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INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE. REPORT ON THE SITUATION IN THE REGION AT THE END OF THE DECADE

This document presents a summary of the manner in which the International Drinking Water Supply and Sanitation Decade 1981-1990 developed, of its achievements and limitations, and of the situation in the Region at the end of the Decade.

The onset of a cholera epidemic in Peru in February 1991, less than 40 days after the end of the Decade, confirms the concern expressed in this document that the expansion of coverage should be accompanied by rigorous control quality of the distributed water and by sanitarily acceptable disposal of wastewater. In this regard, a great deal remains to be done in the new Decade (1991-2000).

The Executive Committee can contribute to an increase in the level of awareness of the governments of the Member Countries concerning the importance to health and economic development, of improving the quality of drinking water, of protecting water resources, especially those used for drinking water supply, irrigation of edible crops, and of fishing and collection of seafoods.

The Executive Committee can also influence the governments so that high priority within development plans be given to the construction of water supply and sanitation works and to the protection of water resources as well as to strengthening of the institutions responsible for these services.

It should be noted that despite the great growth of the population experienced during the Decade in the Region of the Americas and of the economic crisis, the efforts developed during the Decade prevented a greater deterioration of the drinking water and sanitation services and have created a momentum that should be taken advantage of in the decade 1991-2000 for universal coverage as a way of achieving the goals of health for all by the year 2000.

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INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE.  
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I. INTRODUCTION

The United Nations Water Conference, Mar del Plata, Argentina, 1977 (1), recommended that the period 1981-1990 be designated the International Drinking Water Supply and Sanitation Decade (IDWSSD). The United Nations General Assembly welcomed the recommendation and, in special session held November 10, 1980, officially launched the Decade.

Resolution II of the U.N. Water Conference placed priority on providing all people with water of safe quality and adequate quantity and basic sanitary services by 1990, giving priority to the poor and the less favored and to areas where water is scarce (1).

The Plan of Action prepared by the U.N. Water Conference for achieving the above-mentioned aim identified priority areas and recommended actions at the national level and involving international cooperation, including the establishment of goals for 1990, and the development of national plans and programs for drinking water supply and sanitation, within the context of socioeconomic development plans. It also detailed other necessary initiatives.

As a part of its responsibilities in support of the countries and of monitoring of the progress of the IDWSSD, the Organization has promoted the evaluation of the Decade at the national level. For this purpose PAHO prepared and provided guidelines and support for the national evaluations. The specific objectives of the evaluation of the Decade at the national level were to analyze the situation of the water supply and sanitation sector; to promote planning for the development of the sector after the decade on the basis of the situation achieved; and to facilitate cooperation activities by external support agencies (international, bilateral, nongovernmental and others).

The results of the monitoring of the Decade and of the national evaluations have been incorporated in the present document, which presents a regional and subregional view.

II. ECONOMIC, DEMOGRAPHIC, SOCIAL, AND ENVIRONMENTAL CONTEXT DURING THE DECADE

There is a consensus that the deterioration of the economy of the countries in the 1980s has affected the quality of life.

In 1989 the economic growth of the Region continued to be slow, 0.7 (2). According to the Inter-American Development Bank, the Gross Domestic Product (GDP) increased by 12 percent during the Decade, while

the population growth was greater than this, and as a result per capita GDP declined by 8 percent, returning at the levels of 1978 (2). The external debt which was US\$330,000 million in 1982 has been estimated at US\$434,000 million in 1989, constituting a heavy burden for the countries.

In 1970, 25% of the urban (3) population lived in marginal urban areas in precarious conditions. This situation has worsened, and in many specific cases the marginal population makes up more than 60%.

The deterioration of the environment, and particularly of water resources, due to pollution by the large discharges of wastes produced by the population and the accelerated industrial and agricultural development, are affecting the availability of water of quality suitable for drinking, irrigation of crops, and other products destined for human consumption. This situation is forcing the use of increasingly distant water resources or requiring complex treatment processes, which reduce the reliability of the services and increases their cost.

### III. EVOLUTION OF THE SECTOR IN THE DECADE 1981-1990 IN LATIN AMERICA AND THE CARIBBEAN

The present analysis is based on information provided by 25 countries (with 94% of the total population) that participate in the system for monitoring the IDWSSD-PAHO/WHO. The information has been supplemented with evaluations made in 1990 in 21 countries, and is presented in Annexes I, II and III.

#### 3.1 National and Regional Goals

The goals for 1990, readjusted in view of social, political, and economic changes that have affected the Region are detailed in Annex II.

The goals of the countries are translated into the following regional goals for Latin America and the Caribbean:

- To provide drinking water to 87% of the urban population, 80% by means of household connections and 7% by means of public sources of reasonable access (200 meters from the dwelling).
- To provide drinking water to 62% of the rural population by means of household connections or reasonably accessible public sources.
- To provide sewage or excreta disposal services to 79% of the urban population, 55% by household connections and 24% by other means.
- To provide services of sewerage or sanitary disposal of excreta to 37% of the rural population.

### 3.2 Cost of the Decade

At the beginning of the Decade the countries of the Region, in addition to establishing national goals, also determined the costs involved. On the basis of those costs and the goals for coverage it was estimated that some US\$30,000 million would be required, in 1983 prices—approximately \$15,000 million for investments in water supply and \$15,000 million for sanitation. Of the total, 86% would go to urban areas and the balance (14%) to rural areas.

### 3.3 Improvements Achieved

The net increase in coverage has been calculated by estimating the difference at the end of 1980 and at the end of 1988. The following Table summarizes the regional situation and includes figures on population served as well as the increase in the population served.

Drinking water supply and Sanitation  
in Latin America and the Caribbean (25 countries)  
(Population in millions, 1980 and 1988)

Service	1980 POPULATION			1988 POPULATION			1980-1988 Increase
	Total	Served	% Served	Total	Served	% Served	
Urban Water	223.5	183.0	82	291.6	257.8	88	74.8
Rural Water	119.8	56.4	47	124.0	68.5	55	12.1
Urban Sanitation	223.5	174.2	78	291.6	234.7	80	60.5
Rural Sanitation	119.8	26.6	22.	124.5	39.8	32	13.2

The levels of coverage and of service in the base year (1980) and in 1988, and the goals for 1990 are summarized in Annexes V and VI.

Annex IV presents the external financing provided by the international financing agencies IBRD and IDB (which is estimated to represent 90% of the external funds set aside for the sector) as well as by some bilateral agencies and others during the period 1981-1989. Also included are national counterpart funds for loans. The accumulated loans

from IDB reached US\$2,400 million and those of the World Bank nearly \$2,000 million in current values for the ten years of the Decade. The loans from private banks, donations and technical cooperation, bilateral agencies, nongovernmental agencies, volunteer programs, and others are estimated at some \$600 million more making the total external investments some \$5,000 million during the Decade. Counterpart funds approximate \$4,000 million or a total of \$9,000 million in current values. National funds, at the ratio of 30% external to 70% national, should total more than double this, including counterpart funds. The information available does not make possible a more complete estimate in regional terms. There is knowledge, however, of many systems that were built through local initiatives and without the participation of external support or international financial agencies.

In general, it is estimated that in the peripheral urban areas, where the water services are intermittent, and in the small and medium systems, particularly in remote areas, standards of quality established by the countries are not fulfilled, and in general there is an inefficient use of water, with losses that in some cases amount to 50% of the water produced.

It is estimated that even in the countries with better services less than 10% of the sewerage systems have treatment installations.

