



TWENTY-NINTH WORLD HEALTH ASSEMBLY

Provisional agenda item 2.5.5

COMMUNITY WATER SUPPLY AND WASTEWATER DISPOSAL
(MID-DECADE PROGRESS REPORT)

Report by the Director-General



The progress achieved by developing countries in the provision of community water supplies and excreta disposal facilities during the period 1970-75 is reported and assessed. In the case of water supplies, the mid-decade achievements (1975) are compared with the targets for the Second United Nations Development Decade (1970-1980). In the light of the findings of the survey and the varying degrees of progress achieved, suggestions are made for regional targets to the end of the Decade (1980). The investments required to meet these targets are estimated. The report is submitted to the Twenty-ninth World Health Assembly in accordance with resolution WHA25.35. It should be noted that the review covers not only wastewater disposal, but excreta disposal as a whole.

CONTENTS

	<u>Page</u>
1. INTRODUCTION	2
1.1 Authorization and purpose of the report	2
1.2 Background	2
2. FINDINGS AND COURSES OF ACTION	4
2.1 Review of global progress	4
2.2 Suggested targets for 1980 and investments required to meet them	5
2.2.1 Community water supply	5
2.2.2 Excreta disposal	6
2.3 Courses of action	6
3. REVIEW BY REGIONS	9
3.1 African Region	9
3.2 Region of the Americas	10
3.3 Eastern Mediterranean Region	11
3.4 European Region	12
3.5 South-East Asia Region	13
3.6 Western Pacific Region	14

- Annex 1. The Mid-decade (1975) survey procedures
- Annex 2. Community water supply - comparison of services 1970 and 1975
- Annex 3. Excreta disposal - comparison of services 1970 and 1975
- Annex 4. Community water supply - proposed new regional and global targets for achievement by 1980, in the light of progress made in 1971-75
- Annex 5. Excreta disposal - proposed new regional and global targets for achievement by 1980, in the light of progress made in 1971-75
- Annex 6. Community water supply - investments needed in the five-year period 1976-80 to meet the proposed new regional targets for 1980
- Annex 7. Excreta disposal - investments needed in the five-year period 1976-80 to meet the proposed new regional targets for 1980

1. INTRODUCTION

1.1 Authorization and purpose of the report

This report is presented in compliance with resolution WHA25.35 of the Twenty-fifth World Health Assembly,¹ which requests the Director-General to furnish the Assembly with a mid-decade progress report covering both community water supply and wastewater disposal.²

The purpose of this report is to:

inform the Assembly of the progress made in the size of the population served in the period 1971-75 in relation to the targets recommended by the Twenty-fifth World Health Assembly for the Second United Nations Development Decade;

submit for the Assembly's consideration, in the light of the assessment made, new targets for both community water supply and excreta disposal, as well as the investments required;

recommend, on the basis of the trends emerging from the present mid-decade survey, courses of action that governments and cooperating external agencies might usefully follow.

1.2 Background

Water supply and excreta disposal, which are persistent and major problem areas in the environmental health field in the developing countries, have received considerable attention in the Organization's policies and in its collaborative programmes with Member States. The current Fifth General Programme of Work and the proposed Sixth General Programme of Work

¹ WHO Handbook of Resolutions and Decisions, Vol. I, 1973, p. 152.

² Wastewater disposal is one method of excreta disposal used particularly in urban areas with flush toilets and public sewers. In unsewered urban areas and in rural areas in large parts of the world, other methods, such as household or pit privies, are used. The more general term "excreta disposal" is more appropriate here, as this mid-decade review covers excreta disposal by whatever method.

covering the period 1978-83 (document A29/6) both give prominence to national planning of water supply and waste disposal. The approaches utilized and activities undertaken are described in the report on WHO's human health and environment programme submitted to this Health Assembly,¹ which presents a review of the present situation as of mid-decade in terms of the number of people who have access to these services.

The increased emphasis in the future programme of the Organization on national planning carried with it a commitment to develop better information systems, as no rational plan is possible without an adequate information base. Many statistical data are indeed available in Member States on different aspects of community water supply (less so on excreta disposal); however, in the form they are collected, compilation and analysis are often not possible and the most relevant information for planning and management is therefore often not available to national planning agencies. WHO is thus giving greater attention to technical cooperation with Member States in the development of rational information systems, as part of its collaborative programme in national planning of community water supply and excreta disposal services. "Status reports" have been prepared at regional level periodically, by a number of regional offices, either routinely, for presentation in regional directors' annual reports or in connexion with regional seminars or meetings of the relevant regional committee. The first global survey in 1962 covered 75 developing countries and dealt with urban water supply conditions.² The second global survey was more extensive, covering community water supply and excreta disposal conditions in both urban and rural areas as of the beginning of this decade.^{3,4} Based on this latter survey, the Twenty-fifth World Health Assembly endorsed revised global targets for the Second United Nations Development Decade,⁵ and called for a mid-decade review, presented in this report. The scope of the survey, the methods and sources of data collection, the definitions used, the accuracy of data and the mode of presentation are described in Annex 1.

¹ Document A29/11.

² Dieterich, B. H. & Henderson, J. M. (1963) Urban water supply conditions and needs in seventy-five developing countries, Geneva, World Health Organization (Publ. Hlth Pap. No. 23).

³ World Health Statistics Report, 1973, 26, No. 11.

⁴ Pineo, C. S. & Subrahmanyam, D. V. (1975) Community water supply and excreta disposal situation in the developing countries: A commentary, Geneva, World Health Organization (WHO Offset Publication No. 15).

⁵ Targets to be attained in the Second United Nations Development Decade, by developing countries:

Global (endorsed by the Twenty-fifth World Health Assembly)

community water supply:

- in urban areas, 60% of the population to be served by house connexions and the remaining 40% by public standposts;
- in rural communities, 25% of the population to have reasonable access to safe water.

Americas (contained in the Ten-Year Health Plan for the Americas, approved by the III Special Meeting of Ministers of Health of the Americas, October 1972)

community water supply:

- to provide house connexions to 80% of the urban population or, as a minimum, to supply half the population at present without water services;
- to supply water to 50% of the rural population, or, as a minimum, to reduce by 30% the proportion of the population lacking such supply;

excreta disposal:

- to install sewerage systems for 70% of the urban population or, as a minimum, to reduce by 30% the proportion of the population lacking such services;
- to install sewerage systems or other sanitary means of excreta disposal for 50% of the rural population or, as a minimum, to reduce by 30% the number of inhabitants not possessing adequate facilities.

2. FINDINGS AND COURSES OF ACTION

2.1 Review of global progress

In the countries that responded to the mid-decade review, there has been an increase not only in the gross numbers of people provided with water supply and excreta disposal facilities over the five-year period 1971-75, but also in the percentage of the urban and rural populations served. In other words, progress in the provision of these services has more than kept pace with population growth in the urban and rural sectors (Table 1). As this survey covered nearly 90% of the total population of the developing countries (excluding China), it would not be unreasonable to assume that this progress applies to the developing countries taken as a whole. However, as the overall goal for the end of the decade is for over 90% of all urban populations to be supplied with safe water either inside their homes or from public standposts (Table 2), it can be readily appreciated that in spite of the progress achieved, a major effort is still required to meet that goal.

TABLE 1. POPULATION PROVIDED WITH COMMUNITY WATER SUPPLY AND EXCRETA DISPOSAL SERVICES IN THE COUNTRIES RESPONDING TO THE MID-DECADE SURVEY (in millions)

WATER SUPPLY (67 countries)	Population served adequately (house connexions and public standposts)					
		1970		1975		Increase (%)
		No.	Percentage of 1970 population	No.	Percentage of 1975 population	
Urban	308	67	390	75	8	
Rural	169	14	248	20	6	
Total	477	29	638	35	6	
<hr/>						
EXCRETA DISPOSAL (57 countries)	Population served adequately (public sewers and household systems)					
		1970		1975		Increase (%)
		No.	Percentage of 1970 population	No.	Percentage of 1975 population	
Urban	276	72	283	74	2	
Rural	90	9	132	12	3	
Total	366	25	415	27	2	

It is also worth noting that the overall progress obtained in the provision of excreta disposal facilities (sanitary sewerage and household systems) is far less satisfactory than that for water supplies. This unsatisfactory situation is rapidly being aggravated by population growth and rural migration into urban areas. This is resulting in the development of unplanned fringe, squatter or slum zones surrounding cities, and these are creating problems of the greatest complexity for all the developing countries.

2.2 Suggested targets for 1980 and investments required to meet them

This evaluation is restricted to a review of the progress achieved during the five-year period 1971-75 in terms of numbers of people served by community water supply and excreta disposal facilities in the various WHO regions and worldwide; comparing the figures with the rate of progress needed to meet the targets adopted; proposing new regional targets for 1980; and estimating the investments that will be required.

Targets are only a means to an end, their main purpose being to stimulate and sustain enthusiasm and effort. They will fail in this purpose if they are set too low or too high. They should therefore be reviewed periodically in the light of an evaluation of progress. In view of the vast differences among countries, the ideal procedure would be for every country to adopt specific national goals as recommended by the Health Assembly in resolution WHA25.35, and to derive regional and global targets from these. In the absence of specific national goals in many countries, and the considerable differences in progress in the different regions, it is felt that it would be more appropriate, in order to stimulate country efforts, to provide an analysis on a regional basis instead of applying only one global set of targets. Accordingly, in keeping with the progress achieved in the different regions, regional targets for 1980 are proposed in Table 2 for both community water supply and excreta disposal; at the same time new global targets are in most cases derived from the regional targets. Targets established in the Ten-Year Health Plan for the Americas have been retained for that Region.

2.2.1 Community water supply (Table 2, Fig. 1, and Annexes 2, 4 and 6)

Urban

The percentage of the urban population served by house connexions from piped public water supplies rose from 50% in 1970 to 57% in 1975. This is a reflection of the progress made in all the regions and is in excess of what is needed to achieve the current global target of 60% by the year 1980. New regional targets have therefore been proposed and the derived global target for 1980 is 68%. It is felt that in view of the progress already made in the first half of this decade, countries should now aim for the new and higher target. Applying an inflation factor of 1.91 to the 1970 unit cost (the inflation factor being derived as a weighted average of estimates of the increase in consumer prices from 1970 to 1975), the new target would need a global investment of \$ 12 000 million at 1975 price levels; this is an approximate annual per capita investment of \$ 3.23 for the estimated 1980 urban population of the developing countries.

The urban population served by public standposts increased only from 17% in 1970 to 18% in 1975. In view of this, the current 40% target would seem unrealistic. From the new regional targets proposed, the derived new global target is 23%. On the same basis as above, the investment required to achieve this level by 1980 is estimated at approximately \$ 2500 million at 1975 prices, which is an annual per capita cost of \$ 0.70 for the total 1980 urban population of developing countries.

With these investments an additional 224 million people would benefit from improved new services, of whom 168 million would be served by house connexions and 56 million by standposts.

Rural

The percentage of the rural population having reasonable access to "safe" water rose from 14% in 1970 to 20% in 1975. As this progress is slightly in excess of the median progress required to achieve the current target of 25% by 1980, new regional targets have been proposed that give a derived global target of 36% to be achieved by 1980. The estimated cost at 1975 price levels to achieve these rural water supply targets is estimated at around \$ 6500 million, or approximately \$ 0.82 per capita per year for the estimated 1980 rural population of the developing countries.

With this investment an additional 255 million rural people would benefit from safe water supplies within reasonable access.

The total global investment in community water supply to meet the proposed new targets in the five years 1976-80 would thus be in the region of \$ 21 000 million, which is an approximate annual investment per capita of \$ 1.81, taking the estimated 1980 population of the developing countries as the base.

With this total investment an additional 479 million people would benefit from improved and new community water supply services.

2.2.2 Excreta disposal (Table 2, Fig. 2, and Annexes 3, 5 and 7)

No targets for excreta disposal have been formally endorsed by WHO, except in the Region of the Americas. Following a review of the progress made in the years 1971-75, targets for achievement by 1980 by all the other regions are now proposed for the consideration of the Assembly. The proposed regional targets give a derived target of 38% of the urban population to have connexions to public sewerage systems and 56% to have household excreta disposal facilities. The global target for the proportion of the rural population to be equipped with adequate disposal facilities, worked out from the regional targets, is 24%. The estimated costs for reaching these levels are: for urban populations to be connected to public sewers, approximately \$ 10 000 million, which is an annual per capita investment of \$ 2.72; for urban populations to be served by household systems, an investment in the region of \$ 2500 million, which is an annual investment of \$ 0.68 per capita; and for rural populations a total investment in the region of \$ 2000 million, which works out at a per capita investment of \$ 0.55, all on the basis of the estimated 1980 urban and rural populations of the developing countries. Thus the total investment required in the excreta disposal sector is in the region of \$ 14 500 million at 1975 price levels. Taking the estimated 1980 population of the developing countries as the base, this would require an annual investment of \$ 1.98 per capita.

With these investments an additional 432 million people would benefit from excreta disposal services: in urban areas 139 million would be served by connexion to a public sewerage system and 108 million by household systems; while 185 million people living in rural areas would be provided with adequate excreta disposal facilities.

A summary of the proposed regional targets and the total investments needed to reach them, for both community water supply and excreta disposal, is given in Table 2.

2.3 Courses of action

While targets set properly, with an appreciation of needs, constraints and resources, can serve as inducements to achieving milestones in specified periods of time, they are not in themselves the most important elements in progress.

The key to successful achievement in the sectoral programmes covered in this report depends on action by the governments of the countries concerned. This action should be motivated by the political will to accomplish clearly stated and feasible national sectoral objectives within the framework of national development planning. Furthermore, if the proposed targets are to be achieved by 1980, action will also be required by the countries themselves for the development of sound institutional structures and adequate financing policies, and for the strengthening of manpower resources. The need to consider broad economic and social goals is especially evident within the rural water supply sector. Where rural economic development planning is in progress or planned, the water supply and sanitation component should be integrated with it. In this regard, a sustained effort to bring about active community participation in the planning, implementation, maintenance and operation of the system is of the utmost importance.

FIG. 1 COMMUNITY WATER SUPPLY – PERCENT OF POPULATION SERVED
(IN THE DEVELOPING COUNTRIES)

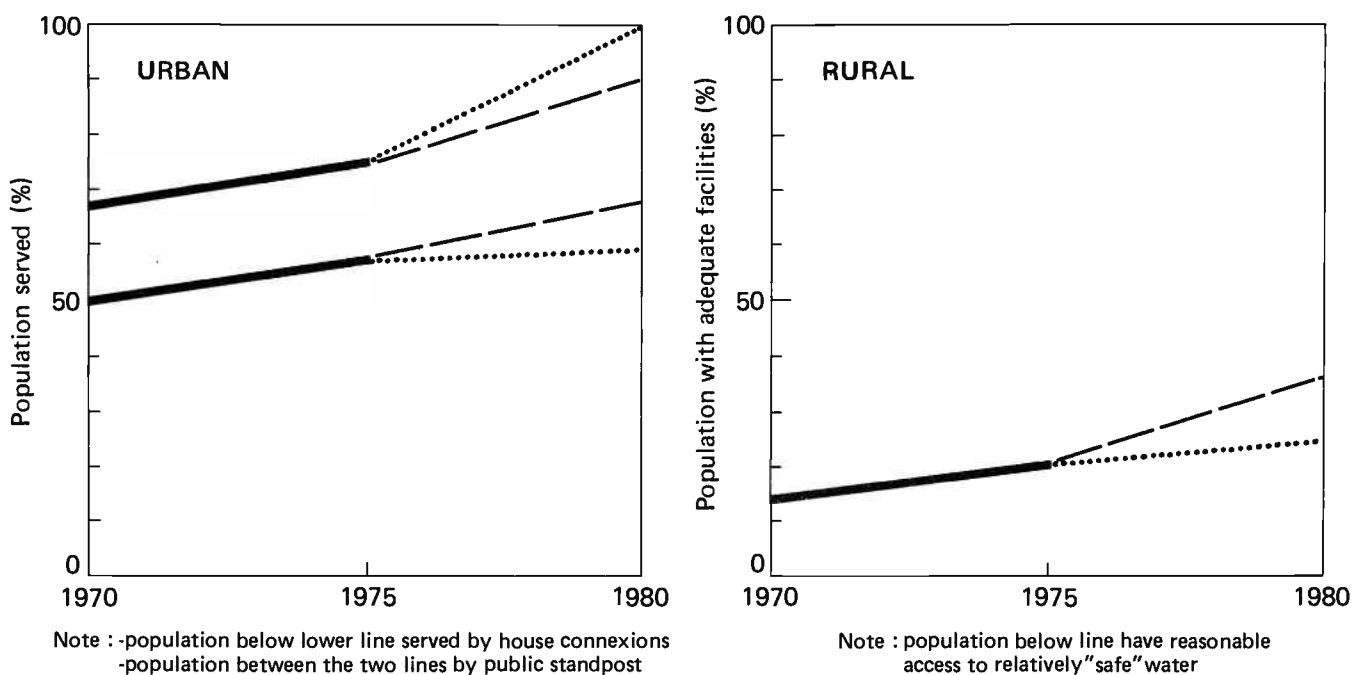
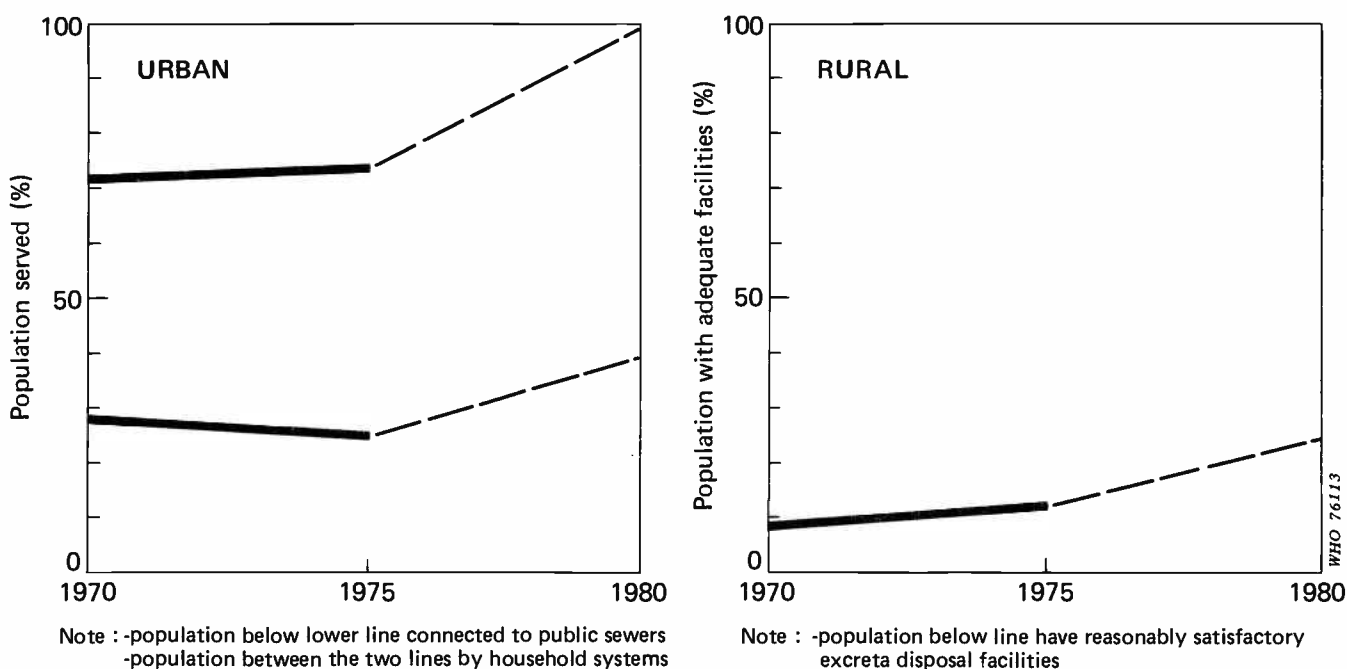


