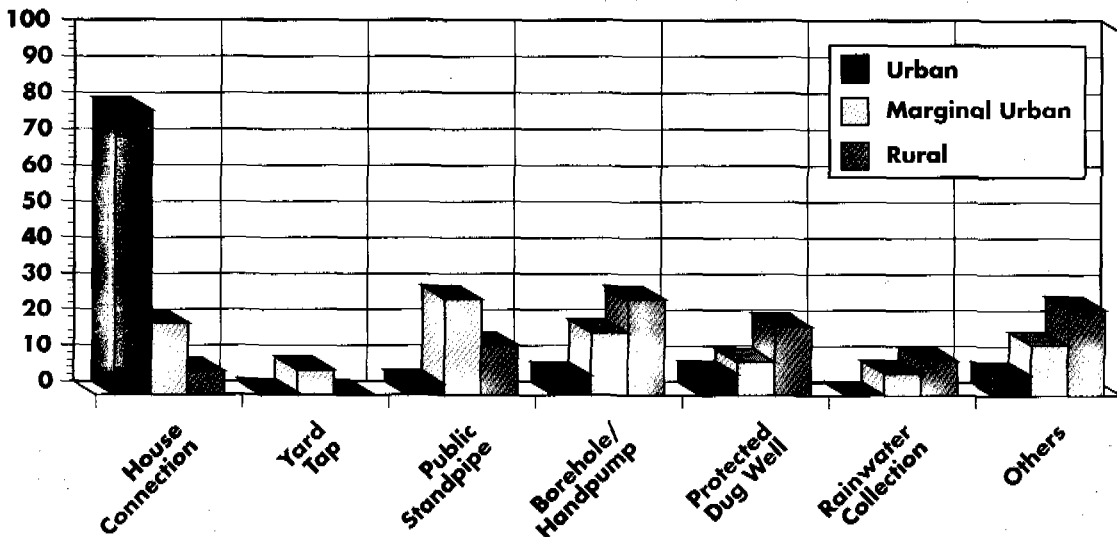


FIGURE 1

Water Supply

Proportion of population served by technology types.

Source: JMP - 1990

Percentage

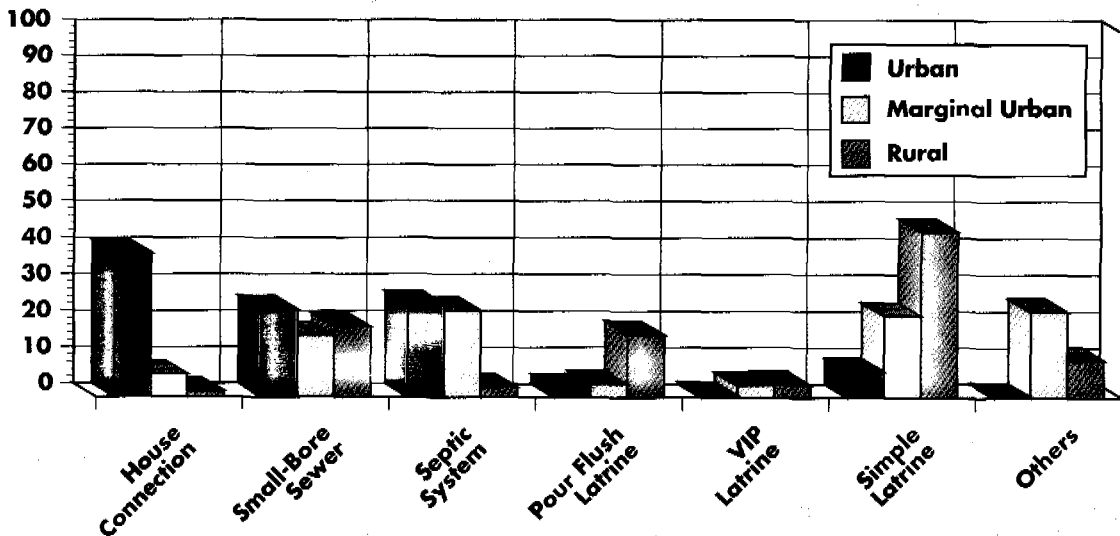


FIGURE 2

Sanitation

Proportion of population served by technology types.

Source: JMP - 1990

FIGURE 2

Water Supply

Contribution to Operation & Maintenance Costs.

Source: JMP - 1990

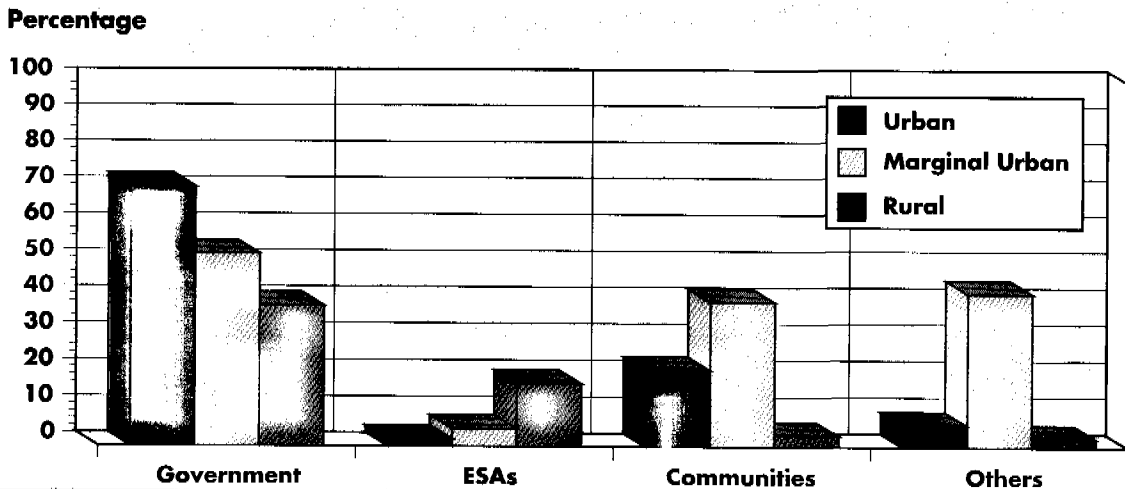


FIGURE 4

Water Supply

Contribution to capital investments.

Source: JMP - 1990

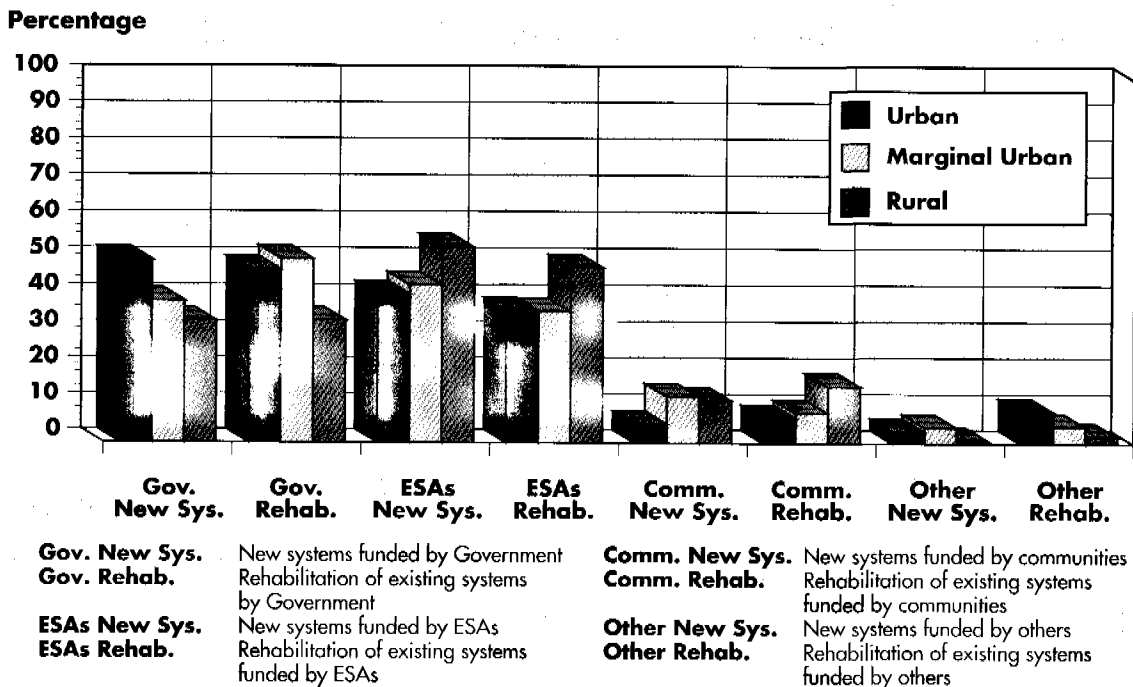
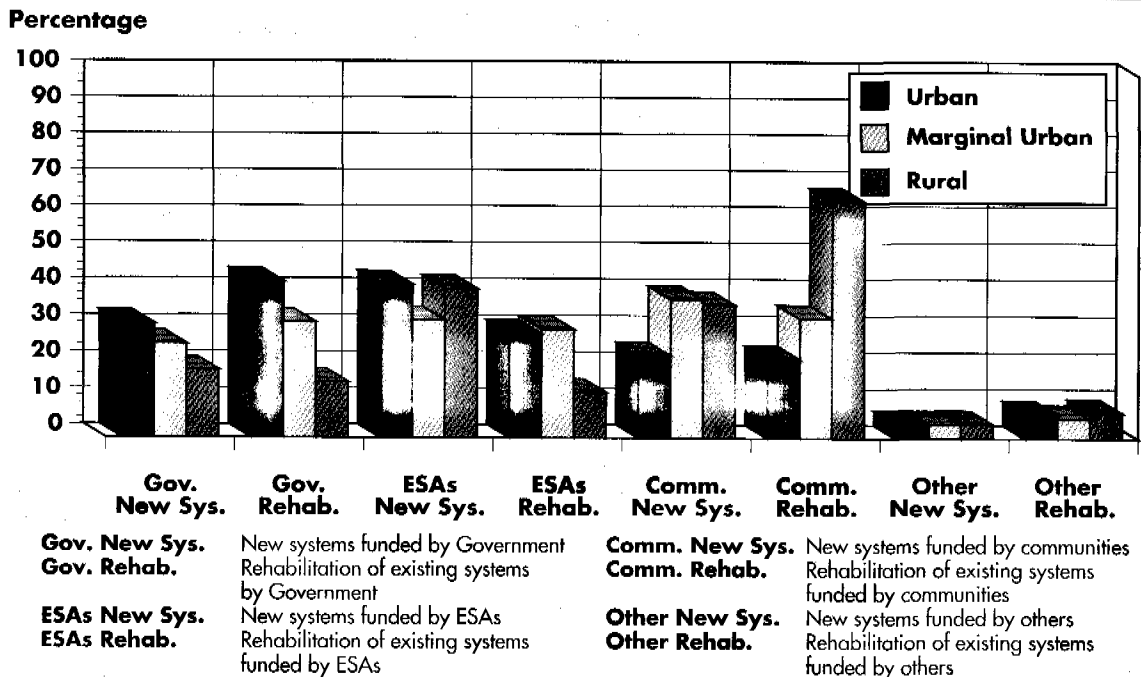


FIGURE 5

Sanitation

Proportional contribution to capital investments.