The uncontrolled utilization of untreated wastewater for irrigation and other uses, a practice reported by several countries of the Region, generates sanitary hazards, especially because of the high content of pathogens, and possibly dangerous toxic substances and heavy metals.

The uncontrolled discharge of industrial wastes contributes heavy metals such as mercury, cadmium, lead, and a range of chemical substances to the watercourses, the air and the soil, which eventually can reach the food supply.

#### IV. IMPACT ON HEALTH

In the countries of Latin America and the Caribbean infant mortality rates are still high, compared to those of the industrialized nations. Between 1980-1985 these were: North America 12.0 per thousand live births, in Latin America they fluctuated between 41.8 and 69.7, and in the Caribbean the rate was 57.8 (4). The Plan of Action in order to achieve Health for All by the Year 2000, proposes that no country should register an infant mortality rate of more than 30 deaths per thousand births.

According to information available in 1988 on intestinal and poorly defined infections, these constituted the leading cause of death among children of less than one year of age in two of 23 countries that reported and the second cause of death in nine more countries. In the 1

to 4 year age group, eleven countries indicated them as the leading cause of death. This situation suggests deficiencies in the water supply, excreta disposal, and wastewater services, as well as the lack of community and personal hygienic practices, which is confirmed by reports of important increases in cases of diarrhea.

In February 1991, less than 40 days from the end of the Decade, a cholera epidemic appeared in the Peruvian coast, a greater incidence being evident in areas with poor sanitation.

## V. SUBREGIONAL COOPERATION AND IMPROVEMENTS ACHIEVED AT THE SUB-REGIONAL LEVEL

### 5.1 Central American Subregion - CAPRE

This subregion is made up of Belize, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua and Panama, which have constituted the Regional Coordinating Committee of Drinking Water and Sanitation Institutions of Central America.

Annex VII presents the water and sanitation coverage in the CAPRE countries through the Decade.

Only in cities with more than 100.000 inhabitants is there control of drinking water quality. In smaller communities there is no important control. A matter of concern is the general deterioration of the quality of water resources due to the increased use of agricultural chemicals (fertilizers and pesticides), to industrial discharges, and to the lack of sanitary disposal of wastewaters and solid wastes.

In the urban environment, less than 4% of the wastewaters are treated or disposed of in an acceptable fashion.

A continuous deterioration of the water resources has been observed, which makes it increasingly difficult to guarantee the safety of the water. This deterioration also accounts for the presence of many agricultural products for human consumption that are irrigated with waters whose concentration of bacteria exceeds the maximum concentrations tolerated by the guidelines of the World Health Organization.

### 5.2 Andean Subregion - ANDESAPA

This subregion is composed by Bolivia, Colombia, Ecuador, Peru and Venezuela.

Annex VIII summarizes the populations estimated in thousands for 1980, 1990 and 2000, as well as the water and sanitation coverage.

Despite the extremely serious economic problems that face the Andean countries, there is continued recognition of the importance of the

development of the water supply and sanitation sector as the key to both health improvement and economic development. However, political support is considered to be still limited. A great deal remains to be done in order to reach the desired coverage and level of service. Recently the water supply and sanitation institutions of the subregion decided to coordinate their efforts and have initiated the process of forming a subregional mechanism, the Andean Association of Drinking Water Supply and Sewerage Agencies (ANDESAPA), which will provide great support in the future.

### 5.3 Caribbean Subregion - CARICOM

The countries in the English-speaking Caribbean associated with the Caribbean Community (CARICOM) had, at the beginning of the decade, a population of approximately five million inhabitants. Eighty-six percent (86%) of the population was concentrated in five countries, Bahamas, Barbados, Guyana, Jamaica, and Trinidad and Tobago. Annex IX presents data on population and coverage in water and sanitation.

Although a considerable level of progress in water supply has been achieved, this is not the case in the coverage of sewerage services.

Despite the limitation of sewerage services, the general coverage of sanitation in the urban and rural areas continues to be high in particular through individual systems. A coverage above 80% is noted in both urban and rural areas in all the countries. A significant improvement in the sanitary means of disposal of excreta is noted in Grenada and Montserrat, which increased their coverage to 85% and 92% respectively. However, several areas with deficient sanitation in urban as well as in rural areas continue to be transmission foci for diarrheal diseases, in particular in Dominica, where typhoid fever remains prevalent.

## VI. EVALUATION OF THE IDWSSD AND ITS LIMITATIONS

### 6.1 Political Commitment and Priority of the Sector

In the evaluations of 1990, most of the countries indicate that the low priority given to the development of the sector is an important limitation. At the same time, the countries that have been successful in obtaining or keeping high priority indicate that in order to obtain the necessary political support, it is important to identify the needs and to provide the authorities with complete diagnoses so that they can establish real policies and objectives.

### 6.2 Organization of the Sector and Institutional Development

Many of the institutions of the sector suffer from restrictions of diverse nature and several of the problems they face are due to inappropriate organization, as well as to the inefficiency of the institu-



tions themselves. In several countries this situation results in duplications or gaps in responsibilities, the inefficient use of the available resources, as well as difficulties in coordination with other institutions and sectors. In addition, little attention is given to the areas of planning, administration, financing, marketing, operations, maintenance, and human resources.

In almost all the countries of the Region it is recognized that the lack of trained and updated personnel is an important limitation in the institutions of the sector, including at the managerial levels, which is more severe in some countries than in others.

During the Decade, the capacity for academic training increased significantly, mainly in the area of sanitary and environmental engineering. Many water and sanitation companies have carried out efforts to institutionalize an internal capacity to develop human resources as an integral part of their institutional development.

### 6.3 Planning

Several countries have made progress in planning and in project preparation, but as in the case of the sectoral plans, greater attention is still given to the engineering aspects and less to financial, socio-economic, and institutional analyses. Indeed, some countries consider that the lack of capacity to prepare projects in accordance with the requirements of the external aid agencies has been a serious impediment to obtaining loans.

An important limitation to planning continues to be the lack of pertinent, timely, and sufficient information that permits the analysis and the quantification of the problems in order to seek the effective fulfillment of the long-, medium-, and short-term objectives of the institution, as well as of the mechanisms of evaluation and feedback of the process.

### 6.4 Financing

The lack of financing continues to be one of the restrictions that most affect the development of the sector. Traditionally, in almost all the countries, investments have depended to a great extent on state allocations, which, in light of the economic crisis, are now more difficult to obtain.

In order to ensure the financial viability of the institutions, it is necessary to recover costs. For this purpose, rates constitute the basic resource, and the institutions should be able to establish adequate and socially just rates.

## 6.5 Operation and Maintenance

In general, there is lack of programs for operation and maintenance, and for information on consumption, on the operation of the installations, operational costs, inventories, etc.

Water losses in the supply systems, together with inefficient use of water, or its use without an awareness of the need for conservation, damage the economy of the companies and impose unnecessary demands on water resources, deteriorating quality without benefitting anyone.

Another aspect that has deserved attention from the economic and institutional point of view, is the rehabilitation of the systems and their optimum utilization since this can result in savings deriving from better returns on the investments made, by postponing new expansions and investments, and by providing better services.

## 6.6 Technology

From the beginning of the Decade it was estimated that the traditional technologies from developed countries alone would not suffice to achieve the goals, due to their high cost. For this reason, it was recommended that appropriate technologies be developed and applied that are adapted to local conditions and make possible a substantial reduction of costs, that are easier to operate and maintain, and that utilize as far as possible local materials and labor.