FIG. 2 EXCRETA DISPOSAL – PERCENT OF POPULATION SERVED
(IN THE DEVELOPING COUNTRIES)



————— Progress made 1970 - 1975
 Progress needed to meet current targets
 - - - - - Progress needed to meet proposed new targets

TABLE 2. PROPOSED TARGETS FOR ACHIEVEMENT BY 1980
(PERCENTAGE OF POPULATION TO BE SERVED) AND THE
ESTIMATED INVESTMENTS NEEDED

Region	Proposed targets for 1980						Total investment required to reach the proposed targets (millions US\$)		Additional population to be served by 1980 (in millions)	
	Community water supply			Excreta disposal			Water supply (a)(b)(c)	Excreta disposal (d)(e)(f)	Water supply	Excreta disposal
	Urban		Rural	Urban		Rural				
	House connexions (a)	Public standposts (b)	(c)	Public sewers (d)	Household systems (e)	(f)				
Africa	45	35	35	20	75	25	3 070	960	52	33
Americas	80*	15	50*	55*	45	46*	10 920	6 230	99	106
Eastern Mediterranean	60	30	25	20	75	25	1 650	3 470	49	73
Europe	80	15	80	30	30	30	680	450	22	19
South-East Asia	60	30	35	35	60	15	3 480	1 670	235	157
Western Pacific	85	15	35	35	65	60	890	1 610	22	44
Global	68	23	36	38	56	24	20 690	14 390	479	432

* Targets established in the Ten-Year Health Plan for the Americas.

Developing countries must develop their own criteria for national planning and installation of community water supplies. Low-cost technology with the maximum utilization of local resources in terms of manpower and materials would go a long way in reducing investment costs, thus permitting a greater number of people to be served. The adoption of criteria in use in industrialized countries results in very expensive investments that most countries can ill afford.

Action proposed by WHO in support of country-wide programmes for community water supply and disposal of wastes are presented in the report by the Director-General on the Organization's human health and environment programme (document A29/11), which includes outlines of support by the WHO regional offices.

Furthermore, WHO collaboration in national planning of services for the provision of community water supply and disposal of waste, including the surveillance of drinking-water quality and the production of guides and manuals, with emphasis on low-cost and readily adaptable techniques, have been made major objectives in the proposed Sixth General Programme of Work covering the period 1978-83 (document A29/6).

The development of sound national programmes should enable other collaborating international, regional and bilateral organizations to provide both technical and financial aid in the implementation of the programmes. In this respect, WHO will maintain its coordinating role with regard to the health aspects of technical cooperation programmes such as the application of health norms and criteria.

Increased external assistance (bilateral, multilateral or international) is required to enable the developing countries to accelerate the rate of progress in their community water supply and excreta disposal programmes. It is also essential that in external assistance programmes priority be given to critical areas such as congested urban and fringe areas and to rural areas where water supply and excreta disposal conditions are most unsatisfactory.

International and bilateral lending agencies should consider adapting their criteria for loans in accordance with the economic and social conditions prevailing in the recipient countries. Such assistance should also include the strengthening of national infrastructure, the training of manpower, and field investigations for the adaptation of existing technology.

Only a concerted and sustained effort by national governments and by organizations providing aid will make it possible, by the end of the century, for every individual in the developing world to be assured of access to a safe water supply and be provided with a sanitary excreta disposal system, a sine qua non for the prevention and control of the majority of communicable diseases.

3. REVIEW BY REGIONS

3.1 African Region

3.1.1 Community water supply

Urban

The percentage of the urban population served by house connexions in Africa increased only marginally from 33% to 36% from 1970 to 1975. Therefore a more realistic target of 45% to be achieved by 1980 is now proposed for this region, instead of the global target of 60% already adopted. The percentage of the urban population served by public standposts has actually decreased from 34% to 29%. The proposed new target is 35%, giving a total 1980 urban target of 80%, including both house connexions and public standposts.

Rural

In the rural sector, the percentage of the population having reasonable access to "safe" water increased from 13% in 1970 to 21% in 1975. In view of the progress made, a new regional target of 35% is proposed for attainment by 1980.

To meet these targets, it is estimated that, in the period 1976-80, an investment of the order of \$ 1200 million, or an annual investment of \$ 4.47 per capita, would be required for provision of house connexions; \$ 400 million (approximately \$ 1.49 per capita a year) for provision of public standpost facilities; and approximately \$ 1500 million for provision of reasonably safe water within easy access of the rural population (\$ 1.33 per capita a year), giving a total investment in the region of \$ 3100 million at 1975 price levels. Taking the total 1980 population of the developing countries in the African Region as the base, this works out at an annual investment of \$ 2.27 per capita.

3.1.2 Excreta disposal

Urban

In 1975, of the total urban population (40 million) of the African Region, 13% lived in dwellings connected to public sewers, compared with 8% in 1970. On the basis of this progress it is suggested that a target of 20% in 1980 is attainable. The suggested target would require a total investment of \$ 440 million for the period 1976-80, or an annual per capita investment of \$ 1.60 based on the estimated 1980 urban population.

There were 27 million urban dwellers, or 67% of the total, served by household systems in 1975. A modest increase to 75% by 1980 is suggested. The total investment required for such an increase would be about \$ 380 million, equivalent to an annual investment of \$ 1.38 per capita.

For total urban excreta needs (including both connexions to sewers and household systems), the investment for the period 1976-80 would be 820 million, or, on the basis of the estimated total urban population in 1980, an annual per capita investment of \$ 2.98.

Rural

Of the total rural population of 195 million in 1975, 41 million or 21% had adequate excreta disposal facilities. In 1970 the proportion served was 23%. A target of 25% is proposed for 1980.

The suggested target would require a total investment of \$ 140 million for the period 1976-80, or an annual per capita investment of \$ 0.13 based on the estimated rural population in 1980.

3.2 Region of the Americas

3.2.1 Community water supply

No new targets are proposed, as regional targets were established in the Ten-Year Health Plan for the Americas.¹

¹ For excreta disposal, minimum targets have been assumed.

Urban

As against the regional target of providing 80% of urban population with house connexions by 1980 the progress from 1970 to 1975 was from 61% to 67%. If the targets are to be met, therefore, greater efforts will have to be made in the second half of the decade.

Rural

As against the adopted target of supplying 50% of the rural population with water, the progress from 1970 to 1975 was an increase from 24% to 30%. Much greater resources must therefore be allocated to the rural sector, or else the targets will have to be revised.

It is worth noting that among the developing countries in the Region of the Americas, the urban population is larger than the rural. This trend, observed over the last few decades, seems to be continuing. To meet the targets in the urban sector, an investment of the order of \$ 9000 million will be required, together with an investment of the order of \$ 2000 million in the rural sector, giving a total investment in the region of \$ 11 000 million. Using the estimated 1980 urban, rural and total populations as a base, the annual per capita investments required will be some \$ 7.45 for urban water supply, \$ 3.20 for rural water supply and \$ 5.90 for the total population, both urban and rural.

3.2.2 Excreta disposal

Urban

As against the target of 55% of the urban population to be provided with connexions to public sewerage systems by 1980, the rate of achievement has not succeeded in keeping pace with the increase in urban population. The percentage of the population served has actually decreased from 36% in 1970 to 30% in 1975. The target may therefore need to be revised. The investment required to meet the present targets is of the order of \$ 5600 million, which would require an annual investment of \$ 4.78 per capita, based on the estimated 1980 urban population

Rural

In the rural sector again, the situation has remained more or less static, with 22% of the population possessing adequate excreta disposal facilities, as against the adopted target of 46% to be achieved by 1980. Here again, a revision of the targets is indicated.

To achieve the targets already adopted by the Region, the investment required for rural excreta disposal is of the order of \$ 600 million, or an annual investment of \$ 0.90 per capita, using the 1980 rural population estimate as a base.

Thus a total investment of some \$ 6200 million would be required in the Region for excreta disposal in order to meet the regional targets by 1980. On the basis of the estimated 1980 population of the developing countries in the Region, an annual investment of \$ 3.37 per capita would be needed

3.3 Eastern Mediterranean Region

3.3.1 Community water supply

Urban

The percentage of the population served through house connexions from public water supplies actually decreased from 56% in 1970 to 52% in 1975; the provision of new facilities is obviously not keeping pace with the increase in urban population. Greater resources need to be provided and it is proposed that, as a minimum, a 60% target for 1980 should be aimed at. If an additional 30% could be served by access to public standposts, it would mean that by 1980, 90% of the urban population would be served, either through house connexions or

through access to public standposts. To achieve these targets, it is estimated that an investment of the order of \$ 1000 million would be required for investment in the provision of house connexions, and an additional \$ 150 million for provision of public standposts, giving a total of \$ 1150 million for the urban sector. These correspond to annual per capita investment requirements of \$ 1.89, \$ 0.29, and \$ 2.18 respectively, based on the estimated 1980 population.

Rural

There has been a similar decrease in the percentage of the population with reasonable access to safe water from 19% in 1970 to 16% in 1975. More therefore needs to be done in the rural sector also. Even a modest target of 25% of the population to be served by 1980 would involve an investment in the region of \$ 500 million in the remaining years of the decade. This would mean an annual investment, based on the estimated 1980 population, of approximately \$ 0.50 per capita in the five-year period.

Thus, to meet the above targets, the total investments on water supply for the next five years would amount to some \$ 1600 million, or an annual investment of \$ 1.04 per capita based on the projected 1980 population.

3.3.2 Excreta disposal

Urban

As in the African Region, a characteristic of the Eastern Mediterranean Region is the provision of services in the urban areas through household systems rather than through public sewers. As of 1975, only 10% of the urban population was served by public sewerage systems, whereas 53% was served by household systems. There was no significant change between 1970 and 1975. Considerable investment is possible in the sewerage sector, especially in the oil-producing Gulf States; however, the more populous states of the Region have lesser resources. In view of this, a modest target of 20% for the population to be served by public sewerage systems is proposed for attainment by 1980, with 75% to be served by household systems. With these targets, the investments required would be of the order of \$ 1600 million for service by public sewers and \$ 1400 million for service by household systems, giving a total urban investment requirement of some \$ 3000 million. Using the estimated 1980 urban population as a base, the annual per capita investment requirement in the five years 1976-80 would be \$ 3.09 for connexions to public sewers and \$ 2.59 for service by house connexion.

Rural

There was a marginal increase from 12% to 14% in the percentage of the rural population with adequate excreta disposal facilities between 1970 and 1975. To achieve the proposed target of 25%, it is estimated that an investment of about \$ 500 million would be required (giving an annual per capita investment requirement of \$ 0.48 for the current five-year period).

For the whole of the excreta disposal sector, an investment of the order of \$ 3500 million would thus be required. This amounts to an annual per capita investment of \$ 2.24, based on the estimated population for 1980.

3.4 European Region

Although regional target figures are proposed for the purpose of estimating the resources needed, in view of the fact that only Algeria, Malta, Morocco and Turkey are considered as developing countries for this survey, regional targets may not be relevant for the Region and it may be more prudent to proceed on the basis of national targets in the countries concerned.

3.4.1 Community water supply

Urban

The percentage of the population served by house connexions from public water supplies increased from 47% in 1970 to 67% in 1975. As such, it should be possible to achieve an average for the four countries concerned of 80% by 1980. It is also proposed that a minimum of another 15% should have access to public standposts. The estimated cost of reaching this level would be \$ 380 million for the urban sector, or an annual investment of \$ 1.90 per capita, on the basis of 1980 population estimates.

Rural

The countries concerned have the highest degree of achievement in providing their rural populations with safe water with reasonable access. As many as 45% were served in 1970, a figure that increased to 63% by 1975. It should thus not be difficult to reach an average figure of 80% by 1980. The resources needed to achieve this level are estimated to be in the order of \$ 300 million over the period 1976-80. This would be an annual investment of \$ 1.33 per capita.

3.4.2 Excreta disposal

Urban

The proportion of people served through connexions to public sewerage systems decreased from 31% in 1970 to 20% in 1975. Even allowing for errors in data collection, it appears that urban population growth has outstripped the provision of new facilities to the population. There was an increase in the percentages of the population served by household systems from 12% in 1970 to 18% in 1975. Assuming that it might be possible to provide public sewer connexions to 30% of the population in these countries by 1980 and for an additional 30% to be served by household systems, the total investment in urban excreta disposal required in the countries concerned would amount to some 2400 million in the period 1976-80, or an annual investment of \$ 2.05 per capita, based on 1980 population estimates.

Rural

The percentage of the population possessing adequate excreta disposal facilities rose from 5% to 18% in the period 1970-75. Aiming at an average figure for the four countries of 30% to be achieved by 1980, the investment required would be of the order of \$ 40 million, or an annual investment of \$ 0.18 per capita, on the basis of 1980 population estimates.

3.5 South-East Asia Region

3.5.1 Community water supply

Urban

There has been a significant increase, from 35% in 1970 to 47% in 1975, in the percentage of people served by house connexions. It is therefore felt that this Region should be able to achieve a target of 60% of the urban population to be served by house connexions from public water supplies by the end of the decade. Aiming to provide access for another 30% of the population to public water supplies through public standposts (the increase from 1970 to 1975 being from 15% to 21%), the Region could hope to have 90% of its urban population provided either with house connexions or with access to public supplies through public standposts by 1980.

With these targets, it is estimated that an investment of the order of \$ 1250 million would be required to provide service by house connexions, and another \$ 400 million for service through public standposts, giving a total investment requirement in the urban sector of the order of \$ 1650 million. Using the estimated 1980 total urban population of this Region as a base, this would require an annual investment of \$ 1.39 per capita.

Rural

There has also been an appreciable increase, from 9% in 1970 to 19% in 1975, in the provision of reasonable access to safe water for the rural population. These percentages are still very low and much more investment in the rural sector is needed. In keeping with the progress achieved in the first half of the decade, it is felt that the Region may well aim at a target of 35% by 1980. On that assumption, the investment required would be of the order of \$ 1800 million for the five-year period 1976-1980. Using the estimated 1980 rural population of the Region as a base, the annual investment requirement would be \$ 0.44 per capita.

3.5.2 Excreta disposal

Progress in excreta disposal has been marginal.

Urban

The proportion of the population served by access to public sewerage systems decreased from 28% in 1970 to 26% in 1975. The high cost of urban sewerage and the rapid increase in urban populations were obvious limiting factors. A modest target of 35% to be connected to sewers by 1980 is proposed, with an additional 60% to be served by household systems. With these targets, it is estimated that an investment of some \$ 800 million would be required for service by connexion to public sewerage, and another \$ 550 million for service through household systems, giving a total of \$ 1350 million for the urban sector. Using the estimated 1980 urban population as a base, the annual investment requirement would be \$ 1.14 per capita.

Rural

There has been an increase from 4% in 1970 to 6% in 1975 in the proportion of the rural population possessing adequate excreta disposal facilities. It is therefore not reasonable to set a higher target than, say, 15% for achievement by 1980. Even this modest target would require an investment of the order of \$ 300 million, equivalent to an annual per capita investment of \$ 0.08, based on 1980 rural population estimates.

An investment of \$ 1700 million would thus be required for provision of excreta disposal facilities in the Region in the remaining five years of the decade, or an annual investment of \$ 0.31 per capita, taking the estimated 1980 rural population as a base.

3.6 Western Pacific Region

3.6.1 Community water supply

Urban

There was an increase from 65% in 1970 to 75% in 1975 in the proportion of the population provided with house connexions. The Region has thus outpaced the Region of the Americas and could well aspire to a higher target for 1980 than the latter. A figure of 85% is therefore proposed. It is also proposed that the remaining 15% should have access to public supplies through standposts; thus by 1980, all of the urban population would be served through either house connexions or access to public standposts. It is felt that these targets are reasonable, in the light of the progress made in the first half of the decade. The investment requirements, if these targets were adopted, would be of the order of \$ 800 million for the urban sector. This would represent an annual investment of \$ 2.57 per capita in the

period 1976-1980, based on the estimated 1980 urban population of the developing countries in this Region.

Rural

There was an increase in the proportion of the rural population with reasonable access to safe water from 23% in 1970 to 30% in 1975. It should thus not be difficult to achieve a target of 35% by 1980. The investment requirement for such a target would be approximately \$ 120 million, or an annual investment of \$ 0.21 per capita based on the estimated 1980 rural population.

3.6.2 Excreta disposal

Urban

Urban sewage disposal by connexion to public sewerage systems has lagged behind the progress in water supply. In fact, the decrease from 27% served in 1970 to 24% in 1975 is an indication that the provision of facilities has not kept pace with the increase in population. It is therefore proposed that a modest target of 35% be adopted for 1980, with the proviso that the remaining 65% should be served by household systems. With these targets, the investment requirement for connexions to public sewers would be of the order of \$ 1000 million. In addition, \$ 300 million would be required for services using household systems. Thus, a total urban investment of the order of \$ 1300 million would be required in the latter half of this decade. The annual investment, based on the estimated 1980 urban population, would be \$ 4.57 per capita.

Rural

The Region has made significant progress in excreta disposal in the rural areas and in fact, has the highest level of all of WHO's Regions. The percentage of the rural population with adequate excreta disposal facilities increased from 11% in 1970 to 43% in 1975. It is therefore felt that 60% would not be an unreasonable target for achievement by 1980. The investment required to meet such a target would be approximately \$ 240 million in the remaining five years of the decade. This would require an annual per capita investment of \$ 1.84.