Source: JMP - 1990



A Hidden Message

There appears to be a hidden message in the aforementioned sections on management funding. The large capital expenditures for rehabilitation of conventional high-cost urban schemes are obviously related to the rapid deterioration of such infrastructures. This apparent lack of sustainability may be linked to inadequate cost recovery for operation and maintenance (see Box 2).

Despite this, governments seem to persist in heavily subsidizing the better-off population who can afford operation and maintenance cost of basic services. This inequitable allocation of limited resources constrains the expansion of services to the unserved poor (see Box 3, this page, and Box 5, page 24).

BOX 2

Inadequate Cost Recovery for Water Supply

A recent review of World Bank-financed projects showed that the effective price charged for water is only about 35 percent of the average cost of supplying it. The proportion of total project financing generated by utilities points in the same direction: Internal cash generation accounts for only 8 percent of project cost in Asia, 9 percent in Sub-Saharan Africa, 21 percent in Latin America and the Caribbean, and 35 percent in the Middle East and North Africa.

World Development Report 1992,
The World Bank, Washington, D.C.

BOX 3

Financial Resource Allocation is a Function of Political Will

The (UNDP) 1991 Human Development Report sets out a framework for restructuring national public expenditures and international aid allocations to ensure the resources needed to underpin human development strategy in the 1990s. This analysis shows that in many countries at present, only a small proportion of GDP (gross domestic product), on average barely 2 percent, is directed to priority human expenditure. The same is true of the aid budgets of most donor countries, on average only 8 percent of total aid. Put differently, the amount of restructuring to generate the resources required for meeting priority human goals is usually not large.

Richard Jolly, UNICEF New York
and Ralph van der Hoeven, ILO, Geneva

Analysis by Geographic Sub-groupings

The potential national and sub-national application of WASAMS as a tool to derive information on geographic or other sub-groupings is illustrated in the following brief analysis which is based on the UN Regional Economic Commission global sub-divisions.

Figure 6, which represents data on global water supply coverage by region, shows an array of technologies used. Similarities exist between Latin America and the Caribbean and West Asia, regarding provision of water supply through household connections. There is also a similarity between Africa, Asia and the Pacific regarding the same technology.

Water supply for rural populations by means of standpipes follows a similar pattern, with approximately 20 percent of the population being served in Latin America and the Caribbean, and West Asia, while about 10 percent is similarly served in Africa, Asia and the Pacific.

Rainwater harvesting appears to be underutilized on a global basis as a means of gaining access to improved water supply. However, many countries (especially in Asia and the Pacific) are actively pursuing this method of supplementing their domestic water supplies. Many countries could potentially gain from such an approach.

As indicated in Figure 7, there is a greater variation in sanitation service coverage by technologies between regions than is the case with water supply. For example, pour flush latrine technology is practically limited to the single region of Asia and the Pacific. The use of simple pit latrines follows a similar pattern in Latin America and the Caribbean, as in Africa. However, 14 percent of Africa's urban high-income population use this technology, compared to its non-use by the equivalent group in Latin America and the Caribbean.

Other unspecified technologies for sanitation appear to be commonly used in Asia and the Pacific Region, and to a lesser extent in Africa as well. It is hoped that through the use of the mapping feature of WASAMS (at national and sub-national levels) the specific sector needs and the inequities may be highlighted. This information, if effectively used and brought to the attention of policy and decision makers, could lead to the restructuring of resources to minimize disparities and accelerate sector coverage. ☉

Rainwater harvesting appears to be underutilized on a global basis as a means of gaining access to improved water supply.