## 6.7 Community and Women's Participation

The Decade included the participation of women and of the community as important elements for the development of the services. However, community participation in the urban areas in nearly all the countries has been limited or absent. Only in some cases, as in Bolivia, are there cooperatives in which the community, including women, participates through the Administration and Surveillance Council. In Colombia, the Water and Sewerage Company, through the Division of Community Action, is making efforts, with the participation of the population of the marginal neighborhoods to provide water and sewerage services. In Costa Rica, Haiti and Paraguay, important efforts have been made to incorporate community and women's participation in the water and sanitation services.

## 6.8 Health Education

At the end of 1988, at least 18 countries of the Region reported that health education activities in general were insufficient, and eight of these countries considered that this deficiency was serious. Nine countries indicated that health education was taught in the schools and, of these, five countries reported that the subject of health education was part of the normal curriculum. The type of activities, as well as their intensity and frequency varies considerably among the countries; notable efforts have been made in some, while in others they have not yet been initiated.

## 6.9 Link to Primary Health Care

Seven countries indicate that in the urban marginal areas the projects are designed, planned, carried out, and integrated with other components of primary health care. Another six countries report that activities are not coordinated. However, most of the countries consider that better coordination or integration is necessary, and an attempt is being made to achieve this through new efforts to strengthen the local health systems (SILOS).

## VII. STATUS OF THE HYDRAULIC RESOURCES

Fifteen countries expressed concern about the situation of the water resources, and of these, three considered the situation as serious. In several countries pertinent, sometimes extensive, legislation has been approved, and prevention and control activities have been carried out, but these have not been sufficient. Some countries have made an effort to improve the management of their water resources, among which are Colombia, Costa Rica, and El Salvador (5).

## VIII. INTERNATIONAL COOPERATION

### 8.1 Cooperation Among Countries

The most notable examples of cooperation among countries can be found in the subregions, especially in Central America, where CAPRE was consolidated during the course of the Decade, permitting the establishment of procedures for cooperation among the countries. One of the activities that has been solidified under CAPRE is a mid-level manpower training project, concentrating efforts in the field of control of losses. The formation of ANDESAPA is another example of cooperation among water supply and sanitation agencies at the subregional level.

The Project for the Caribbean Water Basin Management, which at the outset of the IDWSSD was managed by the Caribbean Development Bank, has become a forum for discussing problems and a mechanism for direct cooperation among the institutions of the countries.

At the regional level, the Inter-American Association of Sanitary Engineering and Environmental Sciences (AIDIS) has been strengthened and has improved its organization so as to fulfill its objectives of promoting the development of environmental health.

### 8.2 External Support Agencies

Thirty-one external support agencies report they have given assistance to the countries of Latin America and the Caribbean during the Decade. The external support community includes 13 bilateral agencies, 8 multilateral, and 10 nongovernmental organizations (NGO). The two most

important financial agencies for the sector are the World Bank and the Inter-American Development Bank (IDB). Among the bilateral agencies, the most active are the Canadian International Development Agency (CIDA); the Society of Technical Cooperation (GTZ) and the Kreditanstalt für Wiederaufbau (KfW) of the Federal Republic of Germany; and the Agency for International Development of the United States (USAID).

Several consultative meetings have been held in the Region on mobilization of resources, at the regional and intercountry levels, and in some countries with the support and active participation of international and bilateral cooperation agencies (see Annex X). Annex IV shows the financial cooperation received from some of them. In general, the international cooperation agencies support the work in the period after the Decade and believe that the momentum developed during the IDWSSD should be maintained.

### 8.3 The Role of PAHO/WHO

PAHO and WHO, in their desire to support achievement of the goals of the IDWSSD, identified the obstacles of the past and defined a new approach and new strategies for action, which were incorporated by the Directing Council of PAHO into the Regional Plan of Action in 1981.

Based on the stated approach and strategies, PAHO, through its Environmental Health Program, was concerned mainly with promoting and supporting the preparation of national plans and programs, the identification and implementation of projects, and the strengthening of national institutions and capacities; the exchange of information, especially concerning appropriate technology, and other aspects that facilitate coordination and technical cooperation; surveillance and evaluation of the progress of the Decade; mobilization of external resources intended especially for the preparation and implementation of national plans and programs, for institutional strengthening, and for the training and enhancement of human resources.

PAHO played an important role in the promotion of the objectives and goals of the Decade and collaborated with the countries in the preparation of the national plans of action for the Decade, as well as in their promotion. During the Decade, PAHO sponsored four regional symposia that were held in the weeks prior to the AIDIS Congresses of 1982, 1984, 1986 and 1990, on the following subjects related to the Decade: 1) Human Resources; 2) Water and Sanitation in Marginal Urban Areas; 3) Water and Sanitation as an Element of Primary Health Care; and 4) Evaluation of the Decade. In addition, PAHO supported country and subregional consultative meetings on the Decade in the countries, and at the subregional level in the English Caribbean, Central America and the Andean countries. Invited to these meetings were bilateral and multinational external support agencies, with which regional and global meetings were also held to define strategies to facilitate the fulfillment of the proposed goals. PAHO developed a regional system of surveillance and evaluation, which was linked to the global system developed by WHO,

which made it possible to obtain valuable regional information; but its principal goal was to strengthen the management information systems at the country level and to facilitate development of the programs and plans of the Decade.

An achievement during the Decade was the development of REPIDISCA, operated by PAHO, which facilitates access to technical and scientific information.

## IX. CONCLUSIONS AND RECOMMENDATIONS

Two important meetings were held in September 1990, to review the events of the Decade of 1980 with respect to water and sanitation. One meeting took place in New Delhi, India, in which a global evaluation of the Decade was made. The other meeting was in San Juan, Puerto Rico, in which there was an evaluation of the Decade in the American Region.

Analyzing the two summaries of both meetings that are presented below, one can confirm the concordance that exists between the global and regional conclusions and recommendations.

### 9.1 Declaration of New Delhi

A safe water supply and adequate disposal of wastes are priority items in order to relieve poverty and to protect the environment. Their provision with broad community participation in the management of the services should be a priority goal for the Decade of 1990.

The optimization of coverage in water supply and sanitation in a sustained manner will require a political commitment that makes it possible to apply and to take advantage of the many lessons learned during the Decade (1981-1990). The use of appropriate technologies, combined with the management of the services by the communities themselves, will reduce the costs of investment and will ensure that the services are more sustained. In this way the countries can increase coverage with socially acceptable standards that facilitate obtaining the services within the possible levels of investment.

Despite the effort made during the Decade, in 1990 a third of the population of the developing countries of the world lacks these basic services.

At the outset of the 1990s, the cities continue to have a unprecedented growth and in many of them the infrastructure is overloaded to the point of collapse. Uncontrolled pollution introduces a factor that further compromises this difficult situation and aggravates the competition for the increasingly limited and expensive water resources. Without new approaches this problem can become an unmanageable crisis.

In order to provide services for all it is necessary:

- To reduce costs by half and to double investments in this new Decade.
- To protect the environment through water conservation (and reduction of costs), rational use of the resource, and its efficient use and sanitary recycling.
- To reorient the institutional structures, change the attitudes, and achieve the participation of women at all levels of the sector and of the institutions.
- To involve the community in the management, operation, and maintenance of the facilities.
- To follow sound financial practices, to improve the administration and operation of the systems, and to utilize appropriate technologies.

## 9.2 Declaration of Puerto Rico

The participants recognized that the efforts during the IDWSSD made important contributions for the future development of the sector, which presents a weakness that results from multiple causes of an administrative, economic, financial, technical, and sociocultural character. Among the principal reasons for the weakness of the sector are its inadequate organization and the lack of sectoral planning; the failure to recover investments; the lack of trained personnel; the lack of promotion of research and of development and application of appropriate technologies. It was also acknowledged that population growth and economic development are inducing a deterioration of the water resources and a greater demand for water that makes a more efficient use of this resource imperative.