THE MID-DECADE (1975) SURVEY PROCEDURES

Scope of the survey

Estimates were obtained of the numbers of people in both urban and rural areas served by community water supply and excreta disposal facilities as of the end of the year 1975, and the investments in these sectors (both national and external) in the five-year period 1971-75. The survey was restricted to developing countries that are Member States of WHO. It was not possible to obtain complete information from all of them.

Sixty-seven countries responded with information on community water supply and 57 on excreta disposal facilities in this survey, compared with 91 and 61 respectively in the 1970 extensive survey, conducted with greater resources. It should be noted, however, that the 67 countries that provided information on community water supply comprise approximately 90% of the total population of the developing countries, not including China. Consequently, it seems reasonable to extrapolate the information as applying to the developing countries (excluding China) as a whole.

The findings on the population served in each of the regions and globally are thus based on extrapolations from responses received. Many countries that responded to the survey have, in addition to giving figures for 1975, also updated the 1970 figures, so that this report presents not only the status at the end of 1975, but also updated information for end 1970. As some responding countries did not answer every question, the extrapolations made to arrive at regional percentages are not uniform.

Method and sources of data collection

The information was furnished to WHO by government ministries or departments. WHO staff assigned to the countries assisted in its collection. Population data have been computed to the end of calendar year 1975 (so as to be compatible with end-of-year estimates of numbers of people served) from estimates by the United Nations Population Division,¹ except in cases where the country was able to furnish estimates from a more recent census. Practically all the countries included in the survey are members of the UNCTAD Group of 77 developing countries.

Definitions

Urban and rural: The national definition of urban and rural population, as determined by each country, has been accepted.

Reasonable access: In an urban area, a public fountain or standpost located not more than 200 metres from a house may be considered as being within reasonable access of that house. In rural areas, reasonable access would imply that the housewife or members of the household do not have to spend a disproportionate part of the day in fetching the family's water needs.

Safe water supply: The term "safe water supply" includes treated surface waters or untreated but uncontaminated water such as from protected boreholes, springs and sanitary wells. Other waters of doubtful quality are classified as unsafe.

Excreta disposal: Sewage disposal may include collection and disposal, with or without treatment, of human excreta and wastewater by water-borne systems, or the use of pit privies and similar installations.

¹ United Nations, Department of Economic and Social Affairs, Population Division (1975) Selected world demographic indicators by countries, 1950-2000 (Document ESA/P/WP.55).

Accuracy of data

Practically all the data presented are estimates. The bases on which estimates were made vary. Concerning estimates of numbers of people served, countries have better information on community water supply services than on excreta disposal services and have better data on the urban than on the rural situation. The inherent difficulties in accumulating this type of basic information from different sources within a country for use in preparing estimates should serve as a note of caution in interpretation. The data obtained from this survey should be considered as order-of-magnitude estimates only. Resource constraints precluded in-depth studies and spot checking in selected countries.

Presentation

The data received from the various countries have been compiled for each of the six WHO regions. In five of the regions, developing countries are overwhelmingly predominant. In the case of the European Region, as already noted, only Algeria, Malta, Morocco and Turkey were invited to provide information. This should be borne in mind when considering the data summarized by regions which appear in this report.

COMMUNITY WATER SUPPLY - COMPARISON OF SERVICES, 1970 AND 1975
APPROVISIONNEMENT PUBLIC EN EAU - COMPARAISON DES SERVICES, 1970 ET 1975

Region and Country	Urban population served - Population urbaine desservie												Rural population with reasonable access - Population rurale desservie à distance raisonnable				Total				Région et pays	
	by house connexions - par raccordements aux immeubles				by public standposts - par distributeurs publics				Total urban - Total urbaine													
	1970		1975		1970		1975		1970		1975		1970		1975							
	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%						
	(Regional totals refer only to countries responding - Les totaux régionaux ne tiennent compte que des pays ayant répondu)																					
Africa	6 803	33	7 882	36	6 940	34	6 270	29	13 743	67	14 152	65	12 696	13	19 272	21	24 815	21	32 710	29	Afrique	
Americas	96 096	61	120 659	67	23 458	15	24 991	14	119 395	76	145 650	81	28 505	24	21 753	30	147 900	54	104 091	57	Amériques	
Eastern Mediterranean	37 611	56	30 147	52	15 370	23	16 125	28	52 961	79	46 272	80	32 002	19	23 955	16	84 963	37	67 673	34	Méditerranée orientale	
Europe	12 406	47	16 577	67	5 426	21	3 403	14	17 832	68	19 980	81	14 420	45	20 180	63	26 752	52	40 160	71	Europe	
South-East Asia	52 716	35	88 324	47	23 327	15	39 197	21	76 043	50	127 521	68	63 414	9	145 118	19	139 177	17	272 639	29	Asie du Sud-Est	
Western Pacific	24 015	65	29 840	75	3 866	11	6 196	16	27 737	76	36 036	91	17 703	23	18 046	30	45 390	40	54 082	54	Pacifique occidentale	
Total		50		57		17		18		67		75		14		20		29		35	Total	
(Number of countries)	(95)		(71)		(94)		(71)		(93)		(71)		(87)		(67)		(86)		(67)		(Nombre de pays)	
AFRICA																					AFRIQUE	
Benin	33	8	34	6	313	75	536	94	346	83	570	100	455	20	500	20	801	29	1 070	34	Bénin	
Botswana	16	46			19	54			35	100			149	25			184	29			Botswana	
Burundi	15	15			60	62			75	77			...	...			...	...			Burundi
Central African Republic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	République Centrafricaine
Chad	30	11			170	65			200	76			780	22			980	26			Tchad	
Comoros																					Comores	
Congo	80	28			198	69			278	97			46	7			324	34			Congo	
Gabon	5	5			1	1			6	6			1	-			7	1			Gabon	
Gambia	10	27			26	70			36	97			9	3			45	12			Gambie	
Ghana	872	35	995	35	1 255	51	1 433	51	2 127	86	2 428	86	853	14	973	14	2 980	35	3 401	35	Ghana	
Guinea	337	52	420	47	100	16	193	22	437	68	613	69	...	...	16	-	...	...	629	14	Guinée
Guinea-Bissau																					Guinée-Bissau	
Ivory Coast	260	28			656	70			916	98			1 000	29			1 916	44			Côte d'Ivoire	
Kenya	1 320	93	1 600	90	100	7	180	10	1 420	100	1 780	100	240	2	420	4	1 660	15	2 200	17	Kenya	
Lesotho	5	19			22	81			27	100			...	...			...	...			Lesotho
Liberia	60	43			50	57			110	100			67	6			177	15			Libéria	
Madagascar	140	13	225	15	594	54	896	61	734	67	1 121	76	45	1	950	14	779	11	2 071	25	Madagascar	
Malawi																					Malawi	
Mali	160	26			20	3			180	29			...	...			...	...			Mali
Mauritania	80	91			6	7			86	98			114	10			200	17			Mauritanie	
Mauritius	271	72	330	75	108	28	110	25	379	100	440	100	130	29	100	22	509	61	540	60	Maurice	
Mozambique																					Mozambique	
Niger	84	28	124	28	27	9	38	8	111	37	162	36	700	19	1 100	26	811	20	1 262	27	Niger	
Nigeria	Nigéria
Rwanda	14	12	18	13	79	69	95	71	93	81	113	84	2 300	66	2 700	68	2 393	67	2 813	68	Rwanda	
Senegal	280	21	357	21	625	46	357	21	905	67	714	42	...	...	...	...	...	...	...	...	Senégal
Sierra Leone	102	27			180	48			282	75			26	1			308	12			Sierra Leone	

Region and Country	Urban population served - Population urbaine desservie												Rural population with reasonable access - Population rurale desservie à distance raisonnable				Total				Région et pays	
	by house connexions - par raccords aux immeubles				by public standposts - par distributeurs publics				Total urban - Total urbaine				Total									
	1970		1975		1970		1975		1970		1975		1970		1975							
	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%						
Swaziland	...	...	40	57	...	...	18	26	...	...	58	83	...	...	118	29	...	...	176	37	Souaziland
Togo	34	14	45	14	210	86	107	10	244	100	152	49	86	5	203	10	330	17	355	16	Togo	
Uganda	400	57	662	67	216	31	321	33	616	88	983	100	1 600	17	3 057	29	2 216	22	4 040	35	Ouganda	
United Republic of Cameroon	150	13			750	64			900	77			1 000	21			1 900	32			République-Unie du Cameroun	
United Republic of Tanzania	100	19	175	17	400	75	440	42	500	94	615	59	1 200	9	5 085	36	1 700	13	5 700	38	République-Unie de Tanzanie	
Upper Volta	40	10	96	19	100	25	160	31	140	35	256	50	500	10	1 300	23	640	12	1 556	25	Haute-Volta	
Zaire	1 205	25	1 515	23	400	8	1 000	15	1 605	33	2 515	38	750	4	2 250	12	2 355	11	4 765	19	Zaire	
Zambia	700	51	1 246	66	255	19	386	20	955	70	1 632	86	645	22	500	16	1 600	37	2 132	42	Zambie	
(Number of countries)	(28)		(16)		(28)		(16)		(28)		(16)		(23)		(15)		(23)		(15)		(Nombre de pays)	
AMERICAS																					AMÉRIQUES	
Argentina	11 800	64	14 500	71	900	5	1 000	5	12 700	69	15 500	76	654	12	1 300	26	13 354	56	16 800	66	Argentine	
Bahamas																					Bahamas	
Barbados	85	81	109	97	15	14	3	3	100	95	112	100	135	100	134	100	235	98	246	100	Barbade	
Bolivia	542	32	625	30	1 009	60	1 042	51	1 551	92	1 667	81	53	2	190	6	1 604	33	1 857	34	Bolivie	
Brazil	28 700	54	43 400	65	12 600	24	14 500	22	41 300	78	57 900	87	12 000	28	...	...	53 300	55	...	...	Brésil
Chile	4 200	56	5 600	65	800	11	1 106	13	5 000	67	6 706	78	250	13	486	28	5 250	56	7 192	70	Chili	
Colombia	9 493	73	10 600	75	2 000	15	1 500	11	11 493	88	12 100	86	2 680	28	3 360	33	14 173	63	15 460	64	Colombie	
Costa Rica	611	91	710	95	46	7	37	5	657	98	747	100	639	59	712	56	1 296	74	1 459	72	Costa Rica	
Cuba	4 258	82	5 412	96	-	-	-	-	4 258	82	5 412	96	519	15	...	...	4 777	56	...	...	Cuba
Dominican Republic	934	55	1 406	66	291	17	468	22	1 225	72	1 874	88	377	14	699	27	1 602	37	2 573	55	République Dominicaine	
Ecuador	1 498	63	1 852	58	312	13	276	9	1 810	76	2 128	67	244	7	289	8	2 054	34	2 417	36	Equateur	
El Salvador	540	39	792	47	446	32	713	42	986	71	1 505	89	436	20	699	28	1 422	40	2 204	53	El Salvador	
Grenada																					Grenade	
Guatemala	725	40	858	40	872	48	978	45	1 597	88	1 836	85	425	12	535	14	2 022	38	2 371	39	Guatemala	
Guyana	200	87	230	85	29	13	40	15	229	100	270	100	309	63	400	75	538	75	670	84	Guyane	
Haiti	159	20	175	18	...	...	270	28	...	...	445	46	...	...	112	3	...	...	557	12	Haïti
Honduras	468	67	534	61	230	33	336	39	698	100	870	100	193	10	226	10	891	34	1 096	35	Honduras	
Jamaica	475	62			24	63			499	65			647	52			1 146	57			Jamaïque	
Mexico	19 002	67	24 912	68	1 237	4	775	2	20 239	71	25 687	70	5 770	29	10 497	49	26 009	54	36 184	62	Mexique	
Nicaragua	296	33	746	66	227	25	390	34	523	58	1 136	100	170	16	172	14	693	35	1 308	56	Nicaragua	
Panama	611	90	787	93	66	10	56	7	677	100	843	100	308	41	450	54	985	69	1 293	77	Panama	
Paraguay	162	19	230	23	25	3	18	2	187	22	248	25	81	5	92	5	268	11	340	13	Paraguay	
Peru	3 580	49	4 961	56	620	9	1 400	16	4 200	58	6 361	72	500	8	1 000	15	4 700	35	7 361	47	Pérou	
Trinidad and Tobago	297	54			59	11			356	65			530	100			886	82			Trinité-et-Tobago	
Uruguay	2 060	94	2 220	96	130	6	83	4	2 190	100	2 303	100	300	59	400	87	2 490	92	2 703	98	Uruguay	
Venezuela	5 400	72			1 520	20			6 920	92			1 285	38			8 205	75			Venezuela	
(Number of countries)	(24)		(21)		(23)		(21)		(23)		(21)		(23)		(19)		(23)		(19)		(Nombre de pays)	

Region and Country	Urban population served - Population urbaine desservie												Rural population with reasonable access - Population rurale desservie à distance raisonnable				Total				Région et pays																		
	by house connexions - par raccordements aux immeubles				by public standposts - par distributeurs publics				Total urban - Total urbaine																														
	1970		1975		1970		1975		1970		1975		1970		1975		1970		1975																				
	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%																			
EASTERN MEDITERRANEAN																				MÉDITERRANÉE ORIENTALE																			
Afghanistan	125	7	175	7	200	11	800	33	325	18	975	40	110	1	800	5	435	3	1 775	9	Afghanistan																		
Bahrain	154	91	195	95	15	9	10	5	169	100	205	100	46	94	50	100	215	99	255	100	Bahreïn																		
Cyprus	250	100	272	94	-	-	-	-	250	100	272	94	355	92	372	96	605	95	644	95	Chypre																		
Democratic Yemen	234	62			100	26			334	88			400	43			734	57			Yémen démocratique																		
Egypt	11 170	75			2 830	19			14 000	94			18 000	93			32 000	93			Egypte																		
Ethiopia	600	24	860	27	900	37	1 000	31	1 500	61	1 860	58	-	-	350	1	1 500	6	2 210	8	Ethiopie																		
Iran	6 500	52	9 252	60	2 000	16	2 546	16	8 500	68	11 798	76	2 000	11	5 500	30	10 500	35	17 298	51	Iran																		
Iraq	3 600	65	6 900	98	966	18	118	2	4 566	83	7 018	100	300	7	462	11	4 866	51	7 480	66	Irak																		
Jordan	972	88			108	10			1 080	98			742	59			1 822	77			Jordanie																		
Kuwait	120	18	496	50	280	42	495	50	400	60	991	100	-	-	-	-	400	51	991	89	Koweït																		
Lebanon	2 100	95			-	-			2 100	95			850	85			2 950	92			Liban																		
Libyan Arab Republic	421	76	528	75	130	24	176	25	551	100	704	100	599	42	1 296	82	1 150	58	2 000	87	République Arabe Libyenne																		
Oman	...	...	15	21	20	61	55	79	...	...	70	100	...	...	450	48	...	...	520	52	Oman										
Pakistan	5 194	35	6 490	33	6 270	42	8 238	42	11 464	77	14 728	75	1 720	4	3 200	5	13 184	21	17 928	25	Pakistan																		
Qatar	120	94	152	99	8	6	2	1	128	100	154	100	24	75	30	83	152	95	184	97	Qatar																		
Saudi Arabia	1 164	82	1 050	55	256	18	800	42	1 420	100	1 850	97	2 410	37	4 000	56	3 830	49	5 850	64	Arabie Saoudite																		
Somalia	12	2	60	7	108	15	646	70	120	17	706	77	300	14	500	22	420	15	1 206	38	Somalie																		
Sudan	1 140	60	1 981	80	10	1	406	16	1 150	61	2 387	96	1 800	13	6 945	43	2 950	19	9 332	50	Soudan																		
Syrian Arab Republic	2 455	89			244	9			2 699	98			1 746	50			4 445	71			République Arabe Syrienne																		
Tunisia	1 200	54	1 721	63	850	38	833	30	2 050	92	2 554	93	500	17	...	...	2 550	49	...	...	Tunisie														
United Arab Emirates																					Emirats arabes unis																		
Yemen	80	23			75	22			135	45			100	2			255	4			Yémen																		
(Number of countries)	(20)		(15)		(21)		(15)		(20)		(15)		(20)		(14)		(20)		(14)		(Nombre de pays)																		
EUROPE																				EUROPE																			
Algeria	4 500	69	6 500	93	1 000	15	500	7	5 500	84	7 000	100	...	...	5 500	61	...	...	12 500	77	Algérie														
Malta	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Malte
Morocco	2 200	39			3 000	53			5 200	92			2 900	28			8 100	51			Maroc																		
Turkey	5 706	41	10 077	57	1 426	10	2 903	17	7 132	51	12 980	74	11 520	53	14 680	64	18 652	52	27 600	68	Turquie																		
(Number of countries)	(3)		(2)		(3)		(2)		(3)		(2)		(2)		(2)		(2)		(2)		(Nombre de pays)																		
SOUTH-EAST ASIA																				ASIE DU SUD-EST																			
Bangladesh	240	6	522	6	280	7	1 480	16	520	13	2 002	22	30 000	47	43 350	61	30 520	45	45 352	56	Bangladesh																		
Burma	369	7	394	6	1 581	28	1 765	25	1 950	35	2 159	31	2 995	13	3 324	14	4 945	18	5 483	17	Birmanie																		
Democratic People's Rep. of Korea																					République populaire démocratique de Corée																		
India	46 400	42	75 000	56	19 900	18	32 000	24	66 300	60	107 000	80	25 000	6	86 000	18	91 300	17	193 000	31	Inde																		
Indonesia	2 000	10	7 210	30	200	1	2 300	11	2 200	10	9 510	41	1 020	1	4 825	4	3 220	3	14 335		Indonésie																		

Region and Country	Urban population served - Population urbaine desservie										Rural population with reasonable access - Population rurale desservie à distance raisonnable				Total				Région et pays		
	by house connexions - par raccordements aux immeubles				by public standposts - par distributeurs publics				Total urban - Total urbaine												
	1970		1975		1970		1975		1970		1975		1970		1975		1970			1975	
	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%		N'000	%
Maldives	-	-	-	-	14	100	17	89	14	100	17	89	-	-	-	-	14	12	17	13	Maldives
Mongolia	98	20			182	37			280	58			...	...			...	...			Mongolie
Nepal	13	3	150	28	200	50	300	57	213	53	450	85	10	-	542	5	223	2	992	8	Népal
Sri Lanka	755	27	847	21	535	19	600	15	1 290	46	1 447	36	1 389	14	1 477	13	2 679	21	2 924	19	Sri Lanka
Thailand	2 841	52	4 201	59	435	8	735	10	3 276	60	4 936	69	3 000	10	5 600	16	6 276	17	10 536	25	Thaïlande
(Number of countries)	(9)		(8)		(9)		(8)		(9)		(8)		(8)		(8)		(8)		(8)		(Nombre de pays)
WESTERN PACIFIC																					
Cambodia	572	64			296	33			868	97			2 400	38			3 268	45			PACIFIQUE OCCIDENTAL
China																					Chine
Democratic Republic of Viet-Nam																					République démocratique du Viet-Nam
Fiji	144	77	200	88	...	...	2	1	...	...	202	89	50	15	200	56	...	...	402	69	Fidji
Lao People's Democratic Republic	300	65	337	67	148	32	163	33	448	97	500	100	1 000	39	945	32	1 448	48	1 445	41	République démocratique populaire lao
Malaysia	2 074	70	3 329	89	901	30	407	11	2 975	100	3 736	100	55	1	492	6	3 030	29	4 228	34	Malaisie
Philippines	7 350	57	8 578	52	1 312	10	4 967	30	8 662	67	13 545	82	5 060	20	9 031	31	13 722	36	22 576	50	Philippines
Republic of Korea	10 430	80	15 004	91	549	4	605	4	10 979	84	15 609	95	6 857	38	6 857	38	17 836	58	22 466	66	République de Corée
Republic of South Viet-Nam	1 450	33			475	11			1 925	44			645	5			2 570	14			République du Sud Viet-Nam
Singapore	1 586	88	2 250	100	150	8	-	-	1 736	96	2 250	100	-	-	-	-	1 736	83	2 250	100	Singapour
Tonga	11	58	17	41	8	42	24	59	19	100	41	100	36	53	45	71	55	63	86	83	Tonga
Western Samoa	18	62	37	86	7	24	6	14	25	86	43	100	-	-	28	23	25	17	71	43	Samoa - Occidental
Papua New Guinea	80	35	88	24	20	9	22	6	100	44	110	30	1 600	72	448	19	1 700	70	558	20	Papouasie-Nouvelle-Guinée
(Number of countries)	(11)		(9)		(10)		(9)		(10)		(9)		(11)		(9)		(10)		(9)		(Nombre de pays)

Note: 1. ... No information. 1. ... Donnée non disponible.
 - Magnitude negligible. - Quantité négligeable.
 2. Blank space indicates no response. 2. Espace blanc = aucune réponse n'est parvenue.