Figure 6: Water Supply Coverage by Region

FIGURE 6.1

Water Supply Coverage by Region

Latin America & Caribbean

Technology Types Used

Source: JMP - 1990

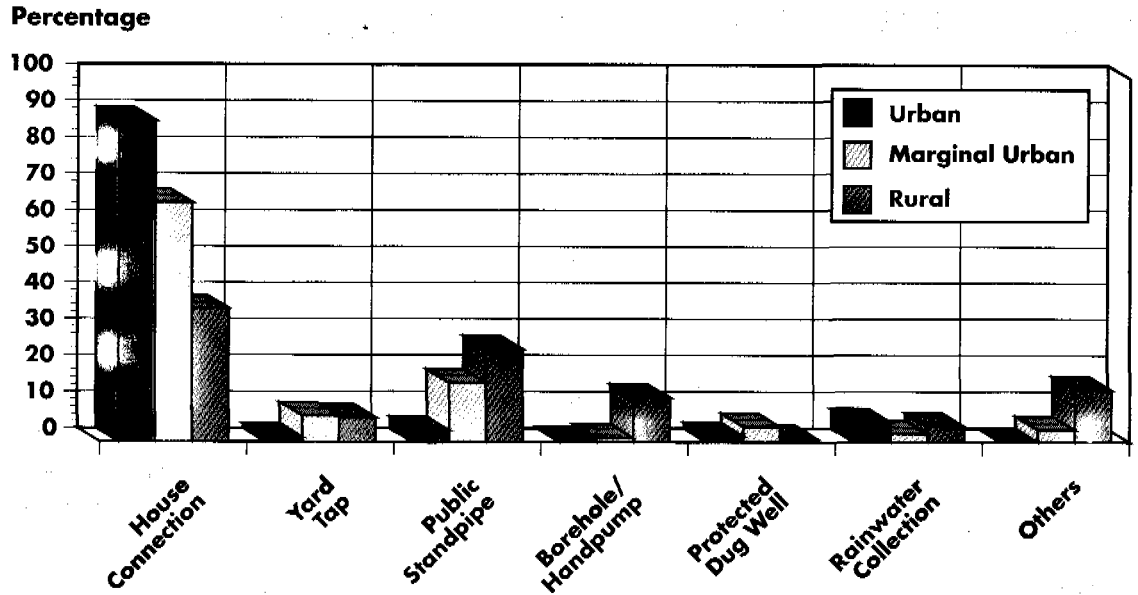


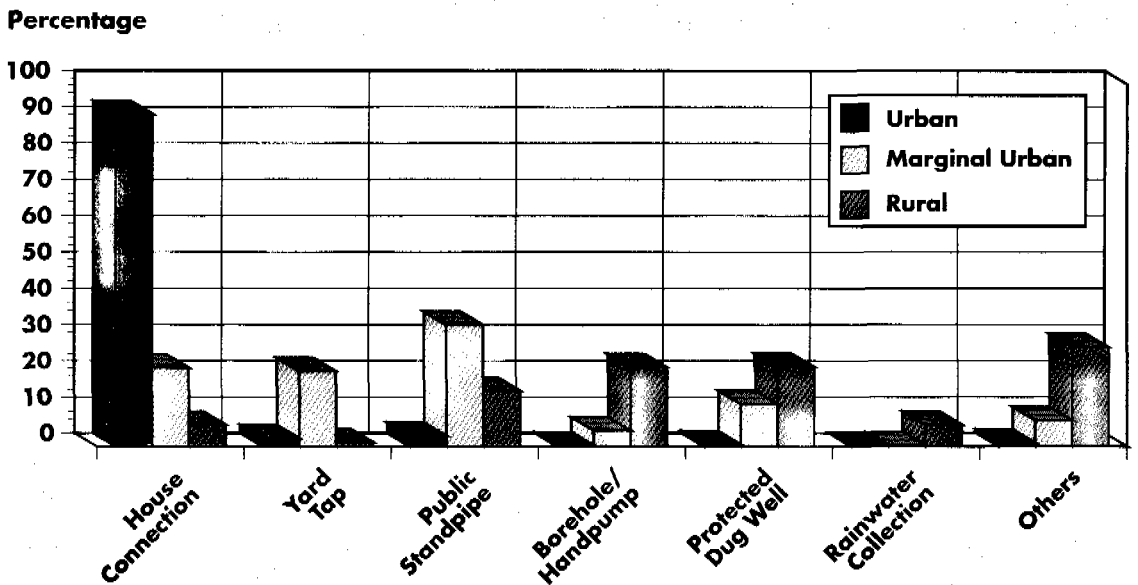
FIGURE 6.2

Water Supply Coverage by Region

Africa

Technology Types Used

Source: JMP - 1990



Percentage

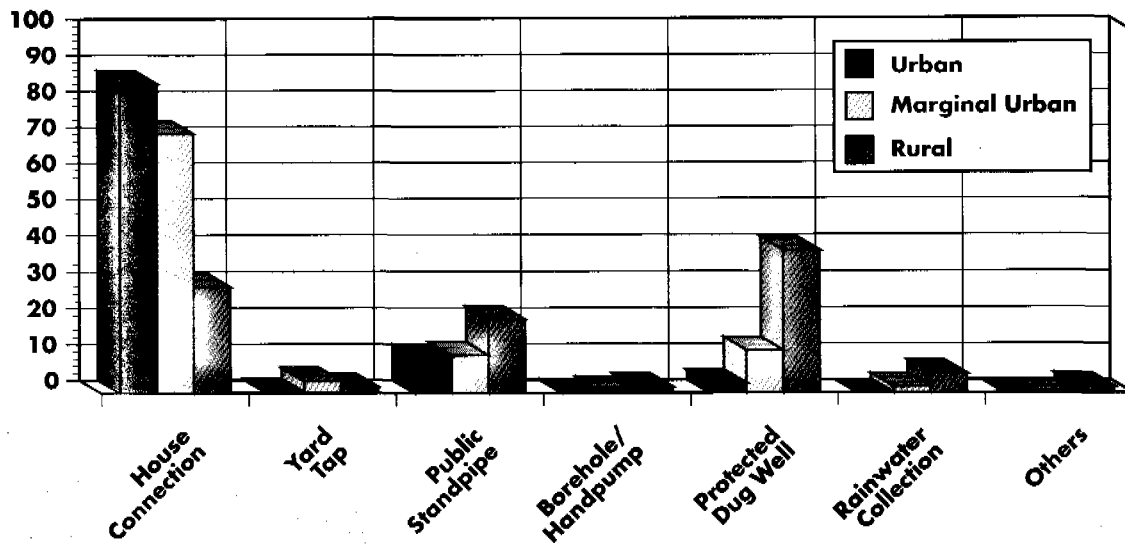


FIGURE 6.3

Water Supply Coverage by Region

West Asia

Technology Types Used

Source: JMP - 1990

Percentage

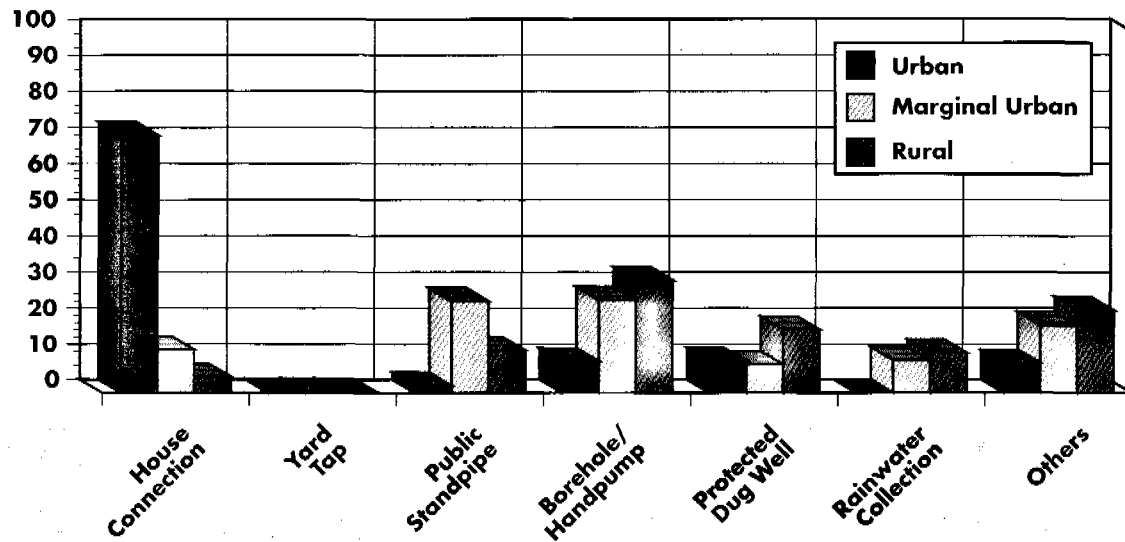


FIGURE 6.4

Water Supply Coverage by Region

Asia & Pacific

Technology Types Used

Source: JMP - 1990

Figure 7: Sanitation Service Coverage by Region

FIGURE 7.1
Sanitation Service Coverage by Region
Latin America & Caribbean
 Technology Types Used

Source: JMP - 1990

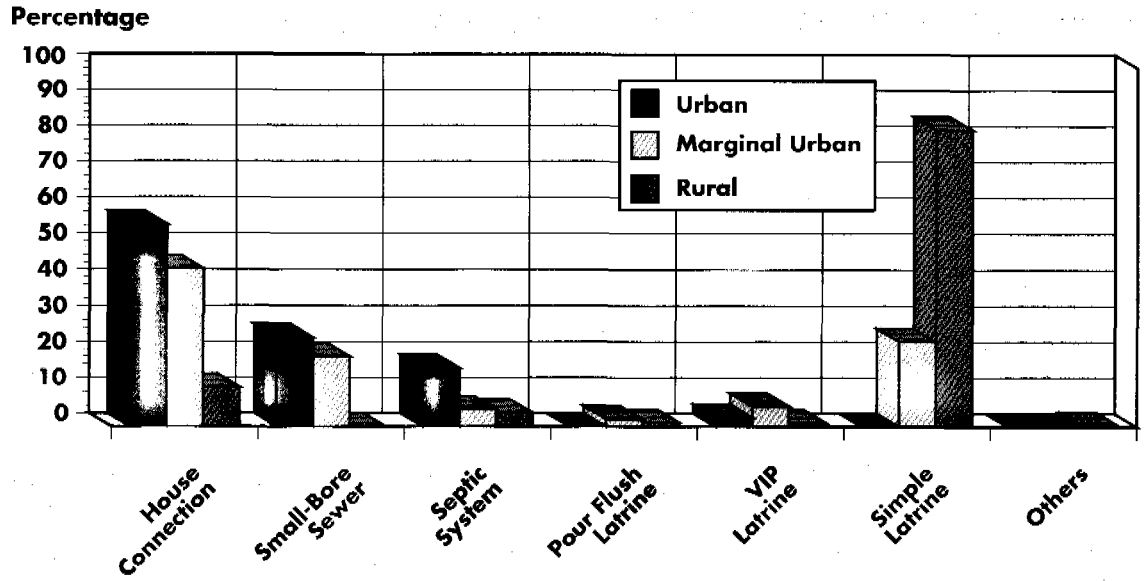
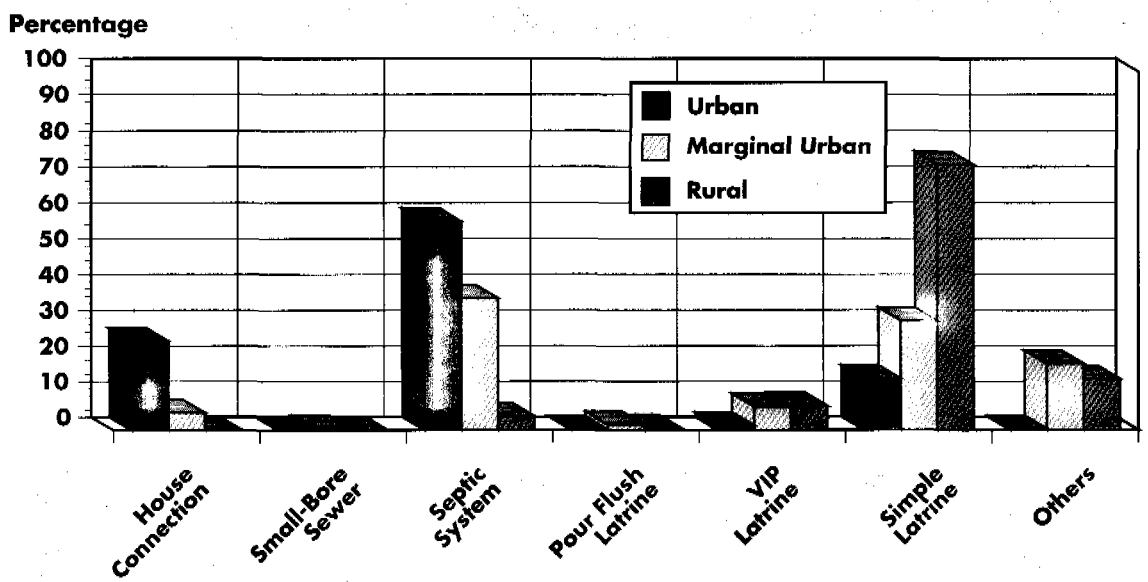


FIGURE 7.2
Sanitation Service Coverage by Region
Africa
 Technology Types Used

Source: JMP - 1990



Percentage

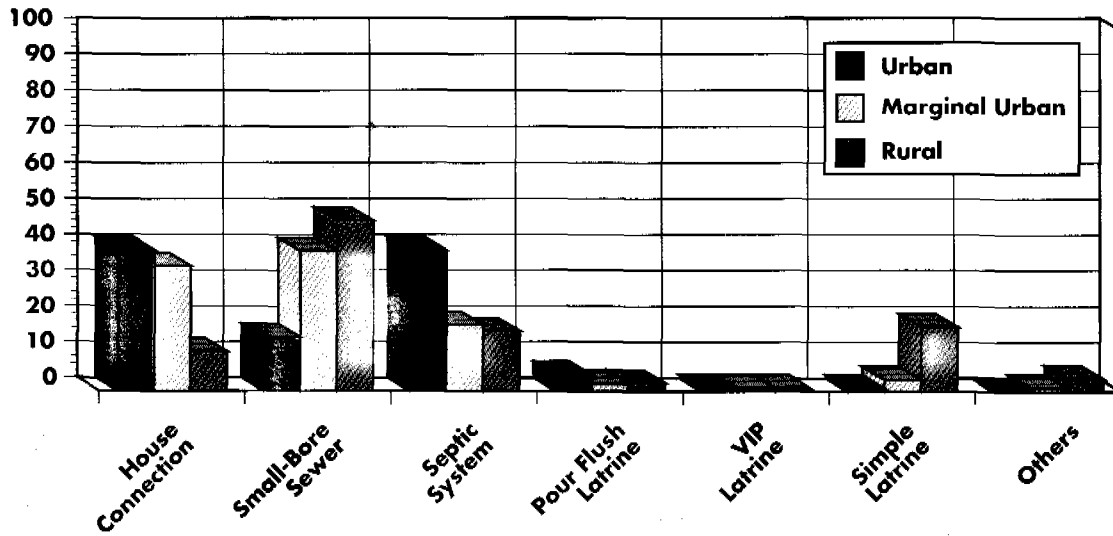


FIGURE 7.3

**Sanitation Service Coverage by Region
West Asia**

Technology Types Used

Source: JMP - 1990

Percentage

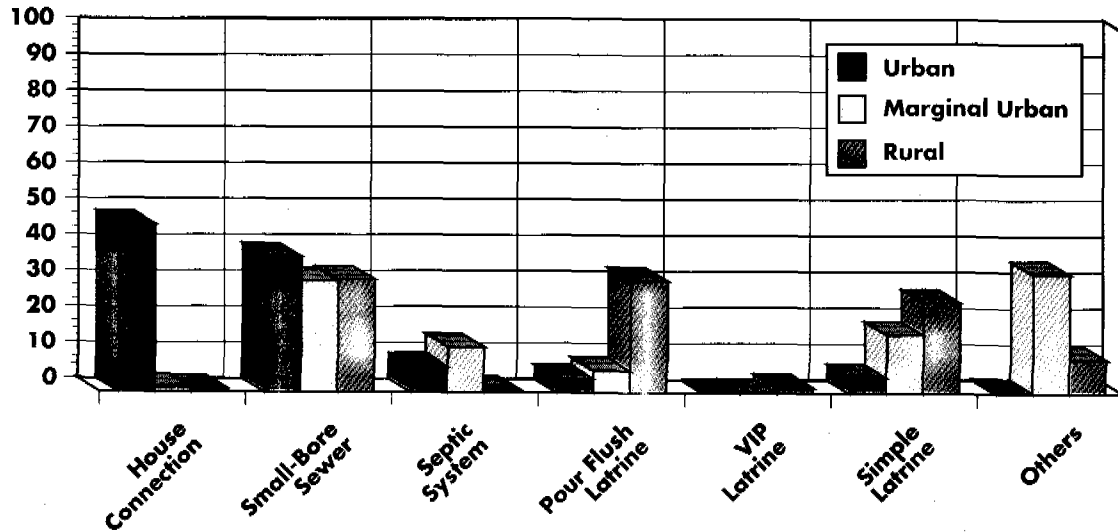


FIGURE 7.4

**Sanitation Service Coverage by Region
Asia & Pacific**

Technology Types Used

Source: JMP - 1990

IV: Framework for Improved Sector Planning

Enhanced sector monitoring can pave the way for improved sector planning.