The participants recommended that:

- In the national development plans, a high priority be given to the sectoral plan for drinking water and sanitation and that national water and sanitation systems be established, coordinating the state, regional, municipal, and community levels.
- Programs for efficient use and water conservation be introduced, giving preferential attention to the control of losses and to the full use of the infrastructure.
- The responsible authorities ensure surveillance of the water quality and carry out epidemiological studies of the effects of the water pollution on health.

- Preferential attention be given to the extension of the services for sewerage and sanitary disposal of wastewater, as well as to its reuse in accordance with sanitary criteria.
- Special attention be given to the population groups with limited resources that live in marginal urban and rural areas.
- The criterion for justice be reaffirmed according to which payment matches consumption, rates cover costs, and unjustifiable subsidies that are sometimes granted to those who do not need them be eliminated.
- Comprehensive management of the watersheds, water conservation, control of water pollution, and the protection of the environment be promoted.
- Management practices be evaluated, utilizing indicators that take into account efficiency and commercial effectiveness and the technical aspects, including the protection of water resources.
- The associations of companies and professionals linked to the sector participate more actively in its improvement and in the improvement of the personnel in their service.
- The external support agencies extend their cooperation and streamline their regulations and requirements for the concession of loans; and that the Pan American Health Organization increase its support for the sector in harmony with the spirit of this Declaration.

### 9.3 Plan of Action 1991-2000

Taking into account the lessons learned during the Decade and the results of the intense evaluation carried out at the national as well as at the regional level, a Plan of Action 1991-2000 is being developed for the purpose of recapturing the spirit of Mar del Plata and ensuring the continued determination to fulfill its goals, as well as to continue developing the sector during the 1990s and to translate the recommendations of the Conferences of New Delhi and Puerto Rico into effective programs. The Plan of Action should include five priority areas and numerous measures of support that have been identified within the efforts for coordination that the health institutions and the water and sanitation agencies should make:

- Efficient use of water. Water is a precious resource and its use should take this into account. This can require changes in policies, financing practices, and public attitudes. Programs for the control of water that is not accounted for should be strengthened to prevent losses and waste.

- Control of water quality. Effective measures of reasonable cost will be sought so as to guarantee the quality of water for human consumption. At the same time, the necessary sanitation and pollution-control measures will be taken to protect water resources, both surface and underground, with high priority being given to the resources used for water supply for human consumption, irrigation of edible crops and oyster beds and other areas where shellfish used for human consumption are obtained.
- Water supply and sanitation priority in the high-risk areas. Special emphasis will be placed on the marginal urban areas and other communities where there is high exposure to epidemic diseases.
- Sanitary disposal of excreta and wastewater. Fulfillment of the directives on use of wastewater in agriculture and hydroponics will be sought. Special attention should be given to the treatment and sanitary disposal of wastewaters.
- Institutional and human resource development. Should be accompanied by a strengthening in managerial information and in technical and scientific information in order to facilitate the transfer and adaptation of appropriate technologies that help the development of the programs.

Setting the Plan of Action in motion will require a very effective mobilization of resources. From the perspective of the countries, both the policy makers and the planners should be committed with the Sector in a joint effort to improve health and the quality of life. The support of the local nongovernmental institutions and of the private sector will continue to be essential to the continuation of the program.

From the international point of view efforts are being made to strengthen the cooperation of the international community and of the external support agencies. In this regard PAHO/WHO, the United Nations Development Program, the World Bank, UNICEF, the Inter-American Development Bank, the Caribbean Development Bank and the bilateral agencies are considering their participation in the implementation of the Plan. Coordinating mechanisms have been established through the Collaborating Council of the External Support Agencies.

The strategies to carry out the Plan of Action will take into account the opportunity presented by the subregional initiatives for the promotion and coordination of the actions, which will be adjusted to the characteristics of each country.

Once the Plan is completed, it will be distributed to the countries for discussion and approval. At the country level, as well as at the subregional and regional levels, there will be appropriate mechanisms for the control, monitoring, and continuous review of the Plan.



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Annexes

# **ANNEXES**

INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE  
POPULATION SERVED WITH WATER SUPPLY, SEWERAGE AND SANITARY EXCRETA DISPOSAL SERVICES  
AS OF DECEMBER 1980\*\* (BASE YEAR FOR DECADE)

COUNTRY	POPULATION			DRINKING WATER SUPPLY						SEWERAGE AND EXCRETA DISPOSAL									
	TOTAL	URBAN	RURAL	TOTAL POPULATION SERVED		URBAN POPULATION SERVED				RURAL POPULATION SERVED		TOTAL POPULATION SERVED		URBAN POPULATION SERVED				RURAL POPULATION SERVED	
				TOTAL	%	HOUSE CONNec- TION	EASY ACCESS	TOTAL	%	TOTAL	%	TOTAL	%	HOUSE CONNec- TION	OTHERS	TOTAL	%	TOTAL	%
ARGENTINA	27947	23193	4754	14818	53	13380	651	14031	60	787	17	20208	72	8184	10375	18559	80	1649	35
BAHAMAS	208	108	100	108.*	52.*	89	19	108	100	0.*	0.*	102.*	49.*	12	90	102	94	0.*	0.*
BARBADOS	245	79	166	241	98	77	2	79	100	162	78	64.*	26	N/A	37	37.*	47.*	27	16
BELIZE	146	73	73	99	68	45	28	73	100	26	36	126	68	29	42	71	98	55	75
BOLIVIA	5599	2489	3110	2044	37	599	1129	1728	69	316	10	1034	18	580	337	917	37	117	4
BRAZIL	119098	80510	38588	92729	78	64609	2400	67009	83	25720	67	79696	67	28478	37106	65584	81	14112	37
CHILE	11199	9071	2128	9135	82	8125	765	8890	98	245	12	8891.*	79	5991	2900	8891	98	0.*	0.*
COLOMBIA	25000	16000	9000	23110	92	11840	4160	16000	100	7110	79	16369	65	9760	6240	16000	100	369	4
COSTA RICA	2217	1330	887	2057	93	1303	27	1330	100	727	82	2083	94	465	864	1329	100	754	85
DOMINICAN REPUBLIC	5431	2752	2679	3228	59	1643	688	2331	85	897	33	1101	20	691	300	991	36	110	4
ECUADOR	81233	3825	4298	3872	48	2769	252	3021	79	851	20	3539	44	2291	509	2800	73	739	17
EL SALVADOR	4529	1899	2630	2330	51	1171	110	1281	67	1049	40	2127	47	914	525	1439	76	688	26
GUATEMALA	7260	2690	4570	3231	44	1377	1026	2403	89	828	18	2135	29	945	270	1215	45	920	20
GUYANA	793	389	404	631	80	350	39	389	100	242	60	673	85	67	283	350	90	323	80
HAITI	4913	1199	3714	894	18	332	281	613	51	281	8	871	18	0	498	498	42	373	10
HONDURAS	3674	1319	2355	1882	51	936	225	1161	88	721	31	1664	45	781	242	1023	78	641	27
JAMAICA	2143	1000	1143	1425	66	325	650	975	97	450	39	115.*	5.*	115	N/A	115.*	12.*	0.*	0.*
MEXICO	69600	46100	23500	49446	71	23255	14825	38080	83	11366	48	34104	49	20804	12618	33422	73	682	3
NICARAGUA	3272	1873	1399	1059	32	973	12	985	53	74	5	474.*	14.*	474	N/A	474.*	25.*	0.*	0.*
PANAMA	1920	945	975	1547	81	838	107	945	100	602	62	1358	71	618	162	780	83	578	59
PARAGUAY	3681	1295	2386	650.*	18.*	488	N/A	488.*	38.*	162	7	1525	41	341	400	741	57	784	32
PERU	16812	10205	6607	8129	48	5817	1102	6919	68	1210	18	5868	35	5602	242	5844	57	24	0
SURINAME	352	100	252	300	85	98	2	100	100	200	79	300	85	15	85	100	100	200	79
TRINIDAD & TOBAGO	1096	700	396	1070	98	550	150	700	100	370	93	1015	93	165	500	665	95	350	88
URUGUAY g/	2939	2439	500	2365	80	2190	163	2353	96	12	2	1741	59	356	1086	1442	59	299	60
VENEZUELA	15024	11887	3137	13014	87	9804	1200	11004	93	2010	64	13638	91	7217	3607	10824	91	2814	90
TOTALS	343221	223470	119751	239414	70	152983	30013	182996	82	56418	47	200821	59	94895	79318	174213	78	26608	22