EXCRETA DISPOSAL - COMPARISON OF SERVICES, 1970 AND 1975
 EVACUATION DES EXCRETA - COMPARAISON DES SERVICES, 1970 ET 1975

Region and country	Urban - Urbaine												Rural with adequate disposal - Rurals avec installations adéquates				Total				Région et pays		
	connected to public sewerage systems - raccordée à des égouts publics				household systems - installations privées				Total urban - Total urbaine														
					pit privy, septic tank - fosses septiques, puisards, latrines à fosse		buckets - seaux																
	1970		1975		1970		1975		1970		1975		1970		1975		1970		1975				
N'000		%		N'000		%		N'000		%		N'000		%		N'000		%		N'000		%	
	(Regional totals refer only to countries responding - Les totaux régionaux ne tiennent compte que des pays ayant répondu)																						
Africa	1 502	8	2 782	13	5 899	12 243	1 493	892	8 894	48	15 470	80	18 352	23	24 841	21	26 195	27	39 726	39	Afrique		
Americas	55 823	36	53 235	30	47 596	22 132	20	120	87 750	75	46 894	80	26 263	23	13 814	22	106 416	55	50 592	62	Amériques		
Eastern Mediterranean	3 171	7	5 705	10	23 690	28 291	817	1 093	27 678	62	34 304	63	15 618	12	20 515	14	43 263	24	54 819	27	Méditerranée orientale		
Europe	3 904	31	5 110	20	1 158	4 369	355	-	5 417	43	9 479	38	908	5	5 723	18	6 325	20	15 202	27	Europe		
South-East Asia	42 421	28	48 161	26	31 705	47 825	42 361	48 434	116 487	77	144 420	78	25 077	4	41 565	6	141 564	17	185 985	20	Asie du Sud-Est		
Western Pacific	9 893	27	9 499	24	14 086	14 336	5 892	8 434	29 871	81	32 269	81	3 941	11	26 089	43	17 739	31	58 358	58	Pacifique occidental		
Total		28		25						72		74		9		12		25		27	Total		
(Number of countries)	(77)		(67)		(73)	(60)	(73)	(61)	(72)		(58)		(71)		(63)		(66)		(57)		(Nombre de pays)		
AFRICA																					AFRIQUE		
Benin	45	11	...	...	240	...	60	...	345	83	...	...	17	1	...	...	362	14	...	...	Bénin
Botswana																					Botswana		
Burundi	14	14			80		-		94	96			...	...		...	...				Burundi
Central African Republic	-	-	-	-	1 200	2 250	-	-	1 200	64	2 250	100	600	96	750	100	1 800	72	3 000	100	République Centrafricaine		
Chad	1	-			28		-		29	11			13	-			42	1			Tchad		
Comoros																					Comores		
Congo																					Congo		
Gabon																					Gabon		
Gambia																					Gambie		
Ghana	61	2	138	5	1 730	1 976	494	565	2 285	92	2 679	95	2 432	40	2 780	40	4 717	55	5 459	56	Ghana		
Guinea	60	9	...	...	391	...	-	...	451	70	...	...	60	2	...	...	511	13	...	...	Guinée
Guinea-Bissau																					Guinée-Bissau		
Ivory Coast	110	12			65		45		220	23			-	-			220	5			Côte d'Ivoire		
Kenya	515	36	750	42	403	790	296	210	1 214	85	1 750	98	4 453	45	5 500	48	5 667	50	7 250	55	Kenya		
Lesotho																					Lesotho		
Liberia	32	26			79		10		121	100			100	9			221	19			Libéria		
Madagascar	260	24	301	21	127	146	570	...	957	88	...	...	...	...	585	9	...	...	...	...	Madagascar
Malawi																					Malawi		
Mali	-	-			390		-		390	63			-	-			390	8			Mali		
Mauritania	60	68			28		-		88	100			-	-			88	7			Mauritanie		
Mauritius	96	25	150	34	90	126	8	1	194	51	277	63	449	99	465	100	643	77	742	82	Maurice		
Mozambique																					Mozambique		
Niger	-	-	-	-	30	135	-	-	30	10	135	30	3	-	21	1	33	1	156	3	Niger		

Region and country	Urban - Urbaine																Rural with adequate disposal Rurale avec installations adéquates				Total				Région et pays
	connected to public sewerage system raccordée à des égouts publics				household systems - installations privées				Total urban Total urbaine																
					pit privy, septic tank - fosses septiques, puisards, latrines à fosse		buckets seaux																		
	1970		1975		1970		1975		1970		1975		1970		1975										
N'000	%	N'000	%	N'000	N'000	N'000	N'000	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%						
Nigeria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nigéria
Rwanda	-	-	-	-	96	116	-	-	96	83	116	87	1 800	52	2 240	66	1 896	53	2 356	57	Rwanda				
Senegal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Sénégal
Sierra Leone	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Sierra Leone
Swaziland	...	...	4	6	...	65	...	-	...	...	69	99	...	...	100	25	...	...	169	36	Swaziland
Togo	10	4	10	3	-	14	-	92	10	4	116	36	-	-	230	12	10	1	346	15	Togo				
Uganda	150	21	200	20	435	607	6	4	591	84	811	82	7 000	76	10 000	95	7 591	76	10 811	94	Uganda				
United Republic of Cameroon	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	République-Unie du Cameroun
United Republic of Tanzania	...	...	78	7	...	968	...	-	...	...	1 045	100	...	...	510	4	...	...	1 556	10	République-Unie de Tanzanie
Upper Volta	-	-	-	-	195	242	-	-	195	49	242	47	-	-	9	-	195	4	251	4	Haute-Volta				
Zaire	25	1	27	-	200	4 300	-	-	225	5	4 327	65	875	5	1 138	6	1 100	5	5 465	22	Zaïre				
Zambia	63	5	1 124	59	92	508	4	20	159	12	1 652	87	550	18	513	16	709	16	2 165	42	Zambie				
(Number of countries)	(20)		(14)		(20)	(14)	(20)	(13)	(20)		(13)		(18)		(14)		(18)		(13)		(Nombre de pays)				
AMERICAS																									
Argentina	6 200	33	7 200	35	10 000	13 280	-	-	16 200	87	20 480	100	4 200	79	4 200	83	20 400	85	24 680	97	Argentine				
Bahamas	-	-	-	-	105	112	-	-	105	100	112	100	135	100	134	100	240	100	245	100	Bahames				
Barbados	-	-	-	-	105	112	-	-	105	100	112	100	135	100	134	100	240	100	245	100	Barbade				
Bolivia	343	20	493	24	90	...	-	-	433	25	...	...	127	4	302	9	560	12	...	...	Bolivia
Brazil	15 600	29	19 400	29	29 880	...	-	...	45 480	85	...	...	10 384	24	...	...	55 864	58	...	...	Bésil
Chile	2 530	33	3 117	36	-	-	-	-	2 530	33	3 117	36	185	10	190	11	2 715	29	3 307	32	Chili				
Colombia	7 817	60	8 400	60	2 000	1 800	-	-	9 817	75	10 200	73	800	8	1 300	13	10 617	47	11 500	48	Colombie				
Costa Rica	210	31	369	49	232	333	-	-	442	66	702	94	467	43	1 184	93	909	52	1 886	93	Costa Rica				
Cuba	1 394	27	2 682	48	1 533	2 949	-	-	2 927	57	5 631	100	...	...	...	...	...	...	...	...	Cuba
Dominican Republic	277	16	567	27	796	1 000	-	-	1 073	63	1 567	74	1 444	54	420	16	2 517	58	1 987	42	République Dominicaine				
Ecuador	1 383	58	1 670	52	...	...	...	...	...	...	...	...	...	...	254	7	...	...	...	...	Equateur
El Salvador	524	38	591	35	393	601	-	-	917	66	1 192	71	393	18	416	17	1 310	37	1 608	39	El Salvador				
Grenada	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Grenade
Guatemala	728	40	835	39	...	...	...	...	...	...	...	...	402	11	642	16	...	...	...	...	Guatemala
Guyana	66	28	68	25	154	200	-	-	220	95	268	99	450	92	500	94	670	93	768	96	Guyane				
Haiti	...	...	...	...	669	...	...	...	...	...	...	...	43	1	...	...	...	...	...	...	Haïti
Honduras	420	60	401	46	30	70	-	-	450	64	471	54	173	9	271	12	623	24	742	24	Honduras				
Jamaica	94	12	...	...	396	...	-	-	490	64	...	...	1 249	100	...	...	1 739	86	...	...	Jamaïque
Mexico	9 422	33	10 494	29	...	...	-	-	...	...	...	...	2 600	13	2 992	14	...	...	...	...	Mexique
Nicaragua	287	32	313	28	...	823	...	...	...	...	...	...	90	8	295	24	...	...	...	...	Nicaragua

Region and country	Urban - Urbaine												Rural with adequate disposal Rurale avec installations adéquates				Total				Région et pays
	connected to public sewerage system raccordée à des égouts publics				household systems - installations privées				Total urban Total urbaine												
					pit privy, septic tank - fosses septiques, puisards, latrines à fosse		buckets seaux														
	1970		1975		1970		1975		1970		1975		1970		1975						
N'000	%	N'000	%	N'000	N'000	N'000	N'000	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%				
Panama	482	70	610	72	118	54	-	-	600	87	664	78	520	69	634	76	1 120	78	1 298	77	Panama
Paraguay	131	16	180	18	-	-	-	100	131	16	280	28	-	-	-	-	131	6	280	10	Paraguay
Peru	3 500	48	4 565	51	300	...	-	...	3 800	52	...	...	1 000	16	...	...	4 800	36	...	...	Pérou
Trinidad and Tobago																					Trinité-et-Tobago
Uruguay	1 215	55	1 280	56	900	910	20	20	2 135	97	2 210	97	66	13	80	17	2 201	82	2 290	83	Uruguay
Venezuela	3 200	43			...	...	...	...	...	...	...	...	1 535	45			...	...			Venezuela
(Number of countries)	(22)		(20)		(18)	(14)	(18)	(15)	(17)		(13)		(21)		(17)		(16)		(12)		(Nombre de pays)
EASTERN MEDITERRANEAN																					
Afghanistan	15	1	18	1	1 278	1 500	-	-	1 293	69	1 518	63	2 400	16	2 500	15	3 693	21	4 018	21	Afghanistan
Bahrain	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Bahreïn
Cyprus	-	-	-	-	250	272	-	-	250	100	272	94	355	92	371	95	605	95	643	95	Chypre
Democratic Yemen																					Yémen démocratique
Egypt																					Egypte
Ethiopia	155	6	175	5	1 500	1 650	-	-	1 655	67	1 825	56	1 800	8	2 000	8	3 455	14	3 825	14	Ethiopie
Iran	500	4	700	5	12 067	14 757	-	-	12 567	100	15 457	100	8 500	48	11 000	59	21 067	70	26 457	78	Iran
Iraq	212	4	300	4	4 270	5 000	-	-	4 482	82	5 300	75	20	-	30	1	4 502	47	5 330	47	Irak
Jordan																					Jordanie
Kuwait	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Koweït
Lebanon																					Liban
Libyan Arab Republic	119	22	251	36	432	453	-	-	551	100	704	100	769	54	1 096	69	1 320	67	1 800	79	République Arabe Libyenne
Oman	-	-	10	14	20	30	13	30	33	100	70	100	...	...	50	5	...	...	120	12	Oman
Pakistan	1 300	9	2 800	14	300	1 000	100	400	1 700	12	4 200	21	-	-	-	-	1 700	3	4 200	6	Pakistan
Qatar	10	8	108	70	112	45	6	1	128	100	154	100	5	16	36	100	133	83	190	100	Qatar
Saudi Arabia	150	11	500	26	800	1 250	-	-	950	67	1 750	91	700	11	2 500	35	1 650	21	4 250	47	Arabie Saoudite
Somalia	-	-	3	-	-	700	-	5	-	-	708	77	-	-	800	35	-	-	1 508	47	Somalie
Sudan	30	1	55	2	1 106	1 634	698	657	1 834	100	2 346	100	64	4	132	10	1 898	16	2 478	22	Soudan
Syrian Arab Republic																					République Arabe Syrienne
Tunisia	680	30	785	29	1 555	...	-	-	2 235	100	...	...	1 005	34	...	...	3 240	62	...	...	Tunisie
United Arab Emirates																					Emirats arabes unis
Yemen																					Yémen
(Number of countries)	(13)		(13)		(13)	(12)	(13)	(13)	(13)		(12)		(12)		(12)		(12)		(12)		(Nombre de pays)
EUROPE																					
Algeria	500	9	4 000	57	380	3 000	-	-	880	13	7 000	100	480	6	4 500	50	1 360	9	11 500	67	Algérie
Malta	241	96	256	98	10	5	-	-	251	100	261	100	60	80	63	93	311	95	324	98	Malte
Morocco	3 163	55			768		355		4 286	75			368	4			4 654	29			Maroc
Turkey	...	...	854	5	...	1 364	...	-	...	...	2 218	13	...	...	1 160	5	...	...	3 378	8	Turquie
(Number of countries)	(3)		(3)		(3)	(3)	(3)	(3)	(3)		(3)		(3)		(3)		(3)		(3)		(Nombre de pays)

Region and country	Urban - Urbaine												Rural with adequate disposal Rurale avec installations adéquates				Total				Région et pays																		
	connected to public sewerage system raccordée à des égouts publics				household systems - installations privées				Total urban Total urbaine				Total																										
					pit privy, septic tank - fosses septiques, puisards, latrines à fosse		buckets seaux																																
	1970		1975		1970	1975	1970	1975	1970		1975		1970		1975																								
	N'000	%	N'000	%	N'000	N'000	N'000	N'000	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%																					
SOUTH-EAST ASIA																				ASIE DU SUD-EST																			
Bangladesh	500	12	505	5	2 000	2 100	1 200	1 200	3 700	87	3 805	40	100	-	112	-	3 800	6	3 917	5	Bangladesh																		
Burma	321	6	346	5	1 600	1 804	600	570	2 521	45	2 720	38	7 200	32	7 844	32	9 721	35	10 564	33	Birmanie																		
Democratic People's Republic of Korea																					République populaire démocratique de Corée																		
India	40 000	36	45 500	34	14 000	25 000	40 000	45 000	94 000	85	116 500	87	5 000	1	8 700	2	99 000	18	125 200	20	Inde																		
Indonesia	460	2	460	2	10 000	13 969	-	-	10 460	50	14 429	60	4 250	4	5 635	5	14 710	12	20 064	15	Indonésie																		
Maldives	-	-	-	-	-	4	-	-	-	-	4	21	-	-	-	-	-	-	4	3	Maldives																		
Mongolia																					Mongolie																		
Nepal	40	10	50	9	5	15	10	10	55	14	75	14	5	-	5	-	60	1	80	1	Népal																		
Sri Lanka	1 100	39	1 300	32	500	783	551	654	2 151	76	2 737	68	6 022	61	6 269	55	8 173	64	9 006	59	Sri Lanka																		
Thailand	-	-	-	-	3 600	4 150	-	-	3 600	65	4 150	58	2 500	8	13 000	36	6 100	17	17 150	40	Thaïlande																		
(Number of countries)	(8)		(8)		(8)	(8)	(8)	(8)	(8)		(8)		(8)		(8)		(8)		(8)		(Nombre de pays)																		
WESTERN PACIFIC																				PACIFIQUE OCCIDENTAL																			
Cambodia	739	83			150				889	100			120	2			1 009	14			Cambodge																		
China																					Chine																		
Democratic Republic of Viet-Nam																					République démocratique du Viet-Nam																		
Fiji	36	19	52	23	151	174	-	-	187	100	226	100	293	87	331	93	480	91	557	96	Fidji																		
Lao Democratic People's Republic	-	-	-	-	-	50	-	-	-	-	50	10	-	-	60	2	-	-	110	3	République démocratique populaire lao																		
Malaysia	336	11	536	14	1 365	1 742	1 274	1 458	2 975	100	3 736	100	3 259	43	3 669	43	6 234	59	7 405	60	Malaisie																		
Philippines	480	4	845	5	11 185	11 580	-	-	11 665	90	12 425	76	...	...	12 797	44	...	...	25 222	56	Philippines														
Republic of Korea	3 830	29	6 549	40	340	340	3 490	6 265	7 660	59	13 154	80	-	-	8 926	50	7 660	25	22 080	64	République de Corée																		
Republic of South Viet-Nam	3 500	79			608		300		4 408	100			...	...			...	...			République du Sud Viet-Nam												
Singapore	920	51	1 427	63	156	222	736	581	1 812	100	2 230	99	-	-	-	-	1 812	87	2 230	99	Singapour																		
Tonga	-	-	-	-	19	41	-	-	19	100	41	100	68	100	63	100	87	100	104	100	Tonga																		
Western Samoa	-	-	-	-	29	43	-	-	29	100	43	100	91	80	123	99	120	84	166	99	Samoa-Occidentale																		
Papua New Guinea	52	23	90	25	83	144	92	130	227	100	364	100	110	5	120	5	337	14	484	18	Papouasie-Nouvelle- Guinée																		
(Number of countries)	(11)		(9)		(11)	(9)	(11)	(9)	(11)		(9)		(9)		(9)		(9)		(9)		(Nombre de pays)																		

Note: 1. ... No information.
- Magnitude negligible.