Linkage Between Sector Monitoring, Planning and Advocacy

The first section of this report provided a general overview of the water and sanitation sector from the 1970s through the 1980s (IDWSSD), while also outlining the political framework for sector development in the 1990s. Section II discussed the need for an improved, simple sector monitoring system with a high degree of flexibility at country level for specific monitoring requirements using the "open-ended" system. It highlights the urgent need to strengthen sector capacity at country level. Section III provided an analysis of the sector derived from the 1990 baseline data submitted. This analysis forms the benchmark for monitoring sector performance during the 1990s.

In response to the critical need to improve sector management through enhanced monitoring Section IV provides a framework for sector professionals, policy makers, donors and decision makers at all levels to monitor progress regarding achieving their sector goal of "universal access" at the earliest possible date.

Enhanced sector monitoring can pave the way for improved sector planning. It can also provide the basis for authoritative public information and advocacy campaigns. A key ingredient is the catalytic relationship between sector monitoring and planning: The former normally feeds into the latter, which can in turn be adjusted as goals and annual targets undergo changes. However, planning can also feed back into monitoring. Monitoring feedback can also be used to "prime" public information channels and advocacy initiatives directed towards policy and decision makers. Additionally, it contributes to the information, education and communication (IEC) process which explores all available communication channels and strategies to disseminate relevant information. This ultimately generates momentum towards the attainment of objectives (Figure 8).

In order to be effective, IEC has to generate political will which, in turn, must be

translated into actions, including the revision of sector policies, the provision of additional resources and the promotion of active community participation.

For sector planning to be effective, it should reflect the following three procedures in a cyclical manner:

- i. **Assessment** of the current sector situation;
- ii. **Analysis** of the constraints affecting sector acceleration and the identification of potential ways to overcome these limitations;
- iii. **Action** in response to the foregoing assessment and analysis.

Framework for Monitoring in the Context of Goal Setting

The gap between the current access rate (or baseline service coverage) and the ultimate objective of "universal access" is very large in many countries. Planning can only be of assistance to sector management if the goals are realistic and have some chance of being met. A selected sector goal for the 1990s could be placed anywhere between the "business as usual" of the 1980s and "universal access" by the year 2000, assuming that the lowest end of the scale corresponds to a linear projection of the 1980s implementation rate, while the highest equates to the World Summit for Children goals of "universal access" (Figure 9).

Within the above context, a sector planning framework comprising seven steps is proposed. In the absence of reliable baseline data, a conservative estimate should be made. Also, it should be kept in mind that it is very difficult to verify progress if initial estimated data on coverage is too optimistic. It is also advisable to agree upon the population denominator for the various sub-national levels, otherwise there may be errors in the estimation of the unserved/served population.

Meeting The Challenge

A much greater synergism in terms of linkage between sector monitoring, planning

and advocacy is paramount to meeting the challenge of "universal access" to water and sanitation in the shortest possible time. The referred-to conceptual framework aims to help sector professionals, policy makers, decision makers and donors achieve this goal.

Step One: Situation Analysis.

This should include the following:

- estimates of current water supply and sanitation coverage (the baseline);
- assessment of sector investments during the 1980s with an estimate of the proportion of funds spent on high-cost, intermediate-cost, and low-cost technologies (see Annex III);
- review of past and current sector policies;
- assessment of current sector strategies including the potential of "community participation" in decision making, planning and management, and willingness to pay for and sustain services, etc.;
- rough assessment of the feasibility of reaching "universal access" in terms of the current resource base (funding, human resources, implementation capacity etc.) and current approaches by the year 2000.

Outcome: Clear assessment of the Water and Sanitation Sector, with a view as to whether or not the current resource base is sufficient to achieve "universal access" by the year 2000, following the "business as usual" approach.

If "universal access" can be achieved through the "business as usual" approach, then proceed to Step Four. If not, proceed to Step Two.

Step Two: Estimate the Maximum Service Coverage Which can be Attained Through Optimal Use of the Available Resource Base and Appropriate Strategies, and Indicate the Resource Gap yet to be Bridged, to Achieve "Universal Access" by the Year 2000.

- On the basis of 1980s strategies and costs for high, intermediate and low-cost technologies (Step One), estimate the maximum coverage which can be attained through restructuring of resources in favour of the unserved, through the optimal mix of technologies bearing in mind political acceptability and sustainability.

- Determine the additional resources required (financial, human etc.) to bridge the gap between the goals attainable through optimal use of available resources, and the "universal access" goal of the year 2000.

Outcome: Outline for optimal use of available resource base, and estimate of additional resources required, if any, to achieve "universal access".

If "universal access" can be achieved via this "optimal use of available resource base and appropriate strategies", then proceed to Step Four. If not, proceed to Step Three.

Step Three: Explore the Restructuring of Macro-economic and Sector Policies to Increase the Resource Base.

This entails a simulation of various policies to determine their potential to generate sufficient resources to bridge or minimize the gap between the goals attainable through optimal use of available resources, and the goal of "universal access" (Step Two), again bearing in mind their political acceptability and sustainability. This may include:

- equitable tariffs for cost recovery/sharing;
- increased sector investment, including community contributions, external resources, etc.;
- optimal use of, and support to, the private sector (manufacture, implementation, etc.);

Estimate the maximum coverage which can be attained through restructuring of resources in favour of the unserved...

FIGURE 8

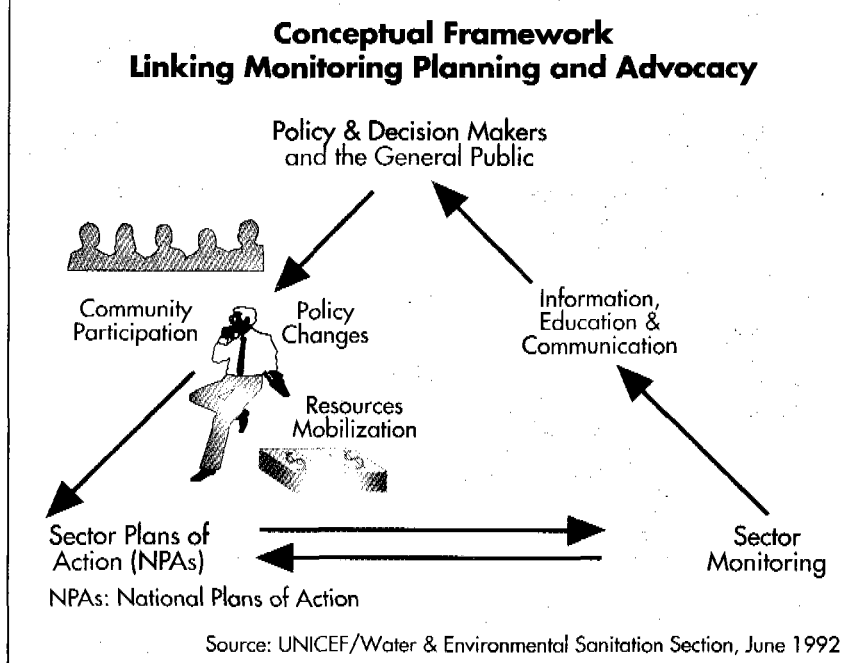
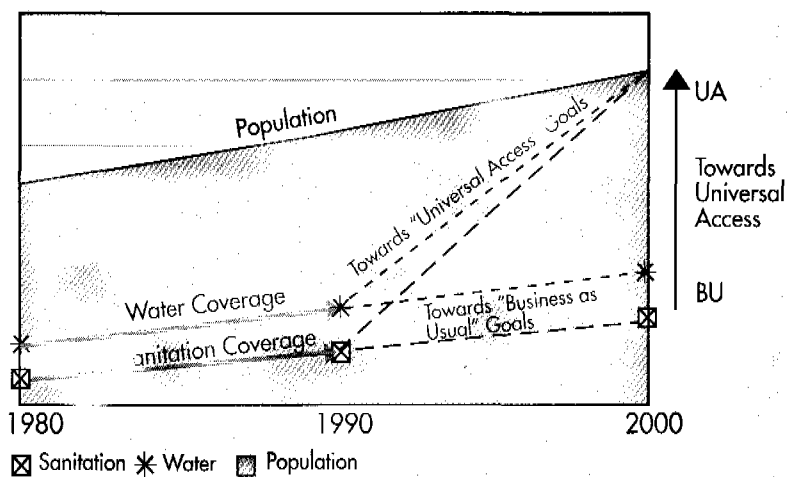


FIGURE 9

A Framework for Goal Setting



UNICEF/Water and Environmental Sanitation Section, New York, July 1992

- reduction in duties and taxes on specific equipment and materials for intermediate- and low-cost options;
- devolution of authority and responsibilities to local communities to enhance sustainability.

Outcome: Optimal policy package to bridge or minimize the gap.

Step Four: Selection of Strategies to Optimize the Use of the Resource Base.