26 Countries.

\* Insufficient Data

\*\* Data adjusted according to information provided by the countries in 1983, 1985, 1987, and 1988.

g/ Base information not available, 1983 data utilized.

N/A Information Not Available

1. In case where information not provided by countries, best available information from other sources used.
2. Due to insufficiency of data, discrepancies exist in the regional totals and percentages.
3. Easy access is defined as a public water fountain at 200 meter or less from the home.

INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE  
POPULATION EXPECTED TO HAVE WATER SUPPLY, SEWERAGE AND SANITARY EXCRETA DISPOSAL SERVICES  
AT THE END OF 1990\*\*, ACCORDING TO GOALS ESTABLISHED BY 25 COUNTRIES (DECADE GOALS)  
(POPULATION IN THOUSANDS)

COUNTRY	DRINKING WATER SUPPLY						SEWERAGE AND EXCRETA DISPOSAL												
	POPULATION			TOTAL POPULATION SERVED	URBAN POPULATION SERVED				RURAL POPULATION SERVED		TOTAL POPULATION SERVED	URBAN POPULATION SERVED				RURAL POPULATION SERVED			
	TOTAL	URBAN	RURAL	TOTAL	%	HOUSE CONNec- TION	EASY ACCESS	TOTAL	%	TOTAL	%	TOTAL	%	HOUSE CONNec- TION	OTHERS	TOTAL	%	TOTAL	%
ARGENTINA	32899	27744	5155	23249	71	22159	0	22159	80	1090	21	21635	66	19421	0	19421	70	2214	43
BAHAMAS	254	170	84	170.*	67.*	165	5	170	100	0.*	0.*	170.*	67.*	70	100	170	100	0	0.*
BARBADOS	255	89	166	254	100	88	1	89	100	165	99	22.*	9.*	22	N/A	22	25.*	0.*	0.*
BELIZE	180	90	90	130	72	85	5	90	100	40	44	115	64	60	30	90	100	25	28
BOLIVIA	7314	3665	3649	4759	65	3068	231	3299	90	1460	40	4392	60	1366	1566	2932	80	1460	40
BRAZIL <sup>a/</sup>	150368	112744	37624	135217	90	101469	1015	102484	91	32733	87	118778	79	50735	49607	100342	89	18436	49
CHILE	12960	11016	1944	11308	87	10748	0	10748	98	560	29	9307	72	9174	0	9174	83	133	7
COLOMBIA	32500	23000	9500	28400	87	15200	5200	20400	89	8000	84	21850	67	13200	7000	20200	88	1650	17
COSTA RICA	2801	1681	1120	2606	93	1647	34	1681	100	925	83	2745	98	1261	420	1681	100	1064	95
DOMINICAN REPUBLIC	7169	4230	2939	4994	70	2961	1269	4230	100	764	26	2981	42	1481	500	1981	47	1000	34
ECUADOR	10782	5977	4805	7492	69	4899	191	5090	85	2402	50	7483	69	4178	903	5081	85	2402	50
EL SALVADOR	5252	2453	2799	2194	42	1804	110	1914	78	280	10	3175	60	1460	675	2135	84	1040	37
GUATEMALA	9197	3676	5521	6737	73	2741	683	3424	93	3313	60	6737	73	2108	1316	3424	93	3313	60
GUYANA	840	412	428	810	96	374	36	410	100	400	93	807	96	70	330	400	97	407	95
HAITI	5774	1713	4061	3820	66	639	731	1370	80	2450	60	3820	66	250	1120	1370	80	2450	60
HONDURAS	4879	2137	2742	4391	90	1923	0	1923	90	2468	90	3861	79	1603	64	1667	78	2194	80
MEXICO	89500	63500	26000	64907	73	49599	3848	53447	84	11460	44	45575	51	38777	4118	42895	68	2680	10
NICARAGUA	3966	2310	1656	2054	52	1486	270	1756	76	298	18	808.*	20.*	808	N/A	808.*	35.*	0.*	0.*
PANAMA	2377	1157	1220	2194	92	1041	116	1157	100	1037	85	1959.*	82.*	983	N/A	983.*	85.*	946	80
PARAGUAY	4077	1651	2426	1389	34	1110	38	1148	70	241	10	3539	87	565	1029	1594	97	1945	60
PERU	22332	14865	7467	13170	59	6300	1970	8270	56	4900	66	12520.*	56.*	5850	2200	8050	54	0.*	0.*
SURINAM	550	300	250	540.*	98.*	300	N/A	300.*	100.*	0.*	0.*	430.*	78.*	230	N/A	230.*	77.*	0.*	0.*
TRINIDAD & TOBAGO	1260	880	380	1220	97	800	80	880	100	340	89	1250	99	250	630	880	100	370	97
URUGUAY	3050	2666	384	2746.*	90.*	2322	40	2362	89	0.*	0.*	1096.*	36.*	906	N/A	906.*	34.*	190	49
VENEZUELA	19735	16855	2880	19730	100	15230	1620	16850	100	2880	100	16130.*	82.*	13710	N/A	13710	81.*	2420	84
TOTALS	432071	304981	125290	344481	80	248158	17493	265651	87	78206	62	291185	68	168538	71608	240156	79	46369	37

25 Countries.

\* Insufficient Data.

\*\* Data adjusted according to information provided by the countries in 1983, 1985, 1987, and 1988.

a/ No goals were established for water supply through easy access and excreta disposal through other means, in urban areas, or water supply and excreta disposal in rural areas. To get a more realistic situation 1988 coverage was utilized as goals.

N/A Information Not Available.

1. In case where information not provided by countries, best available information from other sources used.
2. Due to insufficiency of data, discrepancies exist in the regional totals and percentages.
3. Easy access is defined as a public water fountain at 200 meter or less from the home.

INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE  
POPULATION SERVED WITH WATER SUPPLY, SEWERAGE AND SANITARY EXCRETA DISPOSAL  
DATA OF PROGRESS ACHIEVED AS OF DECEMBER 1988\*\*  
(POPULATION IN THOUSANDS)

COUNTRY	POPULATION			DRINKING WATER SUPPLY								SEWERAGE AND EXCRETA DISPOSAL											
	TOTAL	URBAN	RURAL	TOTAL POPULATION SERVED				URBAN POPULATION SERVED				RURAL POPULATION SERVED	TOTAL POPULATION SERVED				URBAN POPULATION SERVED				RURAL POPULATION SERVED		
				HOUSE CONNec- TION	EASY ACCESS	TOTAL	%	HOUSE CONNec- TION	EASY ACCESS	TOTAL	%		TOTAL	%	HOUSE CONNec- TION	OTHERS	TOTAL	%	HOUSE CONNec- TION	OTHERS		TOTAL	%
ARGENTINA	31074	26219	4855	18208	1763	19971	64	18208	944	19152	73	819	17	10261	17379	27640	89	10261	15958	26219	100	1421	29
BAHAMAS a/	241	136	105	126	114	240	100	126	9	135	99	105	100	22*	114*	136*	56*	22	114	136	100	0*	0*
BARBADOS b/	253	89	164	87	165	252	100	87	2	89	100	163	99	18*	24*	42*	17*	18	24	42	47	0*	0*
BELIZE	175	90	85	70	65	135	77	70	5	75	83	60	71	20	107	127	73	20	55	75	83	52	61
BOLIVIA	6928	3471	3457	2311	898	3209	46	2311	374	2685	77	524	15	1394	960	2354	34	1394	520	1914	55	440	13
BRAZIL	14426	106587	37839	96577	42252	138829	96	96577	9832	106409	100	32420	86	45000	68155	113155	78	45000	49896	94896	89	18259	48
CHILE	12748	10497	2251	10287	672	10959	86	10287	210	10497	100	462	21	8654	1983	10637	83	8654	1843	10497	100	140	6
COLOMBIA	31200	22100	9100	14500	12800	27300	88	14500	4900	19400	88	7900	87	12000	8300	20300	65	12000	6700	18700	85	1600	18
COSTA RICA	2866	1719	1147	1685	997	2682	94	1685	34	1719	100	963	84	722	2063	2785	97	722	997	1719	100	1066	93
DOMINICAN REPUBLIC	6866	4038	2828	1913	1624	3537	52	1913	820	2733	68	804	28	882	3220	4102	60	882	2209	3091	77	1011	36
ECUADOR	10203	5529	4674	3963	1918	5881	58	3963	190	4153	75	1728	37	3441	2317	5758	56	3441	719	4160	75	1598	34
EL SALVADOR	5032	2349	2683	1672	379	2051	41	1672	110	1782	76	269	10	1339	1706	3045	61	1339	671	2010	86	1035	39
GUATEMALA	8681	3287	5394	2393	2830	5223	60	2393	608	3001	91	2222	41	1617	3325	4942	57	1617	741	2358	72	2584	48
GUYANA	756	246	510	196	413	609	81	196	34	230	95	379	74	70	577	647	86	70	138	208	85	439	86
HAITI	5562	1581	3981	474	1851	2325	42	474	403	877	55	1448	36	0	1228	1228	22	0	650	650	41	578	15
HONDURAS	4625	1947	2678	1600	1747	3347	72	1600	140	1740	89	1607	60	1178	1709	2887	62	1178	539	1717	88	1170	44
MEXICO	89500	63500	26000	47000	14498	61498	69	47000	3928	50928	80	10570	41	33518	6917	40435	45	33518	4689	38207	60	2228	9
NICARAGUA	3622	2109	1513	1436	492	1928	53	1436	206	1642	78	286	19	685*	0*	685*	19*	685	N/A	685*	32*	0*	0*
PANAMA	2282	1111	1171	1063	823	1886	83	1063	48	1111	100	775	66	805	1104	1909	84	805	305	1110	100	799	68
PARAGUAY	3900	1733	2167	866	420	1286	33	866	260	1126	65	160	7	437	1810	2247	58	437	510	947	55	1300	60
PERU	21256	13890	7366	8679	3743	12422	58	8679	2100	10779	78	1643	22	7640	1223*	8863*	42*	7640	N/A	7640*	55*	1223	17
SURINAME	395	296	99	2	282	284	72	2	229	231	78	53	54	9	212	221	56	9	178	187	63	34	34
TRINIDAD & TOBAGO	1230	840	390	730	450	1180	96	730	110	840	100	340	87	250	970	1220	99	250	590	840	100	380	97
URUGUAY	2990	2607	384	2387	152	2539	85	2387	132	2519	97	20	5	1436	370	1806	60	1436	119	1555	60	251	65
VENEZUELA a/	18757	15604	3153	12142	4614	16756	89	12142	1814	13956	89	2800	89	10611	6719	17330	92	10611	4509	15120	97	2210	70
TOTALS	415568	291575	123994	230367	95962	326329	79	230367	27442	257809	88	68520	55	142009	132492	274501	66	142009	92674	234683	80	39818	32

25 Countries.

a/ Base information not available, 1983 data utilized.

\* Insufficient Data.

b/ 1985 data utilized.

\*\* Data adjusted according to information provided by the countries in 1987 and 1988

N/A Information Not Available.

- 1 In case where information not provided by countries, best available information from other sources used.
- 2 Due to insufficiency of data, discrepancies exist in the regional totals and percentages.
- 3 Easy access is defined as a public water fountain at 200 meter or less from the home.

**INVESTMENTS AND TECHNICAL COOPERATION FUNDS, IN WATER SUPPLY, SEWERAGE, AND  
EXCRETA DISPOSAL IN LATIN AMERICA AND THE CARIBBEAN  
(CURRENT VALUES US\$ - MILLIONS)**

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990*	TOTAL 1981-1990
Inter-American Development Bank (IDB)	191.8	265.3	245.3	340.8	141.0	351.3	419.4	422.0	30.9	N/A	2,407.80
International Bank for Reconstruction and Development (IBRD)	346.5	40.6	424.2	28.6	163.8	175.0	64.0	252.3	320.0	124.7	1,939.70
Caribbean Development Bank (CDB)	1.6	2.6	0.2	12.5	0.0	5.3	1.0	7.7	7.3	7.5	45.70
Canadian International Development Agency (CIDA)	6.5	0.1	22.6	15.9	4.4	9.1	4.4	0.0	0.0	0.0	63.00
AID	13.2	13.4	26.6	16.2	18.3	2.5	1.3	20.1	-	-	111.60
GTZ	-	-	-	7.8	14.4	22.3	4.0	10.6	9.5	4.8	73.40
Others**											
<b>Total by Years</b>	<b>559.60</b>	<b>322.00</b>	<b>718.90</b>	<b>421.80</b>	<b>341.90</b>	<b>565.50</b>	<b>494.10</b>	<b>712.70</b>	<b>367.70</b>	<b>137.00</b>	<b>4,641.20</b>
<b>National Counterpart Funds for Projects:</b>											
- IDB	99.7	167.2	270.0	493.1	82.7	387.7	348.7	663.8	9.1	N/A	2,522.00
- IBRD	N/A	N/A	N/A	25.7	260.1	168.6	50.0	405.9	339.0	77.7	1,327.00
<b>Total Counterpart Funds</b>	<b>99.70</b>	<b>167.20</b>	<b>270.00</b>	<b>518.80</b>	<b>342.80</b>	<b>556.30</b>	<b>398.70</b>	<b>1,069.70</b>	<b>348.10</b>	<b>77.70</b>	<b>3,849.00</b>
<b>GRAND TOTAL</b>	<b>659.30</b>	<b>489.20</b>	<b>988.90</b>	<b>940.60</b>	<b>684.70</b>	<b>1,121.80</b>	<b>892.80</b>	<b>1,782.40</b>	<b>715.80</b>	<b>214.70</b>	<b>8,490.20</b>