2. Blank space indicates no response.

1. ... Donnée non disponible.
- Quantité négligeable.

2. Espace blanc = aucune réponse n'est parvenue.

COMMUNITY WATER SUPPLY - PROPOSED NEW REGIONAL AND GLOBAL TARGETS FOR ACHIEVEMENT BY 1980, IN THE LIGHT OF PROGRESS MADE IN 1971-1975

Region	Percentage of urban population served									Percentage of rural population with easy access to safe water			Percentage of total population served	
	By house connexions			By public standposts			By either house connexions or by public standposts							
	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished	
	1970	1975		1970	1975		1970	1975		1970	1975		1970	1975	1970	1975
Africa	33	36	45	34	29	35	67	65	80	13	21	35	21	29
Americas	61	67	80 ^a	15	14	15	76	81	95	24	30	50	54	57
Eastern Mediterranean	56	52	60	23	28	30	79	80	90	19	16	25	37	34
Europe	47	67	80	21	14	15	68	81	95	45	63	80	52	71
South-East Asia	35	47	60	15	21	30	50	68	90	9	19	35	17	29
Western Pacific	65	75	85	11	16	15	76	91	100	23	30	35	40	54
Global	50	57	68	17	18	23	67	75	91	14	20	36	29	35

^a Target established in the Ten-Year Health Plan for the Americas.

EXCRETA DISPOSAL - PROPOSED NEW REGIONAL AND GLOBAL TARGETS FOR ACHIEVEMENT BY 1980, IN THE LIGHT OF PROGRESS MADE IN 1971-1975

Region	Percentage of urban population served									Percentage of rural population with adequate disposal			Percentage of total population served	
	By connexion to public sewerage system			By household systems			By either public sewerage or household systems							
	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished	
	1970	1975		1970	1975		1970	1975		1970	1975		1970	1975
Africa	8	13	20	40	67	75	48	80	95	23	21	25	27	39
Americas	36	30	55 ^a	39	50	45	75	80	100	23	22	46	55	62
Eastern Mediterranean	7	10	20	55	53	75	62	63	95	12	14	25	24	27
Europe	31	20	30	12	18	30	43	38	60	5	18	30	20	27
South-East Asia	28	26	35	49	52	60	77	78	95	4	6	15	17	20
Western Pacific	27	24	35	54	57	65	81	81	100	11	43	60	31	58
Global	28	25	38	-	-	56	72	74	94	9	12	24	25	27

^a Minimum target established in the Ten-Year Health Plan for the Americas.

COMMUNITY WATER SUPPLY - INVESTMENTS NEEDED IN THE FIVE-YEAR PERIOD 1976-1980 TO
MEET THE PROPOSED NEW REGIONAL TARGETS FOR 1980

(In millions of US dollars at 1975 price levels)

Region	Urban			Rural	Total
	For population to be served by house connexions	For population to be served by public standposts	Total urban	For population to be served with reasonable access	
Africa	1 230	410	1 640	1 430	3 070
Americas	7 320	1 440	8 760	2 160	10 920
Eastern Mediterranean	990	150	1 140	510	1 650
Europe	280	100	380	300	680
South-East Asia	1 250	390	1 640	1 840	3 480
Western Pacific	720	50	770	120	890
Global	11 790	2 540	14 330	6 360	20 690

Note: Weighted average unit costs per capita for each region from the 1970 survey have been multiplied by an inflation factor to obtain 1975 unit costs. For want of a better index, estimates of rises in consumer prices were based on data published in International Financial Statistics, 29, No. 1, 1976.

EXCRETA DISPOSAL - INVESTMENTS NEEDED IN THE FIVE-YEAR PERIOD 1976-1980 TO
MEET THE PROPOSED NEW REGIONAL TARGETS FOR 1980

(In millions of US dollars at 1975 price levels)

Region	Urban			Rural	Total
	For population to be served by connexion public sewers	For population to be served by household systems	Total urban	For population to be served by adequate disposal	
Africa	440	380	820	140	960
Americas	5 620	-	5 620	610	6 230
Eastern Mediterranean	1 620	1 360	2 980	490	3 470
Europe	340	70	410	40	450
South-East Asia	790	550	1 340	330	1 670
Western Pacific	1 040	330	1 370	240	1 610
Global	9 850	2 690	12 540	1 850	14 390

Note: Weighted average unit costs per capita for each region from the 1970 survey have been multiplied by an inflation factor to obtain 1975 unit costs. For want of a better index, estimates of rises in consumer prices were based on data published in International Financial Statistics, 29, No. 1, 1976.



TWENTY-NINTH WORLD HEALTH ASSEMBLY

Agenda item 2.5.5

COMMUNITY WATER SUPPLY AND WASTEWATER DISPOSAL
 (MID-DECADE PROGRESS REPORT)

Report by the Director-General

The progress achieved by developing countries in the provision of community water supplies and excreta disposal facilities during the period 1970-75 is reported and assessed. In the case of water supplies, the mid-decade achievements (1975) are compared with the targets for the Second United Nations Development Decade (1971-1980). In the light of the findings of the survey and the varying degrees of progress achieved, suggestions are made for regional targets to the end of the Decade (1980). The investments required to meet these targets are estimated. The report is submitted to the Twenty-ninth World Health Assembly in accordance with resolution WHA25.35. It should be noted that the review covers not only wastewater disposal, but excreta disposal as a whole.

CONTENTS

	<u>Page</u>
1. INTRODUCTION	2
1.1 Authorization and purpose of the report	2
1.2 Background	2
2. FINDINGS AND COURSES OF ACTION	4
2.1 Review of global progress	4
2.2 Suggested targets for 1980 and investments required to meet them	5
2.2.1 Community water supply	5
2.2.2 Excreta disposal	6
2.3 Courses of action	6
3. REVIEW BY REGIONS	9
3.1 African Region	9
3.2 Region of the Americas	10
3.3 Eastern Mediterranean Region	11
3.4 European Region	12
3.5 South-East Asia Region	13
3.6 Western Pacific Region	14

- Annex 1. The Mid-decade (1975) survey procedures
- Annex 2. Community water supply - comparison of services 1970 and 1975
- Annex 3. Excreta disposal - comparison of services 1970 and 1975
- Annex 4. Community water supply - proposed new regional and global targets for achievement by 1980, in the light of progress made in 1971-75
- Annex 5. Excreta disposal - proposed new regional and global targets for achievement by 1980, in the light of progress made in 1971-75
- Annex 6. Community water supply - investments needed in the five-year period 1976-80 to meet the proposed new regional targets for 1980
- Annex 7. Excreta disposal - investments needed in the five-year period 1976-80 to meet the proposed new regional targets for 1980

1. INTRODUCTION

1.1 Authorization and purpose of the report

This report is presented in compliance with resolution WHA25.35 of the Twenty-fifth World Health Assembly,¹ which requests the Director-General to furnish the Assembly with a mid-decade progress report covering both community water supply and wastewater disposal.²

The purpose of this report is to:

inform the Assembly of the progress made in the size of the population served in the period 1971-75 in relation to the targets recommended by the Twenty-fifth World Health Assembly for the Second United Nations Development Decade;

submit for the Assembly's consideration, in the light of the assessment made, new targets for both community water supply and excreta disposal, as well as the investments required;

recommend; on the basis of the trends emerging from the present mid-decade survey, courses of action that governments and cooperating external agencies might usefully follow.

1.2 Background

Water supply and excreta disposal, which are persistent and major problem areas in the environmental health field in the developing countries, have received considerable attention in the Organization's policies and in its collaborative programmes with Member States. The current Fifth General Programme of Work and the proposed Sixth General Programme of Work

¹ WHO Handbook of Resolutions and Decisions, Vol. I, 1973, p. 152.

² Wastewater disposal is one method of excreta disposal used particularly in urban areas with flush toilets and public sewers. In unsewered urban areas and in rural areas in large parts of the world, other methods, such as household or pit privies, are used. The more general term "excreta disposal" is more appropriate here, as this mid-decade review covers excreta disposal by whatever method.

covering the period 1978-83 (document A29/6) both give prominence to national planning of water supply and waste disposal. The approaches utilized and activities undertaken are described in the report on WHO's human health and environment programme submitted to this Health Assembly,¹ which presents a review of the present situation as of mid-decade in terms of the number of people who have access to these services.

The increased emphasis in the future programme of the Organization on national planning carried with it a commitment to develop better information systems, as no rational plan is possible without an adequate information base. Many statistical data are indeed available in Member States on different aspects of community water supply (less so on excreta disposal); however, in the form they are collected, compilation and analysis are often not possible and the most relevant information for planning and management is therefore often not available to national planning agencies. WHO is thus giving greater attention to technical cooperation with Member States in the development of rational information systems, as part of its collaborative programme in national planning of community water supply and excreta disposal services. "Status reports" have been prepared at regional level periodically, by a number of regional offices, either routinely, for presentation in regional directors' annual reports or in connexion with regional seminars or meetings of the relevant regional committee. The first global survey in 1962 covered 75 developing countries and dealt with urban water supply conditions.² The second global survey was more extensive, covering community water supply and excreta disposal conditions in both urban and rural areas as of the beginning of this decade.^{3,4} Based on this latter survey, the Twenty-fifth World Health Assembly endorsed revised global targets for the Second United Nations Development Decade,⁵ and called for a mid-decade review, presented in this report. The scope of the survey, the methods and sources of data collection, the definitions used, the accuracy of data and the mode of presentation are described in Annex 1.

¹ Document A29/11.

² Dieterich, B. H. & Henderson, J. M. (1963) Urban water supply conditions and needs in seventy-five developing countries, Geneva, World Health Organization (Publ. Hlth Pap. No. 23).

³ World Health Statistics Report, 1973, 26, No. 11.

⁴ Pineo, C. S. & Subrahmanyam, D. V. (1975) Community water supply and excreta disposal situation in the developing countries: A commentary, Geneva, World Health Organization (WHO Offset Publication No. 15).

⁵ Targets to be attained in the Second United Nations Development Decade, by developing countries:

Global (endorsed by the Twenty-fifth World Health Assembly)

community water supply:

- in urban areas, 60% of the population to be served by house connexions and the remaining 40% by public standposts;
- in rural communities, 25% of the population to have reasonable access to safe water.

Americas (contained in the Ten-Year Health Plan for the Americas, approved by the III Special Meeting of Ministers of Health of the Americas, October 1972)

community water supply:

- to provide house connexions to 80% of the urban population or, as a minimum, to supply half the population at present without water services;
- to supply water to 50% of the rural population, or, as a minimum, to reduce by 30% the proportion of the population lacking such supply;

excreta disposal:

- to install sewerage systems for 70% of the urban population or, as a minimum, to reduce by 30% the proportion of the population lacking such services;
- to install sewerage systems or other sanitary means of excreta disposal for 50% of the rural population or, as a minimum, to reduce by 30% the number of inhabitants not possessing adequate facilities.

2. FINDINGS AND COURSES OF ACTION

2.1 Review of global progress

It is evident on the basis of the mid-decade review, there has been an increase not only in the gross numbers of people provided with water supply and excreta disposal facilities over the five-year period 1971-75, but also in the percentage of the urban and rural populations served. In other words, progress in the provision of these services has more than kept pace with population growth in the urban and rural sectors (Table 1). As this survey covered nearly 90% of the total population of the developing countries (excluding China), it would not be unreasonable to assume that this progress applies to the developing countries taken as a whole. However, as the overall goal for the end of the decade is for over 90% of all urban populations to be supplied with safe water either inside their homes or from public standposts (Table 2), it can be readily appreciated that in spite of the progress achieved, a major effort is still required to meet that goal.

TABLE 1. ESTIMATED POPULATION PROVIDED WITH COMMUNITY WATER SUPPLY AND EXCRETA DISPOSAL SERVICES IN THE DEVELOPING COUNTRIES, EXCLUDING CHINA (based on mid-decade survey in 1975)

WATER SUPPLY	Population served adequately (house connexions or reasonable access)				
	1970		1975		Increase in the percentage
	in millions	% of population	in millions	% of population	
Urban	315	67	445	76	9
Rural	180	14	310	22	8
Total	495	29	755	38	9
EXCRETA DISPOSAL	Population served adequately (public sewers or household systems)				
	1970		1975		Increase in the percentage
	in millions	% of population	in millions	% of population	
Urban	340	72	435	75	3
Rural	115	9	195	14	5
Total	455	25	630	32	7

It is also worth noting that the overall progress obtained in the provision of excreta disposal facilities (sanitary sewerage and household systems) is far less satisfactory than that for water supplies. This unsatisfactory situation is rapidly being aggravated by population growth and rural migration into urban areas. This is resulting in the development of unplanned fringe, squatter or slum zones surrounding cities, and these are creating problems of the greatest complexity for all the developing countries.

2.2 Suggested targets for 1980 and investments required to meet them

This evaluation is restricted to a review of the progress achieved during the five-year period 1971-75 in terms of numbers of people served by community water supply and excreta disposal facilities in the various WHO regions and worldwide; comparing the figures with the rate of progress needed to meet the targets adopted; proposing new regional targets for 1980; and estimating the investments that will be required.

Targets are only a means to an end, their main purpose being to stimulate and sustain enthusiasm and effort. They will fail in this purpose if they are set too low or too high. They should therefore be reviewed periodically in the light of an evaluation of progress. In view of the vast differences among countries, the ideal procedure would be for every country to adopt specific national goals as recommended by the Health Assembly in resolution WHA25.35, and to derive regional and global targets from these. In the absence of specific national goals in many countries, and the considerable differences in progress in the different regions, it is felt that it would be more appropriate, in order to stimulate country efforts, to provide an analysis on a regional basis instead of applying only one global set of targets. Accordingly, in keeping with the progress achieved in the different regions, regional targets for 1980 are proposed in Table 2 for both community water supply and excreta disposal; at the same time new global targets are in most cases derived from the regional targets. Targets established in the Ten-Year Health Plan for the Americas have been retained for that Region.

2.2.1 Community water supply (Table 2, Fig. 1, and Annexes 2, 4 and 6)

Urban

The percentage of the urban population served by house connexions from piped public water supplies rose from 50% in 1970 to 57% in 1975. This is a reflection of the progress made in all the regions and is in excess of what is needed to achieve the current global target of 60% by the year 1980. New regional targets have therefore been proposed and the derived global target for 1980 is 68%. It is felt that in view of the progress already made in the first half of this decade, countries should now aim for the new and higher target. Applying an inflation factor of 1.91 to the 1970 unit cost (the inflation factor being derived as a weighted average of estimates of the increase in consumer prices from 1970 to 1975), the new target would need a global investment of \$ 12 000 million at 1975 price levels; this is an approximate annual per capita investment of \$ 3.23 for the estimated 1980 urban population of the developing countries.

The urban population served by public standposts increased only from 17% in 1970 to 20% in 1975. In view of this, the current 40% target would seem unrealistic. From the new regional targets proposed, the derived new global target is 23%. On the same basis as above, the investment required to achieve this level by 1980 is estimated at approximately \$ 2500 million at 1975 prices, which is an annual per capita cost of \$ 0.70 for the total 1980 urban population of developing countries.

With these investments an additional 224 million people would benefit from improved new services, of whom 168 million would be served by house connexions and 56 million by standposts.

Rural

The percentage of the rural population having reasonable access to safe water rose from 14% in 1970 to 22% in 1975. As this progress reported is in excess of the median progress required to achieve the current target of 25% by 1980, new regional targets have been proposed that give a derived global target of 36% to be achieved by 1980. The estimated cost at 1975 price levels to achieve these rural water supply targets is estimated at around \$ 6500 million, or approximately \$ 0.82 per capita per year for the estimated 1980 rural population of the developing countries.

With this investment an additional 255 million rural people would benefit from safe water supplies within reasonable access.

The total global investment in community water supply to meet the proposed new targets in the five years 1976-80 would thus be in the region of \$ 21 000 million, which is an approximate annual investment per capita of \$ 1.81, taking the estimated 1980 population of the developing countries as the base.

With this total investment an additional 479 million people would benefit from improved and new community water supply services.

2.2.2 Excreta disposal (Table 2, Fig. 2, and Annexes 3, 5 and 7)

No targets for excreta disposal have been formally endorsed by WHO, except in the Region of the Americas. Following a review of the progress made in the years 1971-75, targets for achievement by 1980 by all the other regions are now proposed for the consideration of the Assembly. The proposed regional targets give a derived target of 38% of the urban population to have connexions to public sewerage systems and 56% to have household excreta disposal facilities. The global target for the proportion of the rural population to be equipped with adequate disposal facilities, worked out from the regional targets, is 24%. The estimated costs for reaching these levels are: for urban populations to be connected to public sewers, approximately \$ 10 000 million, which is an annual per capita investment of \$ 2.72; for urban populations to be served by household systems, an investment in the region of \$ 2500 million, which is an annual investment of \$ 0.68 per capita; and for rural populations a total investment in the region of \$ 2000 million, which works out at a per capita investment of \$ 0.25, all on the basis of the estimated 1980 urban and rural populations of the developing countries. Thus the total investment required in the excreta disposal sector is in the region of \$ 14 500 million at 1975 price levels. Taking the estimated 1980 population of the developing countries as the base, this would require an annual investment of \$ 1.25 per capita.

With these investments an additional 432 million people would benefit from excreta disposal services: in urban areas 139 million would be served by connexion to a public sewerage system and 108 million by household systems; while 185 million people living in rural areas would be provided with adequate excreta disposal facilities.