Once the resource base is established, different choices of resource utilization may be made. The technology options vary on the basis of the proportion of resources being allocated to appropriate low-cost and intermediate-cost technologies. They range from current resource allocations of approximately 20 percent being allocated to low-cost and intermediate-cost technologies, to the maximum possible proportion of resources that may be reallocated to these technologies, based on policy decisions.

The underlying principle is that the greater the shift towards low-cost and intermediate-cost technologies, the greater the potential to achieve "universal access" or to minimize the gap between needs and resources.

Once the policy decision is made on roughly what proportion of resources should be allocated to each of these technology/strategy categories, (i.e. high-, intermediate- and low-cost) resources can be prorated accordingly.

The strategies should go beyond the technology options to include the social aspects, that is, the type/level of community participation required to provide sustainability to the entire approach.

Outcome: Optimal mix of technologies for maximum acceleration of sustainable coverage.

Step Five: Establishing of Sector Goals.

At this point realistic sector goals can be established. Specifically this should be undertaken for: 1) water supply and 2) sanitation coverage in a) urban, b) marginal urban, and c) rural areas, with a total of six sector goals in all.

At this early stage in the 1990s, it may be difficult to realistically determine the access goal for the year 2000. However a mid-decade goal can be determined more readily, with a "guesstimate" only for the end-decade goal.

Outcome: Realistic Sector Goals.

Step Six: Establishing a Planning Framework.

At this juncture it is possible to make a breakdown of the six sector goals into annual targets. This becomes the planning framework against which progress can be monitored. If changes occur in policies, the resource base and/or the goals, this framework has the flexibility to adapt to such changes. It thus becomes a "live" planning tool unlike the rigid "master plans" of the past.

Outcome: Pragmatic planning/monitoring framework.

Step Seven: Optimal use of Monitoring Data.

Finally, these data should be used for sector advocacy purposes, feedback to communities and sub-national levels for improved decision-making, planning, resource mobilization and its equitable allocation, and management.

Outcome: Mobilization of resources and strengthening of decision-making, planning and management at all levels. 🌐

Summary of Salient Points

Strategies for Sector Monitoring in the 1990s

- Meetings attended by water and sanitation sector professionals from Governments, ESAs, and others, resulted in "three core indicators" for enhancing sector monitoring in the 1990s.
- A country-based and country-managed monitoring system was developed, which is both manual and computerised, and possesses an open-ended facility to permit countries to utilize additional indicators as required.
- For the first time a disaggregation of water and sanitation coverage into urban and marginal urban was used. Likewise, a larger range of levels of service (technology types) has been monitored.
- Current measures being used to strengthen country-level capacity for sector monitoring include regional workshops; country-level inter-ministerial meetings; establishing national monitoring units; setting of realistic goals, and developing effective frameworks for guiding sector monitoring.
- Governments are being urged, through the JMP, to build upon and optimize existing data collection systems.

Outcome of Global Monitoring 1990

- Baseline year 1990 was the first time in which the WASAMS format was used by countries to assess the status of their sector.
- Disaggregated data on urban population confirmed that a considerable disparity exists in access to services between urban and marginal urban populations.
- Low-cost options are yet to be seriously considered by Governments and ESAs.
- There is broad-based evidence that inadequate policies exist on cost recovery, especially for high-cost systems.
- Governments tend to concentrate sector investments in new and rehabilitated systems for (high-income) urban populations, with a clear bias towards high-cost systems.
- Water services to high-income populations are generally being subsidised by as much as 70 percent of the O&M cost.
- An alternative approach to efficiently utilize scarce resources is urgently needed. This necessitates policy changes in favour of realistic cost recovery and cost sharing measures at all levels, including areas of high-cost/high level services.
- A strong synergistic linkage between sector monitoring, planning and advocacy has been recognized as the basis to accelerate water and sanitation coverage in the 1990s.
- Planning (and monitoring as a management tool) can only be of assistance if goals are realistic. A sector planning framework is therefore needed to enhance the planning process.

V: Conclusion

To continue "business as usual", despite the laudable efforts of the past decade, would result in a widening of the gap between the served and the unserved, especially in urban areas.

Due to inadequate advocacy and promotion of the sector in the past, the unserved population continues to grow. Therefore to reach "universal access", advocacy will have to be aggressively pursued to attract a larger share of national and external resources to the sector in future. Effective sector monitoring can play a vital role in advocacy by providing updated relevant information. Monitoring is also crucial in facilitating effective and more equitable use of resources to achieve "universal access". Moreover, a strong synergistic linkage between Sector Monitoring, Planning, and Advocacy has been recognized as the basis to accelerate water and sanitation service coverage in the 1990s. Enhanced sector monitoring can thus pave the way for improved sector planning and management.

To continue "business as usual", despite the laudable efforts of the past decade, would

result in a widening of the gap between the served and the unserved, especially in urban areas. Moreover, the current global recession being experienced, leaves little hope for a major increase in the absolute level of funding for sector development in the near future. An immediate solution to substantially accelerate service coverage is therefore to better utilize existing resources. This can be achieved through macro-economic restructuring of government budgets to underpin human development initiatives, as well as restructuring of sector budgets in favour of low-cost, community managed technologies and approaches, with a focus on the unserved rural and marginal urban areas. It is paramount that governments and ESAs see resource allocations to the sector in the context of economic investments for development, rather than social expenditures (see Box 6).

Governments and external support agencies involved in the water and sanitation sector have a fundamental choice: to continue "business as usual", with essentially a low priority for the unserved poor, or to shift the focus to facilitating the provision of services to that silent majority. By opting for the latter, one will substantially contribute to shaping a better future and more just social order in developing countries and, at the same time, establish the foundation for a more rapid human development and a more equitable society. 🌐

BOX 5

Willingness versus Ability to Pay

Households' willingness to pay for improved service is high but not high enough to pay the full costs of an improved service. This group typically includes poor communities in arid areas in South Asia and Sub-Saharan Africa. Village people are willing to pay a relatively large share of their income for improved water service. The distinction is that the costs of supply are so high, as a result of a combination of aridity and low population densities, that improved systems will not be built and operated without subsidies. Given the high priority that people give to improved water supply, if transfers were available from central government or from foreign donors, households would typically choose to spend the funds on an improved water supply. The primary service offered in such communities would be public taps, wells, or boreholes, although in piped systems metered yard taps should be allowed, with tariffs set to recover full costs.

World Development Report 1992,
The World Bank, Washington, D.C.

BOX 6

The Economic Cost of Not Providing Water and Sanitation

In just the first ten weeks of the cholera epidemic in Peru, losses from reduced agricultural exports and tourism were estimated at \$1 billion — more than three times the amount that the country had invested in water supply and sanitation services during the 1980s.

Source: World Development Report 1992,
The World Bank, Washington, D.C.

Annex I

Participants of Workshops who Contributed to the JMP Effort

Geneva Pre-Test Workshop: 2-5 April, 1991

Institution	Name	Region	Country
Government	1. Tesfaye Gemechu	EASRO	Ethiopia
	2. Samira Nicola Rezk	MENA	Egypt
	3. Ativon Kodjo	WCARO	Togo
	4. A. N. Asthana	ROSA	India
	5. Vernon Barrett	TACRO	Jamaica
WHO	1. Mihail Koussitashev	AFRO	Congo
	2. K. Khosh - Chasm	EMRO	Egypt
	3. Mohal Lal Gupta	SEARO	India
	4. Raymond Reid	PAHO	USA
	5. Kassa Kinde	AFRO	Ethiopia
	6. Skouloum Aye Marfa	AFRO	Togo
	7. Homero Serrano Silva	PAHO	Jamaica
	8. Dennis Warner	HQs	Switzerland
	9. Gregor Watters	HQs	Switzerland
	10. Anthony Thomas	HQs	Switzerland
	11. Ivan Mazuranic	HQs	Switzerland
	12. Ingvar Ahman	HQs	Switzerland
UNDP/W. Bank	8. G. Schultzberg	RWSG/EA	Kenya
UNICEF	1. Rupert Talbot	ESARO	Ethiopia
	2. Magdi Zaki	MENA	Egypt
	3. David Delienne	WCARO	Togo
	4. Raúl Niño	TACRO	Guatemala
	5. Pradeep Kumar	ROSCA	India
	6. David Williams	EAPRO	Indonesia
	7. Joseph Christmas	HQs	USA
	8. Carel de Rooy	HQs	USA
	9. Brendan Doyle	HQs	USA

**Guatemala Sub-Regional (Latin America) Monitoring Workshop:
2-5 December, 1991**

Institution	Name	Region	Country
Government	1. Hugo Raúl Garneró	TACRO	Argentina
	2. Paulo F. Teixeira	TACRO	Brazil
	3. Pedro Reyes	TACRO	Chile
	4. Jorge Bravo	TACRO	Costa Rica
	5. Carlos E. Calderón	TACRO	Colombia
	6. Francisco Rivera Díaz	TACRO	Cuba
	7. Leonardo González	TACRO	Ecuador
	8. Manuel Antonio Merlos	TACRO	El Salvador
	9. Armando Mira	TACRO	Guatemala
	10. Eric Alvarado	TACRO	Guatemala
	11. Edith Marul	TACRO	Guatemala
	12. Luis Roberto Escoto	TACRO	Honduras
	13. Emilio Velázquez Uribe	TACRO	Mexico
	14. Flor de M. B. Cruz	TACRO	Nicaragua
	15. Manuel Barrón	TACRO	Perú
	16. Ambar de Pinzón	TACRO	Panama
	17. Angel Chávez	TACRO	Paraguay
	18. Angel Castillo	TACRO	Venezuela
PAHO	1. Julio Búrbano	TACRO	Peru
	2. Luis Carlos Rangel	TACRO	Mexico
	3. Ricardo Núñez	TACRO	El Salvador
	4. Luis Alberto Leal	TACRO	R.Dominicana
	5. Iván Estrubi	TACRO	Costa Rica
	6. Norman Jirón	TACRO	Nicaragua
	7. Luis F. Peñaranda	TACRO	Bolivia
	8. Alberto Sylvester	TACRO	CEPIS/Peru
WHO	1. Gregor Watters	HQs	Switzerland
	2. Ivan Mazuranic	HQs	Switzerland
	3. Ingvar Ahman	HQs	Switzerland
UNICEF	1. Willy Bezold	TACRO	Colombia
	2. Fabio Sabatini	TACRO	Colombia
	3. Bernt Aasen	TACRO	Honduras
	4. José A. Zuleta	TACRO	Bolivia
	5. Jorge M. Molina	TACRO	Guatemala
	6. Hans Spruijt	TACRO	Guatemala
	7. Matías Núñez	TACRO	Mexico
	8. Sara Menéndez	TACRO	R.Dominicana
	9. Mario Sorto	TACRO	El Salvador
	10. Herbert Schembri	TACRO	Peru
	11. Angela Céspedes	TACRO	Ecuador
	12. Hatsune Hatanaka	TACRO	Costa Rica
	13. Per Engebak	TACRO	Guatemala
	14. Hernán Jaramillo	TACRO	Guatemala
	15. Terry Delrue	TACRO	Guatemala
	16. Carel de Rooy	HQs	USA
	17. Brendan Doyle	HQs	USA