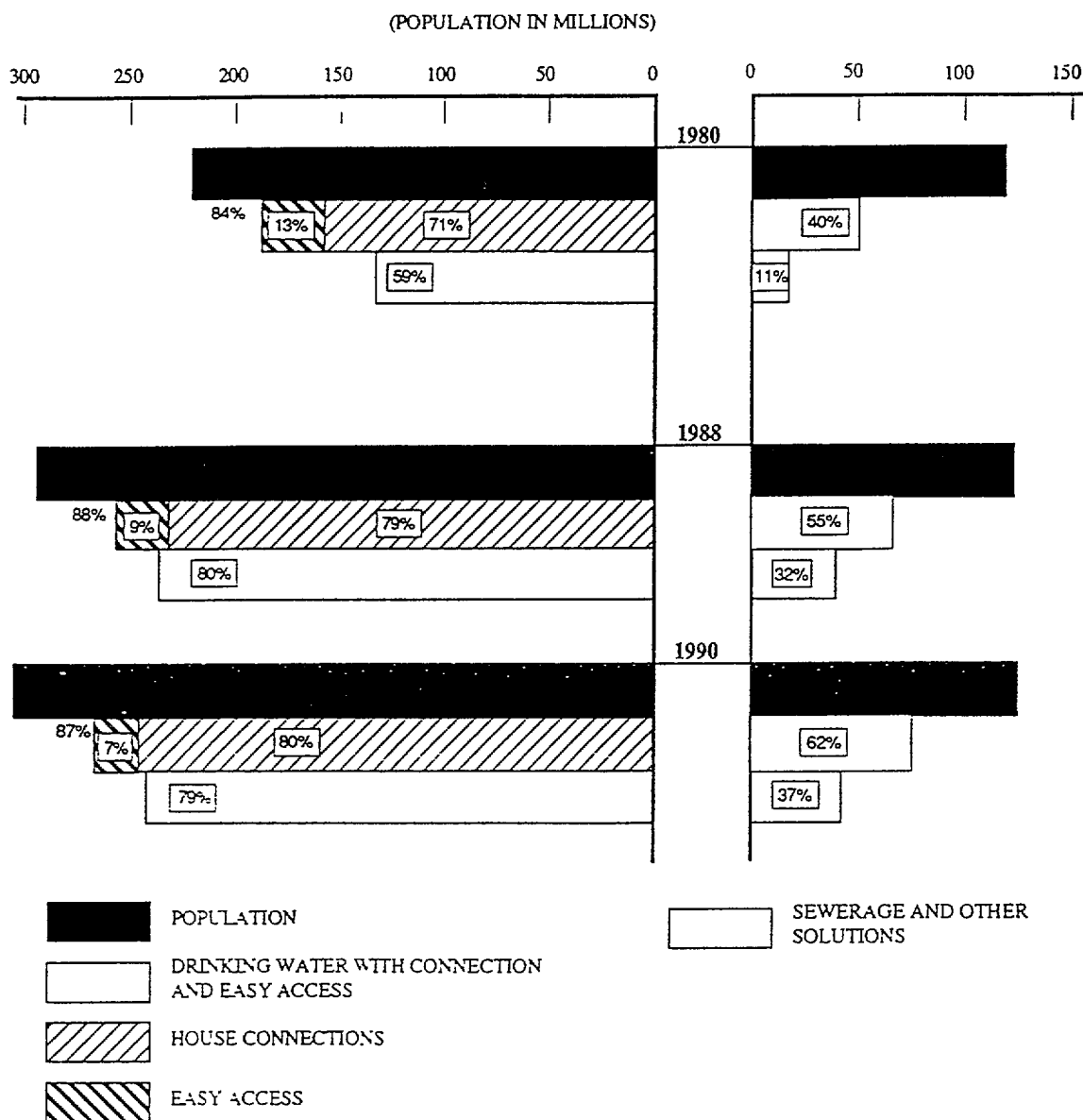
SOURCE: Information provided by IDB, IBRD and from CESI for the indicated bilateral agencies.

\* Parcial Information.

\*\* Various internationals, bilaterals and non government agencies, such as UNICEF, UNDP, UNEP, CIID, SIDA, FINNIDA, NORAD, Italy, Holand, Japan, Spain, France, Israel, The United Kingdom, CARE, etc. carry out activities in some countries but detailed information on investments and technical cooperation is not available.

N/A Information Not Available.

URBAN AND RURAL POPULATION WITH DRINKING WATER, SEWERAGE  
AND EXCRETA DISPOSAL SERVICES IN LATIN AMERICA AND THE  
CARIBBEAN 1980, 1988 AND REVISED TARGETS SET FOR 1990.



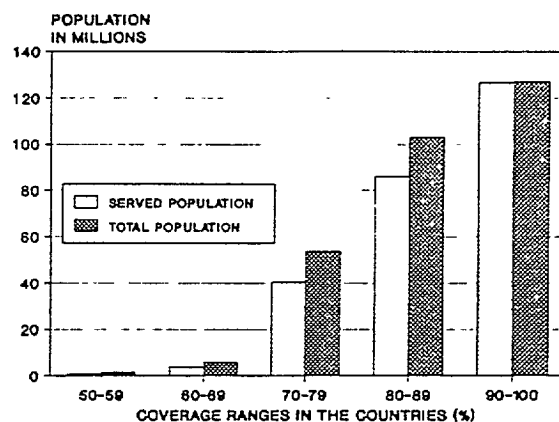
NOTE: The information on 1980 and 1990 provided by 25 countries has been updated with new data made available in 1983, 1985 and 1988

Levels of Coverage with Water Supply, Sewerage and Excreta Disposal Services in Urban and Rural Areas as of late 1988 (25 Countries), (% Ranges)

URBAN AREAS

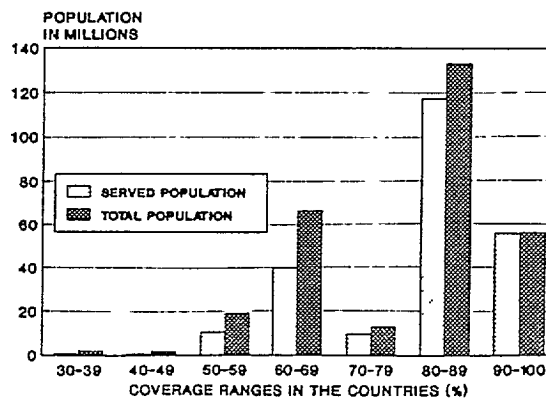
a) Water Supply through House Connections or Public Standpipes

COVERAGE %	COUNTRIES No	TOTAL POPULATION MILLIONS	SERVED POPULATION MILLIONS
50-59	1	1.6	0.9
60-69	2	5.8	3.9
70-79	7	53.9	40.4
80-89	5	103.2	86.1
90-100	10	127.1	126.6
TOTAL	25	291.6	257.9
87 or more	13	166.7	161.7



b) Sewerage and Excreta Disposal

COVERAGE %	COUNTRIES No	TOTAL POPULATION MILLIONS	SERVED POPULATION MILLIONS
30-39	1*	2.1	0.7*
40-49	2	1.7	0.7*
50-59	3*	19.1	10.5*
60-69	3*	66.4	39.9*
70-79	3	12.9	9.6
80-89	6	133.3	117.6
90-100	7	56.1	55.6
TOTAL	25	291.6	234.7
79 or more	13	189.4	173.2