A summary of the proposed regional targets and the total investments needed to reach them, for both community water supply and excreta disposal, is given in Table 2.

2.3 Courses of action

While targets set properly, with an appreciation of needs, constraints and resources, can serve as inducements to achieving milestones in specified periods of time, they are not in themselves the most important elements in progress.

The key to successful achievement in the sectoral programmes covered in this report depends on action by the governments of the countries concerned. This action should be motivated by the political will to accomplish clearly stated and feasible national sectoral objectives within the framework of national development planning. Furthermore, if the proposed targets are to be achieved by 1980, action will also be required by the countries themselves for the development of sound institutional structures and adequate financing policies, and for the strengthening of manpower resources. The need to consider broad economic and social goals is especially evident within the rural water supply sector. Where rural economic development planning is in progress or planned, the water supply and sanitation component should be integrated with it. In this regard, a sustained effort to bring about active community participation in the planning, implementation, maintenance and operation of the system is of the utmost importance.

FIG. 1 COMMUNITY WATER SUPPLY – PERCENT OF POPULATION SERVED
(IN THE DEVELOPING COUNTRIES)

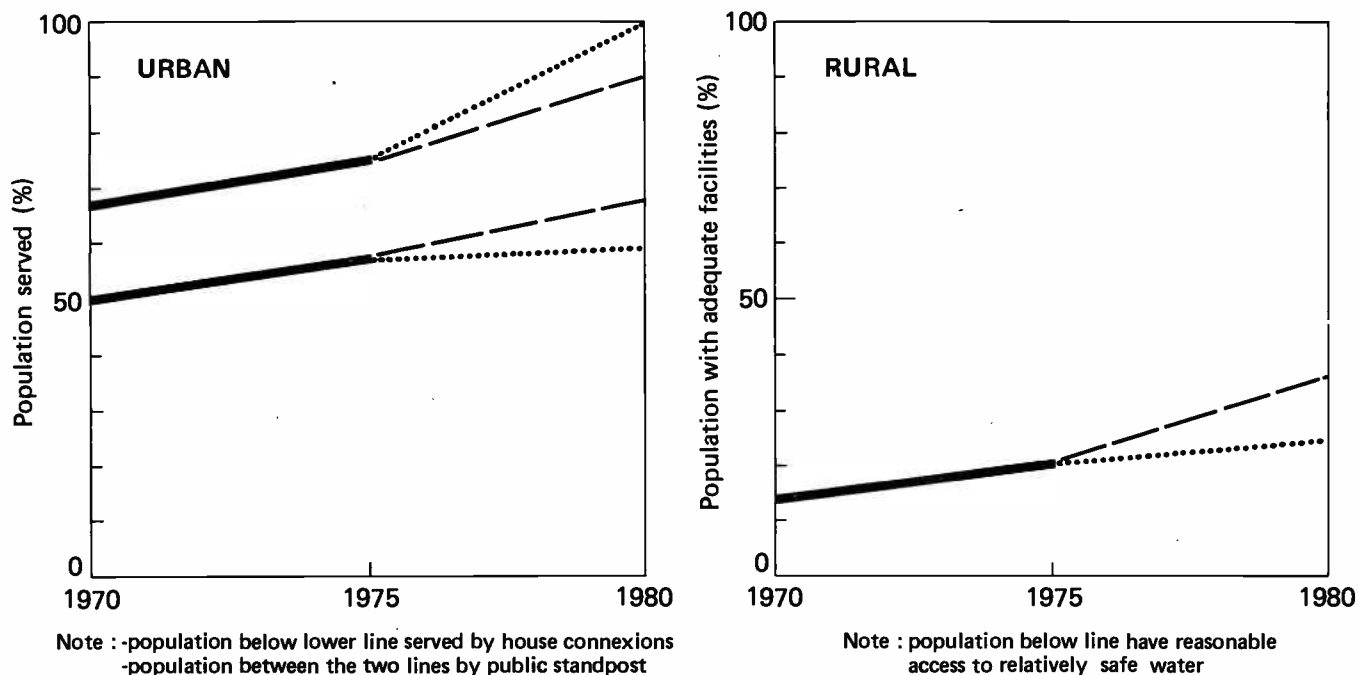
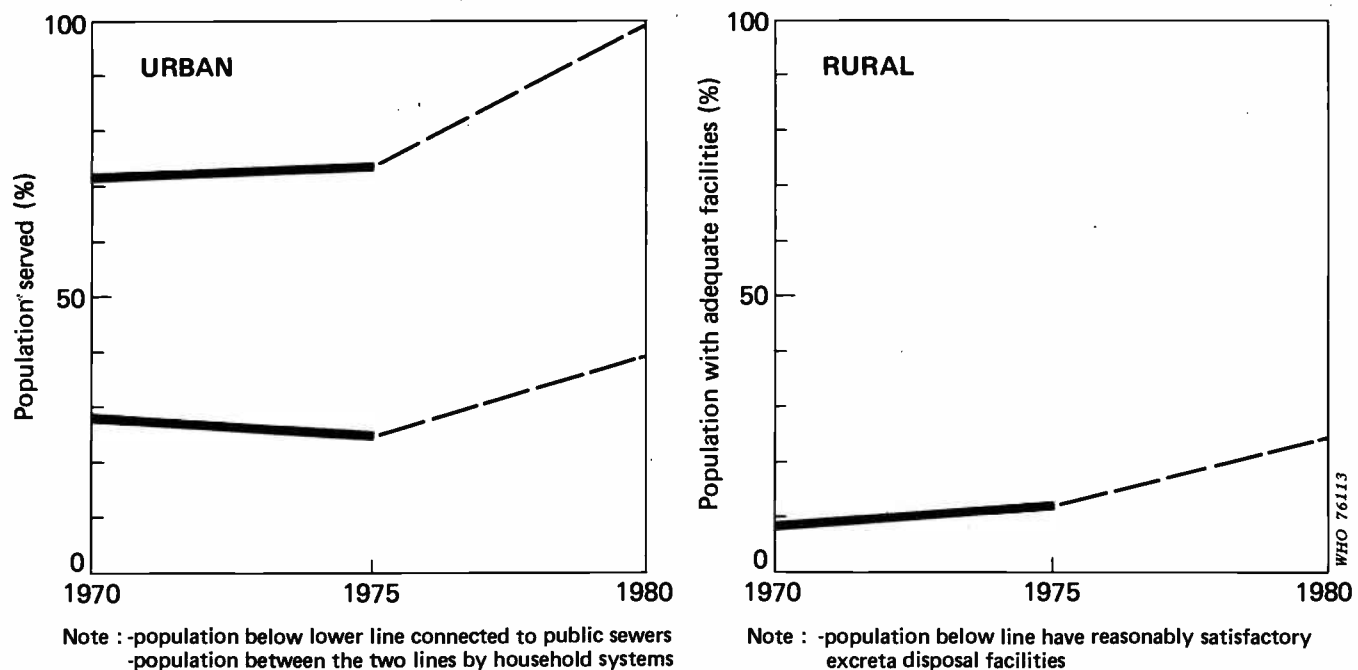


FIG. 2 EXCRETA DISPOSAL – PERCENT OF POPULATION SERVED
(IN THE DEVELOPING COUNTRIES)



————— Progress made 1970 - 1975
 Progress needed to meet current targets
 - - - - - Progress needed to meet proposed new targets

TABLE 2. PROPOSED TARGETS FOR ACHIEVEMENT BY 1980
(PERCENTAGE OF POPULATION TO BE SERVED) AND THE
ESTIMATED INVESTMENTS NEEDED

Region	Proposed targets for 1980						Total investment required to reach the proposed targets (millions US\$)		Additional population to be served by 1980 (in millions)	
	Community water supply			Excreta disposal			Water supply (a)(b)(c)	Excreta disposal (d)(e)(f)	Water supply	Excreta disposal
	Urban		Rural	Urban		Rural				
	House connexions (a)	Public standposts (b)	(c)	Public sewers (d)	Household systems (e)	(f)				
Africa	45	35	35	20	75	25	3 070	960	52	33
Americas	80*	15	50*	55*	45**	46*	10 920	6 230	99	106
Eastern Mediterranean	60	30	25	20	75	25	1 650	3 470	49	73
Europe	80	15	80	30	30	30	680	450	22	19
South-East Asia	60	30	35	35	60	15	3 480	1 670	235	157
Western Pacific	85	15	35	35	65	60	890	1 610	22	44
Global	68	23	36	38	56	24	20 690	14 390	479	432

* Targets established in the Ten-Year Health Plan for the Americas.

** Target assumed for calculating weighted global average; corresponding investments not estimated.

Developing countries must develop their own criteria for national planning and installation of community water supplies. Low-cost technology with the maximum utilization of local resources in terms of manpower and materials would go a long way in reducing investment costs, thus permitting a greater number of people to be served. The adoption of criteria in use in industrialized countries results in very expensive investments that most countries can ill afford.

Action proposed by WHO in support of country-wide programmes for community water supply and disposal of wastes are presented in the report by the Director-General on the Organization's human health and environment programme (document A29/11), which includes outlines of support by the WHO regional offices.

Furthermore, WHO collaboration in national planning of services for the provision of community water supply and disposal of waste, including the surveillance of drinking-water quality and the production of guides and manuals, with emphasis on low-cost and readily adaptable techniques, have been made major objectives in the proposed Sixth General Programme of Work covering the period 1978-83 (document A29/6).

The development of sound national programmes should enable other collaborating international, regional and bilateral organizations to provide both technical and financial aid in the implementation of the programmes. In this respect, WHO will maintain its coordinating role with regard to the health aspects of technical cooperation programmes such as the application of health norms and criteria.

Increased external assistance (bilateral, multilateral or international) is required to enable the developing countries to accelerate the rate of progress in their community water supply and excreta disposal programmes. It is also essential that in external assistance programmes priority be given to critical areas such as congested urban and fringe areas and to rural areas where water supply and excreta disposal conditions are most unsatisfactory.

International and bilateral lending agencies should consider adapting their criteria for loans in accordance with the economic and social conditions prevailing in the recipient countries. Such assistance should also include the strengthening of national infrastructure, the training of manpower, and field investigations for the adaptation of existing technology.

Only a concerted and sustained effort by national governments and by organizations providing aid will make it possible, by the end of the century, for every individual in the developing world to be assured of access to a safe water supply and be provided with a sanitary excreta disposal system, a sine qua non for the prevention and control of the majority of communicable diseases.

3. REVIEW BY REGIONS

3.1 African Region

3.1.1 Community water supply

Urban

The percentage of the urban population served by house connexions in Africa increased only marginally from 33% to 36% from 1970 to 1975. Therefore a more realistic target of 45% to be achieved by 1980 is now proposed for this region, instead of the global target of 60% already adopted. The percentage of the urban population served by public standposts has actually decreased from 34% to 29%. The proposed new target is 35%, giving a total 1980 urban target of 80%, including both house connexions and public standposts.

Rural

In the rural sector, the percentage of the population having reasonable access to safe water increased from 13% in 1970 to 21% in 1975. In view of the progress made, a new regional target of 35% is proposed for attainment by 1980.

To meet these targets, it is estimated that, in the period 1976-80, an investment of the order of \$ 1200 million, or an annual investment of \$ 4.47 per capita, would be required for provision of house connexions; \$ 400 million (approximately \$ 1.49 per capita a year) for provision of public standpost facilities; and approximately \$ 1500 million for provision of reasonably safe water within easy access of the rural population (\$ 1.33 per capita a year), giving a total investment in the region of \$ 3100 million at 1975 price levels. Taking the total 1980 population of the developing countries in the African Region as the base, this works out at an annual investment of \$ 2.27 per capita.

3.1.2 Excreta disposal

Urban

In 1975, of the total urban population (40 million) of the African Region, 13% lived in dwellings connected to public sewers, compared with 8% in 1970. On the basis of this progress it is suggested that a target of 20% in 1980 is attainable. The suggested target would require a total investment of \$ 440 million for the period 1976-80, or an annual per capita investment of \$ 1.60 based on the estimated 1980 urban population.

There were 27 million urban dwellers, or 67% of the total, served by household systems in 1975. A modest increase to 75% by 1980 is suggested. The total investment required for such an increase would be about \$ 380 million, equivalent to an annual investment of \$ 1.38 per capita.

For total urban excreta needs (including both connexions to sewers and household systems), the investment for the period 1976-80 would be 820 million, or, on the basis of the estimated total urban population in 1980, an annual per capita investment of \$ 2.98.

Rural

Of the total rural population of 195 million in 1975, 41 million or 21% had adequate excreta disposal facilities. In 1970 the proportion served was 23%. A target of 25% is proposed for 1980.

The suggested target would require a total investment of \$ 140 million for the period 1976-80, or an annual per capita investment of \$ 0.13 based on the estimated rural population in 1980.

3.2 Region of the Americas

3.2.1 Community water supply

No new targets are proposed, as regional targets were established in the Ten-Year Health Plan for the Americas.¹

¹ For excreta disposal, minimum targets have been assumed.

Urban

As against the regional target of providing 80% of urban population with house connexions by 1980 the progress from 1970 to 1975 was from 61% to 67%. If the targets are to be met, therefore, greater efforts will have to be made in the second half of the decade.

Rural

As against the adopted target of supplying 50% of the rural population with water, the progress from 1970 to 1975 was an increase from 24% to 30%. Much greater resources must therefore be allocated to the rural sector, or else the targets will have to be revised.

It is worth noting that among the developing countries in the Region of the Americas, the urban population is larger than the rural. This trend, observed over the last few decades, seems to be continuing. To meet the targets in the urban sector, an investment of the order of \$ 9000 million will be required, together with an investment of the order of \$ 2000 million in the rural sector, giving a total investment in the region of \$ 11 000 million. Using the estimated 1980 urban, rural and total populations as a base, the annual per capita investments required will be some \$ 7.45 for urban water supply, \$ 3.20 for rural water supply and \$ 5.90 for the total population, both urban and rural.

3.2.2 Excreta disposal

Urban

As against the target of 55% of the urban population to be provided with connexions to public sewerage systems by 1980, the rate of achievement has not succeeded in keeping pace with the increase in urban population. The percentage of the population served has actually decreased from 36% in 1970 to 30% in 1975. The target may therefore need to be revised. The investment required to meet the present targets is of the order of \$ 5600 million, which would require an annual investment of \$ 4.78 per capita, based on the estimated 1980 urban population

Rural

In the rural sector again, the situation has remained more or less static, with 22% of the population possessing adequate excreta disposal facilities, as against the adopted target of 46% to be achieved by 1980. Here again, a revision of the targets is indicated.

To achieve the targets already adopted by the Region, the investment required for rural excreta disposal is of the order of \$ 600 million, or an annual investment of \$ 0.90 per capita, using the 1980 rural population estimate as a base.

Thus a total investment of some \$ 6200 million would be required in the Region for excreta disposal in order to meet the regional targets by 1980. On the basis of the estimated 1980 population of the developing countries in the Region, an annual investment of \$ 3.37 per capita would be needed

3.3 Eastern Mediterranean Region

3.3.1 Community water supply

Urban

The percentage of the population served through house connexions from public water supplies actually decreased from 56% in 1970 to 52% in 1975; the provision of new facilities is obviously not keeping pace with the increase in urban population. Greater resources need to be provided and it is proposed that, as a minimum, a 60% target for 1980 should be aimed at. If an additional 30% could be served by access to public standposts, it would mean that by 1980, 90% of the urban population would be served, either through house connexions or

through access to public standposts. To achieve these targets, it is estimated that an investment of the order of \$ 1000 million would be required for investment in the provision of house connexions, and an additional \$ 150 million for provision of public standposts, giving a total of \$ 1150 million for the urban sector. These correspond to annual per capita investment requirements of \$ 1.89, \$ 0.29, and \$ 2.18 respectively, based on the estimated 1980 population.

Rural

There has been a similar decrease in the percentage of the population with reasonable access to safe water from 19% in 1970 to 16% in 1975. More therefore needs to be done in the rural sector also. Even a modest target of 25% of the population to be served by 1980 would involve an investment in the region of \$ 500 million in the remaining years of the decade. This would mean an annual investment, based on the estimated 1980 population, of approximately \$ 0.50 per capita in the five-year period.

Thus, to meet the above targets, the total investments on water supply for the next five years would amount to some \$ 1600 million, or an annual investment of \$ 1.04 per capita based on the projected 1980 population.

3.3.2 Excreta disposal

Urban

As in the African Region, a characteristic of the Eastern Mediterranean Region is the provision of services in the urban areas through household systems rather than through public sewers. As of 1975, only 10% of the urban population was served by public sewerage systems, whereas 53% was served by household systems. There was no significant change between 1970 and 1975. Considerable investment is possible in the sewerage sector, especially in the oil-producing Gulf States; however, the more populous states of the Region have lesser resources. In view of this, a modest target of 20% for the population to be served by public sewerage systems is proposed for attainment by 1980, with 75% to be served by household systems. With these targets, the investments required would be of the order of \$ 1600 million for service by public sewers and \$ 1400 million for service by household systems, giving a total urban investment requirement of some \$ 3000 million. Using the estimated 1980 urban population as a base, the annual per capita investment requirement in the five years 1976-80 would be \$ 3.09 for connexions to public sewers and \$ 2.59 for service by household systems.

Rural

There was a marginal increase from 12% to 14% in the percentage of the rural population with adequate excreta disposal facilities between 1970 and 1975. To achieve the proposed target of 25%, it is estimated that an investment of about \$ 500 million would be required (giving an annual per capita investment requirement of \$ 0.48 for the current five-year period).

For the whole of the excreta disposal sector, an investment of the order of \$ 3500 million would thus be required. This amounts to an annual per capita investment of \$ 2.24, based on the estimated population for 1980.

3.4 European Region

Although regional target figures are proposed for the purpose of estimating the resources needed, in view of the fact that only Algeria, Malta, Morocco and Turkey are considered as developing countries for this survey, regional targets may not be relevant for the Region and it may be more prudent to proceed on the basis of national targets in the countries concerned.

3.4.1 Community water supply

Urban

The percentage of the population served by house connexions from public water supplies increased from 47% in 1970 to 67% in 1975. As such, it should be possible to achieve an average for the four countries concerned of 80% by 1980. It is also proposed that a minimum of another 15% should have access to public standposts. The estimated cost of reaching this level would be \$ 380 million for the urban sector, or an annual investment of \$ 1.90 per capita, on the basis of 1980 population estimates.