Other		
CAPRE	1. Marco Rodríguez	R.Dominicana
GTZ	2. Yesenia Calderón	Costa Rica
ANDESAPA	3. Fernando Ponce de León	Bolivia
CARE	4. Estilito Loria	Belize
CARE	5. Ravey Smith	Belize

**Jamaica Sub-Regional (Caribbean) Monitoring Workshop:
2-6 March, 1992**

Institution	Name	Country
Government	1. Hastin Barnes 2. Cathal Healy-Singh 3. Barnabas Abraham 4. David Lewis 5. Rajendra Rampersaud 6. Vernon Barrett 7. Barrington Harvey 8. Bernard G. Williams 9. Errol Rawlins 10. Adrienne deHav. Etienne 11. Ricardo Ward 12. Trevor Howe 13. Swammy D. Ramjiawan 14. Hudadar Seelal 15. Leroy Adams 16. Colin Young	Antigua Barbados Dominica Grenada Guyana Jamaica Jamaica Jamaica, St. Kitts St. Lucia St. Lucia Montserrat Suriname Trin. & Tob. Turks & Caic. St. Vin./Grenad.
WHO/PAHO	1. Ton Vlugman 2. Emmanuel K. Mollel 3. Guy Felix 4. Terrence Thompson 5. Raymond Reid 6. Gregor Watters 7. Ivan Mazuranic	Barbados Barbados Guyana Trinidad & Tobago USA Switzerland Switzerland
UNICEF	1. Ashok Dhital 2. Fabio Sabatini 3. Karan Singh 4. Pierre Adam 5. Jack Gershon 6. Joseph Christmas 7. Carel de Rooy 8. Margaret Karp 9. Brendan Doyle	Barbados Colombia Guyana Haiti Jamaica USA USA USA USA

Swaziland Sub-Regional (East And Southern Africa)

Monitoring Workshop: 18-22 May, 1992

Institution	Name	Country
Government	1. Antonio Quaresma	Angola
	2. Tlamelo M. Kedikilwe	Botswana
	3. Melesse Endalamaw	Ethiopia
	4. Momodon S. Ceesay	Gambia
	5. A.M. Makokha	Kenya
	6. Katleho Lesaoana	Lesotho
	7. Rob Kafundu	Malawi
	8. Leo Stolk	Mozambique
	9. Obioha Agada	Nigeria
	10. Napoleon M. Ntezinde	Swaziland
	11. Edith Mbatha	Tanzania
	12. Moses Kagim Gava	Uganda
	13. Fred Sichilongo	Zambia
WHO	1. Fred D. Maitan	Swaziland
	2. Ivan Mazuranic	Switzerland
	3. Gregor Watters	Switzerland
UNDP/WB	1. Nick Greenacre	Lesotho
UNICEF	1. Bhai Raj Sakya	Angola
	2. Nuno Egidio	Cape Verde
	3. Tekka Gebru	Ethiopia
	4. Luc Henskens	Gambia
	5. Emmanuel Bawa	Ghana
	6. S. Makondiege	Kenya
	7. Mannete M. Ramaili	Lesotho
	8. Thowai Sha Zai	Liberia
	9. K. Gibbs	Mozambique
	10. Chandra Bedloe	Namibia
	11. Lloyd Donaldson	Nigeria
	12. Amim Felipe	S. Tome/Principe
	13. Hezekiel Shongwe	Swaziland
	14. T.V. Luong	Tanzania
	15. Dauda Wurie	Tanzania
	16. Grace Ekudu	Uganda
	17. Richard Lupenga	Zambia
	18. Joseph Christmas	USA
	19. Carel de Rooy	USA
	20. Margaret Karp	USA
	21. Brendan Doyle	USA

Annex II

Milestones and Achievements of the JMP

Period	Activity	Outcome
Sep. '89	Collaborative Council Meeting, Sophia Antipolis	Need for improved sector monitoring in the 1990s was highlighted
Jun. '90	Participatory Sector Monitoring Workshop	Inclusion of core-indicator on community involvement
Jul. '90	Final selection of core indicators	Three core indicators for sector monitoring in 1990s
Jul. '90	Sharing of hardcopy questionnaire with selected field offices	Feedback with refinement of definitions, terminologies and structure
Nov. '90	Protocol on JMP agreed to by WHO and UNICEF	Protocol signed
Dec. '90 through Mar. '91	Development of preliminary version of WASAMS computer programme	Computer programme for discussion at a Pre-test Workshop
Apr. '91	Pre-test Workshop: 27 professionals from seven countries plus WHO/UNICEF	Consensus on indicators, definitions, design and terminology of WASAMS computer programme
Sep. '91	Sub-regional preparatory meeting in Guatemala	Improved interagency coordination for Regional Monitoring Workshops
Dec. '91	Sub-regional Workshop on Monitoring for Latin America (Guatemala)	Consensus among Latin American Countries to enhance sector monitoring in the 1990s.
Mar. '92	Sub-regional Workshop on Monitoring for The Caribbean (Jamaica)	Consensus among Caribbean Countries to enhance sector monitoring in the 1990s. Preliminary proposal to develop a "Water Quality Module" for the sub-region.
May '92	Sub-regional Workshop on Monitoring for East and Southern Africa (Swaziland)	Consensus among East and Southern African Countries to enhance sector monitoring in the 1990s.
Sep. '92	Sub-regional Workshop on Monitoring for Central and Western Africa (Benin)	Consensus among West and Central African Countries to enhance sector monitoring in the 1990s.

Annex III

Indicative Technology Categories and Their Respective Costs

Technology Category	Cost/Capita (US\$)
High-Cost (Conventional) Technology	
Urban Water Supply	200
Urban Sanitation	350
Intermediate-Cost Technology	
Marginal Urban Water Supply	100
Marginal Urban Sanitation	25
Low-Cost Technology	
Rural Water Supply	30
Rural Sanitation	20

High-Cost (Conventional) Technology: applies to the conventional urban-type system with elaborate pumping stations, water and/or sewerage treatment plants, complete distribution systems and individual household connections for both water supply and sewage.

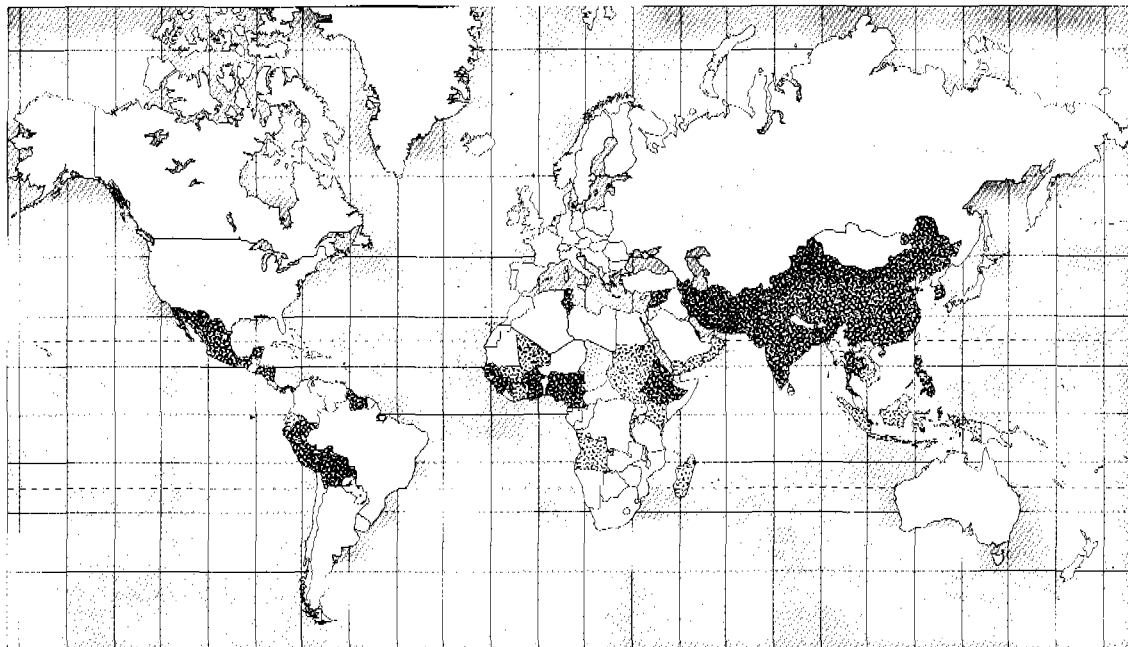
Intermediate-Cost Technology: applicable to marginal urban areas essentially, comprises pipeborne water supply (no allowance for elaborate treatment) leading to public standposts, and "on site" sanitation including technologies such as pour-flush and ventilated improved pit latrines.

Low-Cost Technology: targeted to rural areas essentially, includes handpump-equipped boreholes or handdug wells, rainwater harvesting systems and pipeborne gravity systems with public standposts, for water supply. Sanitation technologies are the same as those allocated to the "intermediate-cost technology" category with a slight cost reduction allowing for the use of locally available construction materials for the building of latrine super-structures.