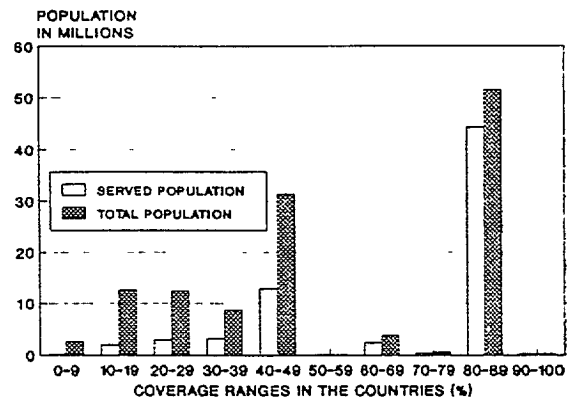
\* Incomplete Information



## RURAL AREAS

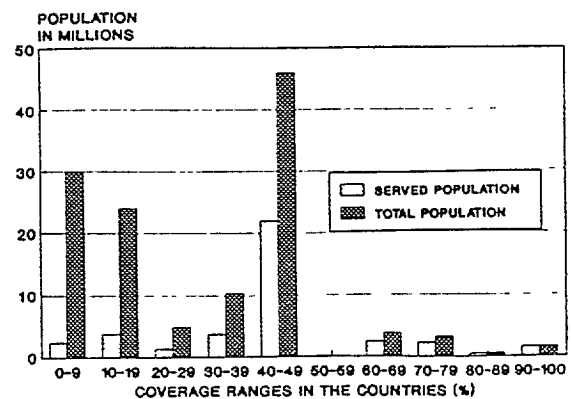
### c) Water Supply through House Connections and Public Standpipes

COVERAGE %	COUNTRIES No.	TOTAL POPULATION MILLIONS	SERVED POPULATION MILLIONS
0-9	2	2.6	0.2
10-19	4	12.6	1.9
20-29	3	12.4	3.0
30-39	2	8.7	3.2
40-49	2	31.4	12.8
50-59	1	0.1	0.1
60-69	2	3.8	2.4
70-79	2	0.6	0.4
80-89	5	51.6	44.4
90-100	2	0.3	0.3
<b>TOTAL</b>		<b>124.0</b>	<b>68.5</b>
<b>62 or more</b>	<b>10</b>	<b>53.7</b>	<b>46.0</b>



### d) Sewerage and Excreta Disposal

COVERAGE %	COUNTRIES No.	TOTAL POPULATION MILLIONS	SERVED POPULATION MILLIONS
0-9	5	30.0	2.4
10-19	4	24.0	3.8
20-29	1	4.9	1.4
30-39	4	10.3	3.7
40-49	3	46.0	22.0
50-59	0	0.0	0.0
60-69	4	3.8	2.4
70-79	1	3.2	2.2
80-89	1	0.5	0.4
90-100	2	1.5	1.5
<b>TOTAL</b>		<b>124.0</b>	<b>39.8</b>
<b>37 or more</b>	<b>12</b>	<b>58.0</b>	<b>28.5</b>



**POPULATION AND WATER AND SANITATION COVERAGE\*  
IN THE EIGHT COUNTRIES**

YEAR	POPULATION IN THOUSANDS			WATER COVERAGE %			SANITATION COVERAGE %		
	TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL	TOTAL	URBAN	RURAL
1980	27,907	12338	15569	55	85	33	42	55	32
1988	34,149	16650	17499	64	88	44	60	76	45
1990	36,095	17151	18944	74	88	60	70	78	60
2000	46,921	22746	24175	86	95	75	75	85	65

\* Coverage indicates connection to a water supply or sewerage system, easy access to services, or individual facilities. The service is not always continuous and the water is not always potable.

POPULATION IN THOUSANDS

COUNTRY	1980	1990	2000
Bolivia	5.599	7.314	9.724
Colombia	25.000	31.819	39.397
Ecuador	8.123	10.782	13.319
Peru	16.812	22.332	27.952
Venezuela	15.024	19.735	24.715
<b>TOTAL</b>	<b>70.558</b>	<b>91.983</b>	<b>115.107</b>

SOURCE: Report on the Decade. CELADE (1990) United Nations 1989.

COVERAGE

Country	Drinking Water Supply (%)				Coverage of Water Elimination Residuals and Excreta (%)			
	Urban		Rural		Urban		Rural	
	1980	1988	1980	1988	1980	1988	1980	1988
Bolivia	69	77	10	15	37	55	4	13
Colombia	100	88	79	87	100	85	4	18
Ecuador	79	75	20	37	73	75	17	34
Peru	68	78	18	22	57	55	1	17
Venezuela	93	89	64	89	91	97	90	70
<b>SUBREGION</b>	<b>87</b>	<b>84</b>	<b>43</b>	<b>52</b>	<b>82</b>	<b>78</b>	<b>15</b>	<b>25</b>

POPULATION CARIBBEAN COUNTRIES

COUNTRIES	POPULATION 1980 (1000)	POPULATION 1990 (1000)
Anguilla	7	7
Antigua & Barbuda	78	85
Bahamas	208	241.*
Barbados	245	253.*
Belize	146	267.**
British Virgin Islands	11	13
Cayman Islands	17	19
Dominica	73	81
Grenada	92	103
Guyana	758	755.*
Jamaica	2143	2480
Montserrat	12	13
St. Christopher-Nevis	45	45
Saint Lucia	118	136
St. Vincent and the Grenadinas	114	120
Suriname	352	395.*
Trinidad & Tobago	1060	1320

\* 1988 Data.

\*\* Belize also participates from CAPRE, as an Observer.

COVERAGE IN WATER SUPPLY AND SANITATION  
EASTERN CARIBBEAN

COUNTRIES	WATER SUPPLY (%)		SANITATION (%)	
	1980 Population with Access	1990 Population with Access	1980 Population with Access	1990 Population with Access
Anguila	-	90	-	96
Antigua & Barbuda	100	100	-	89
Dominica	85	85	56	75
Grenada	80	80	65	85
Montserrat	97	100	80	80
St. Christopher-Nevis	100	100	96	92
Saint Lucia	80	85	75	70
St Vincent	65	90	90	93

COVERAGE IN WATER SUPPLY AND SANITATION

COUNTRIES	Urban Water %		Rural Water %		Urban Sanitation %		Rural Sanitation %	
	1980	1990	1980	1990	1980	1990	1980	1990
Barbados *	97	98			-	20		
**	3	2	78	99	47	27	16	-
Guyana *	85	92			29	32		
**	15	8	70	70	65	64	81	81
Jamaica *		52		63		21		13
**	-	47		27		79	13	55
Trinidad *	74	68			32	33		
**	26	27	84	90	68	67	98	92

\* House connections

\*\* Easy access or individual systems

CHRONOLOGY OF EVENTS OF THE IDWSSD

- MARCH 1977 Declaration of Mar del Plata.
- DECEMBER 1979 United Nations General Assembly, Resolution 34/191.
- JANUARY 1981 Beginning of the IDWSSD
- 1985 Mid-Decade Evaluation
- APRIL 1986 Regional Meeting of IDWSSD External Support Agencies.  
Washington, D.C.
- Additional subregional meetings were held in Central America (Guatemala, Oct. 1986) and the Eastern Caribbean (St. Kitts, Nov. 1989).
- JANUARY 1987 Inter-regional seminary on the Tenth Anniversary of the Declaration of Mar del Plata.
- JUNE 1990 Evaluation of the Decade by the countries.
- SEPTEMBER 1990 Regional Evaluation of the Decade in San Juan, 1990  
Puerto Rico.
- Declaration of Puerto Rico.
- Global Evaluation of the Decade in New Delhi, India.