Rural

The countries reporting have a high degree of achievement in providing their rural populations with safe water with reasonable access. As many as 45% were served in 1970, a figure that increased to 63% by 1975. It should thus not be difficult to reach an average figure of 80% by 1980. The resources needed to achieve this level are estimated to be in the order of \$ 300 million over the period 1976-80. This would be an annual investment of \$ 1.33 per capita.

3.4.2 Excreta disposal

Urban

The proportion of people served through connexions to public sewerage systems decreased from 31% in 1970 to 20% in 1975. Even allowing for errors in data collection, it appears that urban population growth has outstripped the provision of new facilities to the population. There was an increase in the percentages of the population served by household systems from 12% in 1970 to 18% in 1975. Assuming that it might be possible to provide public sewer connexions to 30% of the population in these countries by 1980 and for an additional 30% to be served by household systems, the total investment in urban excreta disposal required in the countries concerned would amount to some 400 million in the period 1976-80, or an annual investment of \$ 2.05 per capita, based on 1980 population estimates.

Rural

The percentage of the population possessing adequate excreta disposal facilities rose from 5% to 18% in the period 1970-75. Aiming at an average figure for the four countries of 30% to be achieved by 1980, the investment required would be of the order of \$ 40 million, or an annual investment of \$ 0.18 per capita, on the basis of 1980 population estimates.

3.5 South-East Asia Region

3.5.1 Community water supply

Urban

There has been a significant increase, from 35% in 1970 to 47% in 1975, in the percentage of people served by house connexions. It is therefore felt that this Region should be able to achieve a target of 60% of the urban population to be served by house connexions from public water supplies by the end of the decade. Aiming to provide access for another 30% of the population to public water supplies through public standposts (the increase from 1970 to 1975 being from 15% to 21%), the Region could hope to have 90% of its urban population provided either with house connexions or with access to public supplies through public standposts by 1980.

With these targets, it is estimated that an investment of the order of \$ 1250 million would be required to provide service by house connexions, and another \$ 400 million for service through public standposts, giving a total investment requirement in the urban sector of the order of \$ 1650 million. Using the estimated 1980 total urban population of this Region as a base, this would require an annual investment of \$ 1.39 per capita.

Rural

There has also been an appreciable increase, from 9% in 1970 to 19% in 1975, in the provision of reasonable access to safe water for the rural population. These percentages are still very low and much more investment in the rural sector is needed. In keeping with the progress achieved in the first half of the decade, it is felt that the Region may well aim at a target of 35% by 1980. On that assumption, the investment required would be of the order of \$ 1800 million for the five-year period 1976-1980. Using the estimated 1980 rural population of the Region as a base, the annual investment requirement would be \$ 0.44 per capita.

3.5.2 Excreta disposal

Progress in excreta disposal has been marginal.

Urban

The proportion of the population served by access to public sewerage systems decreased from 28% in 1970 to 26% in 1975. The high cost of urban sewerage and the rapid increase in urban populations were obvious limiting factors. A modest target of 35% to be connected to sewers by 1980 is proposed, with an additional 60% to be served by household systems. With these targets, it is estimated that an investment of some \$ 800 million would be required for service by connexion to public sewerage, and another \$ 550 million for service through household systems, giving a total of \$ 1350 million for the urban sector. Using the estimated 1980 urban population as a base, the annual investment requirement would be \$ 1.14 per capita.

Rural

There has been an increase from 4% in 1970 to 6% in 1975 in the proportion of the rural population possessing adequate excreta disposal facilities. It is therefore not reasonable to set a higher target than, say, 15% for achievement by 1980. Even this modest target would require an investment of the order of \$ 300 million, equivalent to an annual per capita investment of \$ 0.08, based on 1980 rural population estimates.

An investment of \$ 1700 million would thus be required for provision of excreta disposal facilities in the Region in the remaining five years of the decade, or an annual investment of \$ 0.31 per capita, taking the estimated 1980 rural population as a base.

3.6 Western Pacific Region

3.6.1 Community water supply

Urban

There was an increase from 65% in 1970 to 75% in 1975 in the proportion of the population provided with house connexions. The Region has thus outpaced the Region of the Americas and could well aspire to a higher target for 1980 than the latter. A figure of 85% is therefore proposed. It is also proposed that the remaining 15% should have access to public supplies through standposts; thus by 1980, all of the urban population would be served through either house connexions or access to public standposts. It is felt that these targets are reasonable, in the light of the progress made in the first half of the decade. The investment requirements, if these targets were adopted, would be of the order of \$ 800 million for the urban sector. This would represent an annual investment of \$ 2.57 per capita in the

period 1976-1980, based on the estimated 1980 urban population of the developing countries in this Region.

Rural

There was an increase in the proportion of the rural population with reasonable access to safe water from 23% in 1970 to 30% in 1975. It should thus not be difficult to achieve a target of 35% by 1980. The investment requirement for such a target would be approximately \$ 120 million, or an annual investment of \$ 0.21 per capita based on the estimated 1980 rural population.

3.6.2 Excreta disposal

Urban

Urban sewage disposal by connexion to public sewerage systems has lagged behind the progress in water supply. In fact, the decrease from 27% served in 1970 to 24% in 1975 is an indication that the provision of facilities has not kept pace with the increase in population. It is therefore proposed that a modest target of 35% be adopted for 1980, with the proviso that the remaining 65% should be served by household systems. With these targets, the investment requirement for connexions to public sewers would be of the order of \$ 1000 million. In addition, \$ 300 million would be required for services using household systems. Thus, a total urban investment of the order of \$ 1300 million would be required in the latter half of this decade. The annual investment, based on the estimated 1980 urban population, would be \$ 4.57 per capita.

Rural

The Region has made significant progress in excreta disposal in the rural areas and in fact, has the highest level of all of WHO's Regions. The percentage of the rural population with adequate excreta disposal facilities increased from 11% in 1970 to 43% in 1975. It is therefore felt that 60% would not be an unreasonable target for achievement by 1980. The investment required to meet such a target would be approximately \$ 240 million in the remaining five years of the decade. This would require an annual per capita investment of \$ 1.84.

THE MID-DECADE (1975) SURVEY PROCEDURES

Scope of the survey

Estimates were obtained of the numbers of people in both urban and rural areas served by community water supply and excreta disposal facilities as of the end of the year 1975, and the investments in these sectors (both national and external) in the five-year period 1971-75. The survey was restricted to developing countries that are Member States of WHO. It was not possible to obtain complete information from all of them.

Sixty-seven countries responded with information on community water supply and 57 on excreta disposal facilities in this survey, compared with 91 and 61 respectively in the 1970 extensive survey, conducted with greater resources. It should be noted, however, that the 67 countries that provided information on community water supply comprise approximately 90% of the total population of the developing countries, not including China. Consequently, it seems reasonable to extrapolate the information as applying to the developing countries (excluding China) as a whole.

The findings on the population served in each of the regions and globally are thus based on extrapolations from responses received. Many countries that responded to the survey have, in addition to giving figures for 1975, also updated the 1970 figures, so that this report presents not only the status at the end of 1975, but also updated information for end 1970. As some responding countries did not answer every question, the extrapolations made to arrive at regional percentages are not uniform.

Method and sources of data collection

The information was furnished to WHO by government ministries or departments. WHO staff assigned to the countries assisted in its collection. Population data have been computed to the end of calendar year 1975 (so as to be compatible with end-of-year estimates of numbers of people served) from estimates by the United Nations Population Division,¹ except in cases where the country was able to furnish estimates from a more recent census. Practically all the countries included in the survey are members of the UNCTAD Group of 77 developing countries.

Definitions

Urban and rural: The national definition of urban and rural population, as determined by each country, has been accepted.

Reasonable access: In an urban area, a public fountain or standpost located not more than 200 metres from a house may be considered as being within reasonable access of that house. In rural areas, reasonable access would imply that the housewife or members of the household do not have to spend a disproportionate part of the day in fetching the family's water needs.

Safe water supply: The term "safe water supply" includes treated surface waters or untreated but uncontaminated water such as from protected boreholes, springs and sanitary wells. Other waters of doubtful quality are classified as unsafe.

Excreta disposal: Sewage disposal may include collection and disposal, with or without treatment, of human excreta and wastewater by water-borne systems, or the use of pit privies and similar installations.

¹ United Nations, Department of Economic and Social Affairs, Population Division (1975) Selected world demographic indicators by countries, 1950-2000 (Document ESA/P/WP.55).

Accuracy of data

Practically all the data presented are estimates. The bases on which estimates were made vary. Concerning estimates of numbers of people served, countries have better information on community water supply services than on excreta disposal services and have better data on the urban than on the rural situation. The inherent difficulties in accumulating this type of basic information from different sources within a country for use in preparing estimates should serve as a note of caution in interpretation. The data obtained from this survey should be considered as order-of-magnitude estimates only. Resource constraints precluded in-depth studies and spot checking in selected countries.

Presentation

The data received from the various countries have been compiled for each of the six WHO regions. In five of the regions, developing countries are overwhelmingly predominant. In the case of the European Region, as already noted, only Algeria, Malta, Morocco and Turkey were invited to provide information. This should be borne in mind when considering the data summarized by regions which appear in this report.

COMMUNITY WATER SUPPLY - COMPARISON OF SERVICES, 1970 AND 1975
 APPROVISIONNEMENT PUBLIC EN EAU - COMPARAISON DES SERVICES, 1970 ET 1975

Region and Country	Urban population served - Population urbaine desservie												Rural population with reasonable access - Population rurale desservie à distance raisonnable				Total				Région et pays	
	by house connexions - par raccords aux immeubles				by public standposts - par distributeurs publics				Total urban - Total urbaine				Total									
	1970		1975		1970		1975		1970		1975		1970		1975							
	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%						
(Regional totals refer only to countries responding - Les totaux régionaux ne tiennent compte que des pays ayant répondu)																						
Africa	6 803	33	7 882	36	6 940	34	6 270	29	13 743	67	14 152	65	12 696	13	19 272	21	24 815	21	32 710	29	Afrique	
Americas	96 096	61	120 659	67	23 458	15	24 991	14	119 395	76	145 650	81	28 505	24	21 753	30	147 900	54	104 091	57	Amériques	
Eastern Mediterranean	37 611	56	30 147	52	15 370	23	16 125	28	52 961	79	46 272	80	32 002	19	23 955	16	84 963	37	67 673	34	Méditerranée orientale	
Europe	12 406	47	16 577	67	5 426	21	3 403	14	17 832	68	19 980	81	14 420	45	20 180	63	26 752	52	40 160	71	Europe	
South-East Asia	52 716	35	88 324	47	23 327	15	39 197	21	76 043	50	127 521	68	63 414	9	145 118	19	139 177	17	272 639	29	Asie du Sud-Est	
Western Pacific	24 015	65	29 840	75	3 866	11	6 196	16	27 737	76	36 036	91	17 703	23	18 046	30	45 390	40	54 082	54	Pacifique occidentale	
Total		50		57		17		18		67		75		14		20		29		35	Total	
(Number of countries)	(95)		(71)		(94)		(71)		(93)		(71)		(87)		(67)		(86)		(67)		(Nombre de pays)	
AFRICA																						
Benin	33	8	34	6	313	75	536	94	346	83	570	100	455	20	500	20	801	29	1 070	34	Bénin	
Botswana	16	46			19	54			35	100			149	25			184	29			Botswana	
Burundi	15	15			60	62			75	77			...	...			...	...			Burundi
Central African Republic	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	République Centrafricaine
Chad	30	11			170	65			200	76			780	22			980	26			Tchad	
Comoros																					Comores	
Congo	80	28			198	69			278	97			46	7			324	34			Congo	
Gabon	5	5			1	1			6	6			1	-			7	1			Gabon	
Gambia	10	27			26	70			36	97			9	3			45	12			Gambie	
Ghana	872	35	995	35	1 255	51	1 433	51	2 127	86	2 428	86	853	14	973	14	2 980	35	3 401	35	Ghana	
Guinea	337	52	420	47	100	16	193	22	437	68	613	69	...	...	16	-	...	...	629	14	Guinée
Guinea-Bissau																					Guinée-Bissau	
Ivory Coast	260	28			656	70			916	98			1 000	29			1 916	44			Côte d'Ivoire	
Kenya	1 320	93	1 600	90	100	7	180	10	1 420	100	1 780	100	240	2	420	4	1 660	15	2 200	17	Kenya	
Lesotho	5	19			22	81			27	100			...	...			...	...			Lesotho
Liberia	60	43			50	57			110	100			67	6			177	15			Libéria	
Madagascar	140	13	225	15	594	54	896	61	734	67	1 121	76	45	1	950	14	779	11	2 071	25	Madagascar	
Malawi																					Malawi	
Mali	160	26			20	3			180	29			...	...			...	...			Mali
Mauritania	80	91			6	7			86	98			114	10			200	17			Mauritanie	
Mauritius	271	72	330	75	108	28	110	25	379	100	440	100	130	29	100	22	509	61	540	60	Maurice	
Mozambique																					Mozambique	
Niger	84	28	124	28	27	9	38	8	111	37	162	36	700	19	1 100	26	811	20	1 262	27	Niger	
Nigeria	Nigéria
Rwanda	14	12	18	13	79	69	95	71	93	81	113	84	2 300	66	2 700	68	2 393	67	2 813	68	Rwanda	
Senegal	280	21	357	21	625	46	357	21	905	67	714	42	...	...	...	...	...	...	...	...	Sénégal
Sierra Leone	102	27			180	48			282	75			26	1			308	12			Sierra Leone	

Region and Country	Urban population served - Population urbaine desservie												Rural population with reasonable access - Population rurale desservie à distance raisonnable				Total				Région et pays
	by house connexions - par raccordements aux immeubles				by public standposts - par distributeurs publics				Total urban - Total urbaine												
	1970		1975		1970		1975		1970		1975		1970		1975						
	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%					
Swaziland	...	...	40	57	...	...	18	26	...	...	58	83	...	...	118	29	...	...	176	37	Souaziland
Togo	34	14	45	14	210	86	107	10	244	100	152	49	86	5	203	10	330	17	355	16	Togo
Uganda	400	57	662	67	216	31	321	33	616	88	983	100	1 600	17	3 057	29	2 216	22	4 040	35	Ouganda
United Republic of Cameroon	150	13			750	64			900	77			1 000	21			1 900	32			République-Unie du Cameroun
United Republic of Tanzania	100	19	175	17	400	75	440	42	500	94	615	59	1 200	9	5 085	36	1 700	13	5 700	38	République-Unie de Tanzanie
Upper Volta	40	10	96	19	100	25	160	31	140	35	256	50	500	10	1 300	23	640	12	1 556	25	Haute-Volta
Zaire	1 205	25	1 515	23	400	8	1 000	15	1 605	33	2 515	38	750	4	2 250	12	2 355	11	4 765	19	Zaïre
Zambia	700	51	1 246	66	255	19	386	20	955	70	1 632	86	645	22	500	16	1 600	37	2 132	42	Zambie
(Number of countries)	(28)		(16)		(28)		(16)		(28)		(16)		(23)		(15)		(23)		(15)		(Nombre de pays)
AMERICAS																					
AMÉRIQUES																					
Argentina	11 800	64	14 500	71	900	5	1 000	5	12 700	69	15 500	76	654	12	1 300	26	13 354	56	16 800	66	Argentine
Bahamas																					Bahamas
Barbados	85	81	109	97	15	14	3	3	100	95	112	100	135	100	134	100	235	98	246	100	Barbade
Bolivia	542	32	625	30	1 009	60	1 042	51	1 551	92	1 667	81	53	2	190	6	1 604	33	1 857	34	Bolivie
Brazil	28 700	54	43 400	65	12 600	24	14 500	22	41 300	78	57 900	87	12 000	28	...	...	53 300	55	...	...	Brésil
Chile	4 200	56	5 600	65	800	11	1 106	13	5 000	67	6 706	78	250	13	486	28	5 250	56	7 192	70	Chili
Colombia	9 493	73	10 600	75	2 000	15	1 500	11	11 493	88	12 100	86	2 680	28	3 360	33	14 173	63	15 460	64	Colombie
Costa Rica	611	91	710	95	46	7	37	5	657	98	747	100	639	59	712	56	1 296	74	1 459	72	Costa Rica
Cuba	4 258	82	5 412	96	-	-	-	-	4 258	82	5 412	96	519	15	...	...	4 777	56	...	...	Cuba
Dominican Republic	934	55	1 406	66	291	17	468	22	1 225	72	1 874	88	377	14	699	27	1 602	37	2 573	55	République Dominicaine
Ecuador	1 498	63	1 852	58	312	13	276	9	1 810	76	2 128	67	244	7	289	8	2 054	34	2 417	36	Equateur
El Salvador	540	39	792	47	446	32	713	42	986	71	1 505	89	436	20	699	28	1 422	40	2 204	53	El Salvador
Grenada																					Grenade
Guatemala	725	40	858	40	872	48	978	45	1 597	88	1 836	85	425	12	535	14	2 022	38	2 371	39	Guatemala
Guyana	200	87	230	85	29	13	40	15	229	100	270	100	309	63	400	75	538	75	670	84	Guyane
Haiti	159	20	175	18	...	...	270	28	...	...	445	46	...	...	112	3	...	...	557	12	Haïti
Honduras	468	67	534	61	230	33	336	39	698	100	870	100	193	10	226	10	891	34	1 096	35	Honduras
Jamaica	475	62			24	63			499	65			647	52			1 146	57			Jamaïque
Mexico	19 002	67	24 912	68	1 237	4	775	2	20 239	71	25 687	70	5 770	29	10 497	49	26 009	54	36 184	62	Mexique
Nicaragua	296	33	746	66	227	25	390	34	523	58	1 136	100	170	16	172	14	693	35	1 308	56	Nicaragua
Panama	611	90	787	93	66	10	56	7	677	100	843	100	308	41	450	54	985	69	1 293	77	Panama
Paraguay	162	19	230	23	25	3	18	2	187	22	248	25	81	5	92	5	268	11	340	13	Paraguay
Peru	3 580	49	4 961	56	620	9	1 400	16	4 200	58	6 361	72	500	8	1 000	15	4 700	35	7 361	47	Pérou
Trinidad and Tobago	297	54			59	11			356	65			530	100			886	82			Trinité-et-Tobago
Uruguay	2 060	94	2 220	96	130	6	83	4	2 190	100	2 303	100	300	59	400	87	2 490	92	2 703	98	Uruguay
Venezuela	5 400	72			1 520	20			6 920	92			1 285	38			8 205	75			Venezuela
(Number of countries)	(24)		(21)		(23)		(21)		(23)		(21)		(23)		(19)		(23)		(19)		(Nombre de pays)