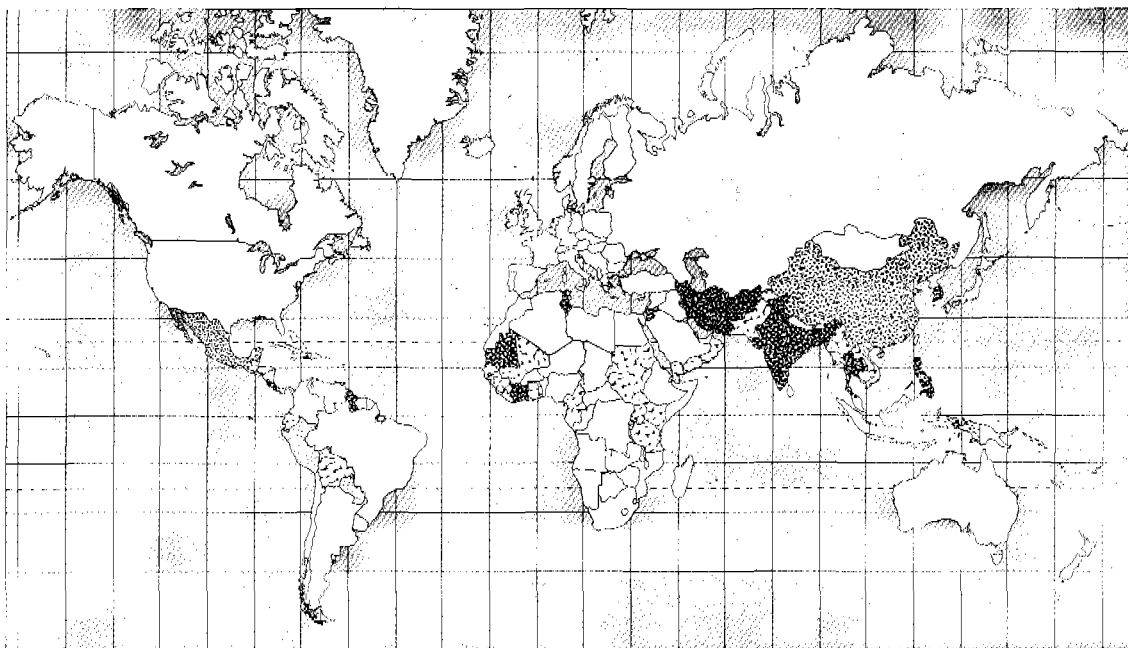
1990 per capita cost estimates by UNDP/World Bank (for urban and marginal urban areas) and UNICEF (for rural areas).

Annex IV

Additional Maps and Tables



Note: For China, only piped water was reported (excluding Mongolia).



Note: For China, only piped water was reported (excluding Mongolia).






M A P 4

Safe Water Supply

Total *urban* population with access to functioning safe water supply.

Source: WASAMS - 1990

Legend

-  Not Reported
-  0% to 25%
-  26% to 50%
-  51% to 75%
-  76% to 100%






M A P 5

Safe Water Supply

Total *rural* population with access to functioning safe water supply.

Source: WASAMS - 1990

Legend

-  Not Reported
-  0% to 25%
-  26% to 50%
-  51% to 75%
-  76% to 100%






M A P

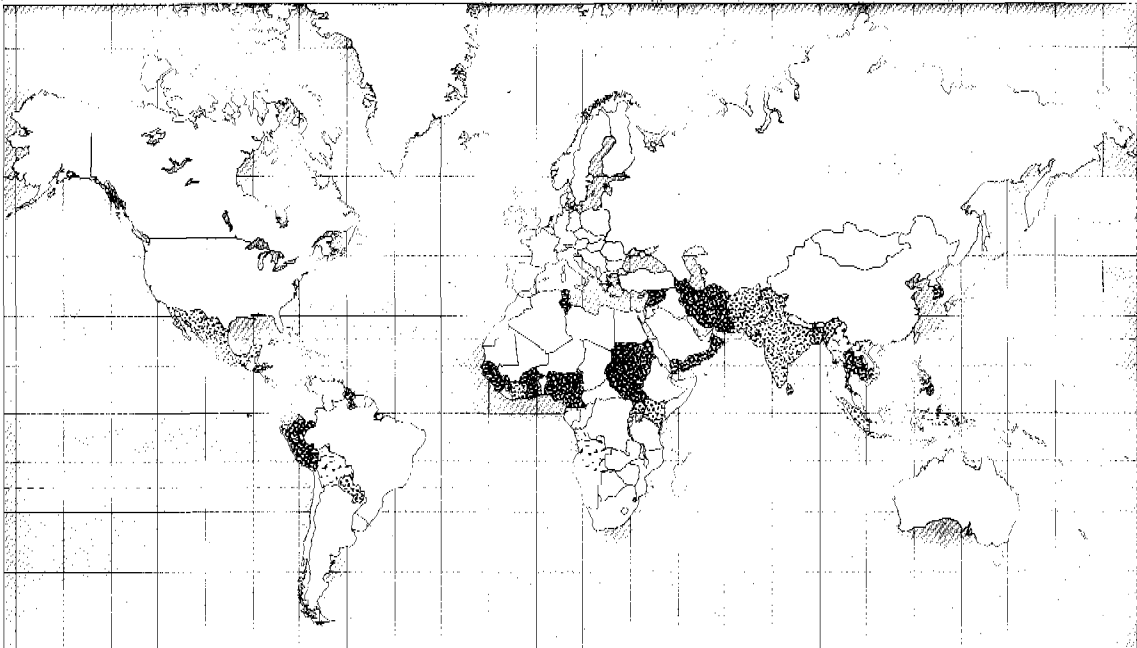
Sanitation

Total urban population with access to adequate excreta disposal.

Source: WASAMS - 1990

Legend

-  Not Reported
-  0% to 25%
-  26% to 50%
-  51% to 75%
-  76% to 100%








M A P

Sanitation

Total rural population with access to adequate excreta disposal.

Source: WASAMS - 1990

Legend

-  Not Reported
-  0% to 25%
-  26% to 50%
-  51% to 75%
-  76% to 100%

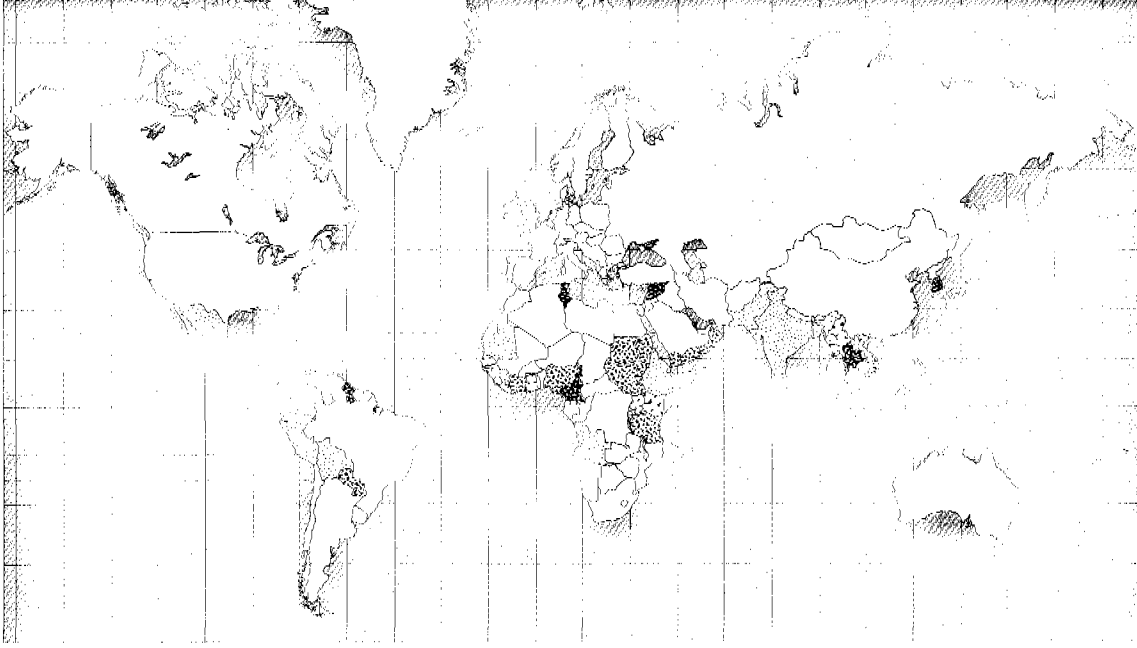


TABLE 7

Africa
Total Water Supply — Urban and Rural Combined
Coverage as a Percentage of Population Served

Country ¹	Population (in thousands)	0 - 25%	26 - 50%	51 - 75%	76 - 100%
Angola	10,002	—	35.7	—	—
Burundi	5,266	—	49.0	—	—
Chad	5,550	—	—	57.4	—
Cameroon	11,482	—	—	63.6	—
Comoros	468	—	—	69.5	—
Côte d'Ivoire	10,736	—	—	75.5	—
Djibouti	480	—	—	—	83.5
Equat. Guinea	356	—	34.7	—	—
Ethiopia	50,974	—	26.9	—	—
Ghana	14,200	—	—	60.6	—
Guinea Bissau	1,000	—	—	52.9	—
Kenya	24,398	—	48.6	—	—
Madagascar	11,200	22.9	—	—	—
Mali	8,100	—	41.3	—	—
Nigeria	108,016	—	—	63.0	—
Rwanda	7,800	—	—	64.0	—
Senegal	6,928	—	48.3	—	—
Sierra Leone	3,664	—	36.5	—	—
Sudan	24,600	—	47.6	—	—
Togo	3,496	—	—	59.6	—
Tunisia	7,900	—	—	—	92.2
Uganda	16,794	21.1	—	—	—
Total	333,410	2	9	9	2

¹ Countries which reported on 1990 baseline data for Safe Water Supply.

TABLE 8

Africa
Total Sanitation — Urban and Rural Combined
Coverage as a Percentage of Population Served

Country ²	Population (in thousands)	0 - 25%	26 - 50%	51 - 75%	76 - 100%
Angola	10,002	22.3	—	—	—
Burundi	5,266	19.4	—	—	—
Cameroon	11,482	—	—	—	91.0
Comoros	468	—	—	—	81.2
Côte d'Ivoire	10,736	—	—	60.4	—
Djibouti	480	—	—	55.2	—
Equator. Guinea	356	—	41.5	—	—
Ghana	14,200	—	50.6	—	—
Guinea/Conakry	5,542	20.9	—	—	—
Kenya	24,398	—	41.5	—	—
Nigeria	108,016	—	—	64.8	—
Rwanda	7,800	—	—	56.7	—
Sudan	24,600	—	—	74.8	—
Togo	3,496	23.2	—	—	—
Tunisia	7,900	—	—	—	95.3
Uganda	16,793	—	31.9	—	—
Total	251,535	4	4	5	3

² Countries which reported on 1990 baseline data for Sanitation.

TABLE 9

Latin America & the Caribbean
Total Water Supply — Urban and Rural Combined
Coverage as a Percentage of Population Served

Country ¹	Population (in thousands)	Population			
		0 - 25%	26 - 50%	51 - 75%	76 - 100%
Barbados	257	—	—	—	100
Belize	184	—	—	—	90.2
Bolivia	6,928	—	—	52.1	—
Brit. Virgin Is.	14	—	—	—	100
Costa Rica	2,940	—	—	—	93.2
Dominica	80	—	—	—	95.8
Ecuador	10,782	—	—	54.5	—
El Salvador	5,250	—	47.4	—	—
Guyana	775	—	—	—	83.2
Haiti	6,267	—	38.4	—	—
Honduras	4,880	—	—	63.6	—
Jamaica	2,400	—	—	—	100
Mexico	81,100	—	—	—	76.1
Montserrat	15	—	44.8	—	—
Nicaragua	3,807	—	—	53.2	—
Paraguay	4,280	—	34.9	—	—
St. Kitts & Nevis	34	—	—	—	100
Total	129,993	0	4	4	9

¹ Countries which reported on 1990 baseline data for Safe Water Supply.

TABLE 10

Latin America & the Caribbean
Total Sanitation — Urban and Rural Combined
Coverage as a Percentage of Population Served

Country ²	Population				
	(in thousands)	0 - 25%	26 - 50%	51 - 75%	76 - 100%
Barbados	257	—	—	—	100
Bolivia	6,928	—	26.5	—	—
Brit. Virgin.Is.	14	—	—	—	100
Costa Rica	2,940	—	—	—	97.4
Dominica	80	—	—	—	98.8
Ecuador	10,782	—	48.4	—	—
El Salvador	5,250	—	—	57.5	—
Guyana	755	—	—	—	96.7
Honduras	4,880	—	—	57.0	—
Jamaica	2,400	—	—	—	85.4
Mexico	81,100	—	50.2	—	—
Panama	2,300	—	—	—	84.3
Paraguay	4,280	—	—	62.0	—
Peru	22,332	—	—	57.5	—
St. Kitts & Nevis	34	—	—	—	98.5
Total	144,332	0	3	4	8

² Countries which reported on 1990 baseline data for Sanitation.

TABLE 11

Asia and the Pacific
Total Water Supply — Rural and Urban Combined
Coverage as a Percentage of Population Served

Country ¹	Population (in thousands)	Population			
		0 - 25%	26 - 50%	51 - 75%	76 - 100%
Afghanistan	17,600	—	—	—	99.2
Bangladesh	113,005	—	—	—	79.7%
Bhutan	1,200	—	34.2	—	—
Cambodia	8,134	—	36.3	—	—
China	1,143,330	—	—	—	79.1 ²
India	853,380	—	—	—	85.2
Indonesia	179,500	—	—	56.9	—
Iran	60,816	—	—	—	89.0
Laos	4,100	—	34.6	—	—
Maldives	213	—	49.4	—	—
Myanmar	40,100	—	32.1	—	—
Pakistan	116,000	—	—	56.1	—
Philippines	61,480	—	—	—	80.0
Rep. Korea	43,500	—	—	—	100
Sri Lanka	17,617	—	—	71.2	—
Thailand	55,888	—	—	—	95.4
Vietnam	64,400	—	41.9	—	—
Total	2,780,263	0	6	3	8

¹ Countries which reported on 1990 baseline data for Safe Water Supply.

² For China, only piped water was reported (excluding Mongolia).

TABLE 12

Asia & the Pacific
Total Sanitation — Rural and Urban Combined
Coverage as a Percentage of Population Served

Country ²	Population (in thousands)	Population			
		0 - 25%	26 - 50%	51 - 75%	76 - 100%
Bangladesh	113,005	20.0	—	—	—
Bhutan	1,200	13.0	—	—	—
Cambodia	8,134	14.4	—	—	—
India	853,380	16.2	—	—	—
Indonesia	179,500	—	38	—	—
Laos	4,100	11.4	—	—	—
Maldives	213	23.9	—	—	—
Myanmar	40,100	—	35.0	—	—
Pakistan	116,000	24.4	—	—	—
Philippines	61,480	—	—	70.6	—
Rep. Korea	43,500	—	—	—	100
Sri Lanka	17,617	—	—	60.2	—
Thailand	55,888	—	—	—	89.7
Vietnam	64,400	—	—	62.1	—
Total	1,558,517	7	2	3	2

² Countries which reported on 1990 baseline data for Sanitation.

TABLE 13

West Asia
Total Water Supply — Urban and Rural Combined
Coverage as a Percentage of Population Served

Country ¹	Population (in thousands)	Population			
		0 — 25%	26 — 50%	51 — 75%	76 — 100%
Jordan	6,082	—	—	—	89.0
Oman	1,468	—	—	54.4	—
Syrian Arab Rep.	12,113	—	—	—	84.0
Yemen	10,620	—	36.0	—	—
Total	30,283	0	1	1	2

¹ Countries which reported on 1990 baseline data for Safe Water Supply.

TABLE 14

West Asia
Total Sanitation — Urban and Rural Combined
Coverage as a Percentage of Population Served

Country ²	Population (in thousands)	Population			
		0 — 25%	26 — 50%	51 — 75%	76 — 100%
Oman	1,468	—	48.2	—	—
Syrian Arab Rep.	12,113	—	—	—	85.0
Yemen	10,620	—	—	65.2	—
Total	24,201	0	1	1	1

² Countries which reported on 1990 baseline data for Sanitation.

Annex V

Generic Guidelines for Developing Enhanced Sector Monitoring at Country Level

These generic guidelines were developed and recommended by the participants of the Regional Monitoring Workshops held in Jamaica, Swaziland and Benin.

Step One: *Review of Monitoring Systems*

Strategy:

Conduct a survey on the existing monitoring systems (routine and surveys) and identify strengths and weaknesses.

Key Indicators:

- List of key actors in the sector
- Status of coordination of monitoring mechanism
- Indication of existing types of information/data.

Assumptions:

- ◆ All actors are willing to cooperate
- ◆ Appropriate resources/capacity available.

Step Two: *Mobilize and sensitize key actors at all levels.*

Strategies:

Conduct a monitoring workshop at the national level to:

- Present and discuss findings of Step One.
- Develop recommendations for policy guidelines for implementation
- Explain importance of sharing information

Key Indicators:

- Commitment to a joint monitoring system.
- Agreement on who will participate in co-ordination.
- Recommendation on guidelines for implementation.

Assumption:

- ◆ Genuine commitment and clear understanding of the need for coordinated monitoring.

Step Three: *Strengthen/set up Coordination Committees at all levels.*

Strategies:

- Set up clear Terms of Reference (TORs).
- Institutionalize coordinating committees.
- Conduct monitoring workshops at different levels (see Step Two)

Key Indicators:

- Clear TORs.
- Work schedule for the coordinating committees.
- Develop TOR for focal point at different levels.

Assumption:

- ◆ Existing institutions have the responsibility and the capacity to implement the enhanced monitoring system.

Step Four: *Set up focal point(s) (Secretariat).*

Strategy:

Set up focal points in each sector (sanitation, social sectors, water, local government, etc.) at national level responsible for monitoring and coordination through **existing structures** for reporting to the National Coordination Committee (see Step Three).

Key Indicator:

- Sectorial information and data available regularly at the different levels.

Assumption:

- ◆ Relevant sector institution has the capacity, understands the need and is willing to play its part.

Set up focal points in each sector at national level responsible for monitoring and coordination through existing structures...

**Evaluate test results
and modify monitoring
system and Plan of
Action as necessary.**

Step Five: *Develop plan of action and identify resources.*

Strategies:

- Using Step One identify type of data required for each sector.
- Define monitoring actions/activities required.
- Quantify inputs necessary.
- Set time frames.

Key Indicators:

- Draft of the country specific monitoring system.
- Assessment of existing resources/workplans for all levels.

Assumption:

- ◆ Coordinating committees (comprising members of existing monitoring/surveillance structures) at different levels are in place and functioning.

Step Six: *Develop country specific monitoring system.*

Strategy:

Set up a sectoral/multi-sectoral working group to adapt existing monitoring systems to the requirements of the country — including WASAMS (which will then feed back into the WASAMS “core indicators”).

Key Indicators:

- Data collection formats that are simple but comprehensively developed and feed into the “core indicators” of WASAMS.
- Data Analysis system setup.
- Feedback mechanism in place.

Assumptions:

- ◆ Results of Step One obtained.
- ◆ Get the commitment of Focal Points in the sectors.
- ◆ Appropriate resources/capacity available/mobilized.

Step Seven: *Testing the Monitoring System.*

Strategies:

- Select pilot test sites at different levels for implementation.
- Evaluate test results and modify monitoring system and Plan of Action as (may be) necessary.

Key Indicator:

- Quality and reliability of data, timeliness and flow of information attained.

Assumption:

- ◆ Existence of “political will” and resources.

Step Eight: *Go to Scale! and continue to use the “Triple A” (Assessment, Analysis and Action) in a cyclical manner.*

Note: Most of the assumptions refer to capacity building and advocacy related constraints. These will have to be tackled through training and dialogue at different levels with the assistance of ESAs if required. 🌐

WHO/UNICEF Joint Monitoring Programme

The Water Supply and Sanitation Sector Monitoring Report 1990 (Baseline Year) provides a "benchmark" to measure progress of the water and sanitation sector in the 1990s. It also furnishes planners and policy makers (both country level and External Support Agencies) with fundamental information for enhanced planning, policy formulation, advocacy and support needs of the sector.

The publication contains preliminary data on sector coverage, management and funding, voluntarily provided by 70 governments out of approximately 130 countries invited to participate. This high return rate of 54 percent clearly indicates the wish by many governments to attract greater focus on the water and sanitation sector at country, regional and global levels.

The report draws from experience, crucial lessons learnt, achievements and constraints of the 1980s in an attempt to better develop a foundation for sector development approaches in the 1990s. In doing so, the report helps to better focus attention on the unserved and underserved, especially those impoverished populations living in marginal urban and rural areas of developing countries. To narrow the gap between the served and the unserved, the report highlights the need to more seriously promote the use of appropriate low-cost technologies in an attempt to accelerate the provision of a basic level of service to all mankind.

And finally, the report puts forward a framework for improved sector planning to help achieve accelerated sustainable service coverage in the shortest possible time-frame.

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The countries shown in colour on the front cover are those which responded to the WASAMS 1990 baseline survey.