Region and Country	Urban population served - Population urbaine desservie												Rural population with reasonable access - Population rurale desservie à distance raisonnable				Total				Région et pays																				
	by house connexions - par raccordements aux immeubles				by public standposts - par distributeurs publics				Total urban - Total urbaine																																
	1970		1975		1970		1975		1970		1975		1970		1975		1970		1975																						
	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%																					
<u>EASTERN MEDITERRANEAN</u>																					MÉDITERRANÉE ORIENTALE																				
Afghanistan	125	7	175	7	200	11	800	33	325	18	975	40	110	1	800	5	435	3	1 775	9	Afghanistan																				
Bahrain	154	91	195	95	15	9	10	5	169	100	205	100	46	94	50	100	215	99	255	100	Bahreïn																				
Cyprus	250	100	272	94	-	-	-	-	250	100	272	94	355	92	372	96	605	95	644	95	Chypre																				
Democratic Yemen	234	62			100	26			334	88			400	43			734	57			Yémen démocratique																				
Egypt	11 170	75			2 830	19			14 000	94			18 000	93			32 000	93			Egypte																				
Ethiopia	600	24	860	27	900	37	1 000	31	1 500	61	1 860	58	-	-	350	1	1 500	6	2 210	8	Ethiopie																				
Iran	6 500	52	9 252	60	2 000	16	2 546	16	8 500	68	11 798	76	2 000	11	5 500	30	10 500	35	17 298	51	Iran																				
Iraq	3 600	65	6 900	98	966	18	118	2	4 566	83	7 018	100	300	7	462	11	4 866	51	7 480	66	Irak																				
Jordan	972	88			108	10			1 080	98			742	59			1 822	77			Jordanie																				
Kuwait	120	18	496	50	280	42	495	50	400	60	991	100	-	-	-	-	400	51	991	89	Koweït																				
Lebanon	2 100	95			-	-			2 100	95			850	85			2 950	92			Liban																				
Libyan Arab Republic	421	76	528	75	130	24	176	25	551	100	704	100	599	42	1 296	82	1 150	58	2 000	87	République Arabe Libyenne																				
Oman	...	...	15	21	20	61	55	79	...	...	70	100	...	...	450	48	...	...	520	52	Oman												
Pakistan	5 194	35	6 490	33	6 270	42	8 238	42	11 464	77	14 728	75	1 720	4	3 200	5	13 184	21	17 928	25	Pakistan																				
Qatar	120	94	152	99	8	6	2	1	128	100	154	100	24	75	30	83	152	95	184	97	Qatar																				
Saudi Arabia	1 164	82	1 050	55	256	18	800	42	1 420	100	1 850	97	2 410	37	4 000	56	3 830	49	5 850	64	Arabie Saoudite																				
Somalia	12	2	60	7	108	15	646	70	120	17	706	77	300	14	500	22	420	15	1 206	38	Somalie																				
Sudan	1 140	60	1 981	80	10	1	406	16	1 150	61	2 387	96	1 800	13	6 945	43	2 950	19	9 332	50	Soudan																				
Syrian Arab Republic	2 455	89			244	9			2 699	98			1 746	50			4 445	71			République Arabe Syrienne																				
Tunisia	1 200	54	1 721	63	850	38	833	30	2 050	92	2 554	93	500	17	...	...	2 550	49	...	...	Tunisie																
United Arab Emirates					75	22			155	45			100	2			255	4			Emirats arabes unis																				
Yemen	80	23																			Yémen																				
(Number of countries)	(20)		(15)		(21)		(15)		(20)		(15)		(20)		(14)		(20)		(14)		(Nombre de pays)																				
<u>EUROPE</u>																					EUROPE																				
Algeria	4 500	69	6 500	93	1 000	15	500	7	5 500	84	7 000	100	...	...	5 500	61	...	...	12 500	77	Algérie																
Malta	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Malte
Morocco	2 200	39			3 000	53			5 200	92			2 900	28			8 100	51			Maroc																				
Turkey	5 706	41	10 077	57	1 426	10	2 903	17	7 132	51	12 980	74	11 520	53	14 680	64	18 652	52	27 600	68	Turquie																				
(Number of countries)	(3)		(2)		(3)		(2)		(3)		(2)		(2)		(2)		(2)		(2)		(Nombre de pays)																				
<u>SOUTH-EAST ASIA</u>																					ASIE DU SUD-EST																				
Bangladesh	240	6	522	6	280	7	1 480	16	520	13	2 002	22	30 000	47	43 350	61	30 520	45	45 352	56	Bangladesh																				
Burma	369	7	394	6	1 581	28	1 765	25	1 950	35	2 159	31	2 995	13	3 324	14	4 945	18	5 483	17	Birmanie																				
Democratic People's Rep. of Korea																					République populaire démocratique de Corée																				
India	46 400	42	75 000	56	19 900	18	32 000	24	66 300	60	107 000	80	25 000	6	86 000	18	91 300	17	193 000	31	Inde																				
Indonesia	2 000	10	7 210	30	200	1	2 300	11	2 200	10	9 510	41	1 020	1	4 825	4	3 220	3	14 335		Indonésie																				

Region and Country	Urban population served - Population urbaine desservie										Rural population with reasonable access - Population rurale desservie à distance raisonnable				Total				Région et pays			
	by house connexions - par raccordements aux immeubles				by public standposts - par distributeurs publics				Total urban - Total urbaine						Total							
	1970		1975		1970		1975		1970		1975		1970		1975							
	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%						
Maldives	-	-	-	-	14	100	17	89	14	100	17	89	-	-	-	-	14	12	17	13	Maldives	
Mongolia	98	20			182	37			280	58			...	...			...	...			Mongolie
Nepal	13	3	150	28	200	50	300	57	213	53	450	85	10	-	542	5	223	2	992	8	Népal	
Sri Lanka	755	27	847	21	535	19	600	15	1 290	46	1 447	36	1 389	14	1 477	13	2 679	21	2 924	19	Sri Lanka	
Thailand	2 841	52	4 201	59	435	8	735	10	3 276	60	4 936	69	3 000	10	5 600	16	6 276	17	10 536	25	Thaïlande	
(Number of countries)	(9)		(8)		(9)		(8)		(9)		(8)		(8)		(8)		(8)		(8)		(Nombre de pays)	
WESTERN PACIFIC																					PACIFIQUE OCCIDENTAL	
Cambodia	572	64			296	33			868	97			2 400	38			3 268	45			Cambodge	
China																					Chine	
Democratic Republic of Viet-Nam																					République démocratique du Viet-Nam	
Fiji	144	77	200	88	...	...	2	1	...	...	202	89	50	15	200	56	...	...	402	69	Fidji
Lao People's Democratic Republic	300	65	337	67	148	32	163	33	448	97	500	100	1 000	39	945	32	1 448	48	1 445	41	République démocratique populaire lao	
Malaysia	2 074	70	3 329	89	901	30	407	11	2 975	100	3 736	100	55	1	492	6	3 030	29	4 228	34	Malaisie	
Philippines	7 350	57	8 578	52	1 312	10	4 967	30	8 662	67	13 545	82	5 060	20	9 031	31	13 722	36	22 576	50	Philippines	
Republic of Korea	10 430	80	15 004	91	549	4	605	4	10 979	84	15 609	95	6 857	38	6 857	38	17 836	58	22 466	66	République de Corée	
Republic of South Viet-Nam	1 450	33			475	11			1 925	44			645	5			2 570	14			République du Sud Viet-Nam	
Singapore	1 586	88	2 250	100	150	8	-	-	1 736	96	2 250	100	-	-	-	-	1 736	83	2 250	100	Singapour	
Tonga	11	58	17	41	8	42	24	59	19	100	41	100	36	53	45	71	55	63	86	83	Tonga	
Western Samoa	18	62	37	86	7	24	6	14	25	86	43	100	-	-	28	23	25	17	71	43	Samoa - Occidental	
Papua New Guinea	80	35	88	24	20	9	22	6	100	44	110	30	1 600	72	448	19	1 700	70	558	20	Papouasie-Nouvelle-Guinée	
(Number of countries)	(11)		(9)		(10)		(9)		(10)		(9)		(11)		(9)		(10)		(9)		(Nombre de pays)	

Note: 1. ... No information.
- Magnitude negligible.

2. Blank space indicates no response.

1. ... Donnée non disponible.
- Quantité négligeable.

2. Espace blanc = aucune réponse n'est parvenue.

EXCRETA DISPOSAL - COMPARISON OF SERVICES, 1970 AND 1975
EVACUATION DES EXCRETA - COMPARAISON DES SERVICES, 1970 ET 1975

Region and country	Urban - Urbaine												Rural with adequate disposal - Rurale avec installations adéquates				Total				Région et pays
	connected to public sewerage systems - raccordée à des égouts publics				household systems - installations privées				Total urban - Total urbaine				Total								
					pit privy, septic tank - fosses septiques, puisards, latrines à fosse		buckets - seaux														
	1970		1975		1970		1975		1970		1975		1970		1975						
N'000	%	N'000	%	N'000	N'000	N'000	N'000	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%				
	(Regional totals refer only to countries responding - Les totaux régionaux ne tiennent compte que des pays ayant répondu)																				
Africa	1 502	8	2 782	13	5 899	12 243	1 493	892	8 894	48	15 470	80	18 352	23	24 841	21	26 195	27	39 726	39	Afrique
Americas	55 823	36	53 235	30	47 596	22 132	20	120	87 750	75	46 894	80	26 263	23	13 814	22	106 416	55	50 592	62	Amériques
Eastern Mediterranean	3 171	7	5 705	10	23 690	28 291	817	1 093	27 678	62	34 304	63	15 618	12	20 515	14	43 263	24	54 819	27	Méditerranée orientale
Europe	3 904	31	5 110	20	1 158	4 369	355	-	5 417	43	9 479	38	908	5	5 723	18	6 325	20	15 202	27	Europe
South-East Asia	42 421	28	48 161	26	31 705	47 825	42 361	48 434	116 487	77	144 420	78	25 077	4	41 565	6	141 564	17	185 985	20	Asie du Sud-Est
Western Pacific	9 893	27	9 499	24	14 086	14 336	5 892	8 434	29 871	81	32 269	81	3 941	11	26 089	43	17 739	31	58 358	58	Pacifique occidentale
Total		28		25						72		74		9	12		25		27		Total
(Number of countries)	(77)		(67)		(73)	(60)	(73)	(61)	(72)		(58)		(71)		(63)		(66)		(57)		(Nombre de pays)
AFRICA																					AFRIQUE
Benin	45	11	...	...	240	...	60	...	345	83	...	...	17	1	...	...	362	14	...	...	Bénin
Botswana																					Botswana
Burundi	14	14			80		-		94	96			...	...			...	...			Burundi
Central African Republic	-	-	-	-	1 200	2 250	-	-	1 200	64	2 250	100	600	96	750	100	1 800	72	3 000	100	République Centrafricaine
Chad	1	-			28		-		29	11			13	-			42	1			Tchad
Comoros																					Comores
Congo																					Congo
Gabon																					Gabon
Gambia																					Gambie
Ghana	61	2	138	5	1 730	1 976	494	565	2 285	92	2 679	95	2 432	40	2 780	40	4 717	55	5 459	56	Ghana
Guinea	60	9	...	...	391	...	-	...	451	70	...	...	60	2	...	...	511	13	...	...	Guinée
Guinea-Bissau																					Guinée-Bissau
Ivory Coast	110	12			65		45		220	23			-	-			220	5			Côte d'Ivoire
Kenya	515	36	750	42	403	790	296	210	1 214	85	1 750	98	4 453	45	5 500	48	5 667	50	7 250	55	Kenya
Lesotho																					Lesotho
Liberia	32	26			79		10		121	100			100	9			221	19			Libéria
Madagascar	260	24	301	21	127	146	570	...	957	88	...	...	...	...	585	9	...	...	...	...	Madagascar
Malawi																					Malawi
Mali	-	-			390		-		390	63			-	-			390	8			Mali
Mauritania	60	68			28		-		88	100			-	-			88	7			Mauritanie
Mauritius	96	25	150	34	90	126	8	1	194	51	277	63	449	99	465	100	643	77	742	82	Maurice
Mozambique																					Mozambique
Niger	-	-	-	-	30	135	-	-	30	10	135	30	3	-	21	1	33	1	156	3	Niger

Region and country	Urban - Urbaine										Rural with adequate disposal Rurale avec installations adéquates				Total				Région et pays		
	connected to public sewerage system raccordée à des égouts publics				household systems - installations privées				Total urban Total urbaine												
					pit privy, septic tank - fosses septiques, puisards, latrines à fosse		buckets seaux														
	1970		1975		1970		1975		1970		1975		1970		1975						
N'000	%	N'000	%	N'000	N'000	N'000	N'000	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%				
Nigeria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nigéria	
Rwanda	-	-	-	-	96	116	-	-	96	83	116	87	1 800	52	2 240	66	1 896	53	2 356	57	Rwanda
Senegal	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Sénégal
Sierra Leone	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Sierra Leone
Swaziland	...	...	4	6	...	65	...	-	...	...	69	99	...	...	100	25	...	...	169	36	Souaziland
Togo	10	4	10	3	-	14	-	92	10	4	116	36	-	-	230	12	10	1	346	15	Togo
Uganda	150	21	200	20	435	607	6	4	591	84	811	82	7 000	76	10 000	95	7 591	76	10 811	94	Ouganda
United Republic of Cameroon	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	République-Unie du Cameroun
United Republic of Tanzania	...	...	78	7	...	968	...	-	...	...	1 045	100	...	...	510	4	...	...	1 556	10	République-Unie de Tanzanie
Upper Volta	-	-	-	-	195	242	-	-	195	49	242	47	-	-	9	-	195	4	251	4	Haute-Volta
Zaire	25	1	27	-	200	4 300	-	-	225	5	4 327	65	875	5	1 138	6	1 100	5	5 465	22	Zaïre
Zambia	63	5	1 124	59	92	508	4	20	159	12	1 652	87	550	18	513	16	709	16	2 165	42	Zambie
(Number of countries)	(20)		(14)		(20)	(14)	(20)	(13)	(20)		(13)		(18)		(14)		(18)		(13)		(Nombre de pays)
AMERICAS																					AMÉRIQUES
Argentina	6 200	33	7 200	35	10 000	13 280	-	-	16 200	87	20 480	100	4 200	79	4 200	83	20 400	85	24 680	97	Argentine
Bahamas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Bahamas
Barbados	-	-	-	-	105	112	-	-	105	100	112	100	135	100	134	100	240	100	245	100	Barbade
Bolivia	343	20	493	24	90	...	-	-	433	25	...	...	127	4	302	9	560	12	...	...	Bolivia
Brazil	15 600	29	19 400	29	29 880	...	-	...	45 480	85	...	...	10 384	24	...	...	55 864	58	...	...	Brésil
Chile	2 530	33	3 117	36	-	-	-	-	2 530	33	3 117	36	185	10	190	11	2 715	29	3 307	32	Chili
Colombia	7 817	60	8 400	60	2 000	1 800	-	-	9 817	75	10 200	73	800	8	1 300	13	10 617	47	11 500	48	Colombie
Costa Rica	210	31	369	49	232	333	-	-	442	66	702	94	467	43	1 184	93	909	52	1 886	93	Costa Rica
Cuba	1 394	27	2 682	48	1 533	2 949	-	-	2 927	57	5 631	100	...	...	...	...	...	...	...	...	Cuba
Dominican Republic	277	16	567	27	796	1 000	-	-	1 073	63	1 567	74	1 444	54	420	16	2 517	58	1 987	42	République Dominicaine
Ecuador	1 383	58	1 670	52	...	...	...	...	...	...	...	...	...	...	254	7	...	...	...	...	Equateur
El Salvador	524	38	591	35	393	601	-	-	917	66	1 192	71	393	18	416	17	1 310	37	1 608	39	El Salvador
Grenada	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Grenade
Guatemala	728	40	835	39	...	...	...	...	...	...	...	...	402	11	642	16	...	...	...	...	Guatemala
Guyana	66	28	68	25	154	200	-	-	220	95	268	99	450	92	500	94	670	93	768	96	Guyane
Haiti	...	...	...	...	669	...	...	...	...	...	...	...	43	1	...	...	...	...	...	...	Haïti
Honduras	420	60	401	46	30	70	-	-	450	64	471	54	173	9	271	12	623	24	742	24	Honduras
Jamaica	94	12	...	...	396	...	-	-	490	64	...	...	1 249	100	...	...	1 739	86	...	...	Jamaïque
Mexico	9 422	33	10 494	29	...	...	-	-	...	...	...	...	2 600	13	2 992	14	...	...	...	...	Mexique
Nicaragua	287	32	313	28	...	823	...	...	...	...	...	...	90	8	295	24	...	...	...	...	Nicaragua

Region and country	Urban - Urbaine										Rural with adequate disposal Rurale avec installations adéquates				Total				Région et pays		
	connected to public sewerage system raccordée à des égouts publics				household systems - installations privées				Total urban Total urbaine												
					pit privy, septic tank - fosses septiques, puisards, latrines à fosse		buckets seaux														
	1970		1975		1970		1975		1970		1975		1970		1975		1970			1975	
N'000	%	N'000	%	N'000	N'000	N'000	N'000	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%		
Panama	482	70	610	72	118	54	-	-	600	87	664	78	520	69	634	76	1 120	78	1 298	77	Panama
Paraguay	131	16	180	18	-	-	-	100	131	16	280	28	-	-	-	-	131	6	280	10	Paraguay
Peru	3 500	48	4 565	51	300	...	-	...	3 800	52	...	...	1 000	16	...	...	4 800	36	...	...	Pérou
Trinidad and Tobago																					Trinité-et-Tobago
Uruguay	1 215	55	1 280	56	900	910	20	20	2 135	97	2 210	97	66	13	80	17	2 201	82	2 290	83	Uruguay
Venezuela	3 200	43			...	...	...	...	...	...	...	...	1 535	45	...	...	...	...	...	...	Venezuela
(Number of countries)	(22)		(20)		(18)	(14)	(18)	(15)	(17)		(13)		(21)	(17)		(16)		(12)			(Nombre de pays)
EASTERN MEDITERRANEAN																					
Afghanistan	15	1	18	1	1 278	1 500	-	-	1 293	69	1 518	63	2 400	16	2 500	15	3 693	21	4 018	21	Afghanistan
Bahrain	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Bahréïn
Cyprus	-	-	-	-	250	272	-	-	250	100	272	94	355	92	371	95	605	95	643	95	Chypre
Democratic Yemen																					Yémen démocratique
Egypt																					Egypte
Ethiopia	155	6	175	5	1 500	1 650	-	-	1 655	67	1 825	56	1 800	8	2 000	8	3 455	14	3 825	14	Ethiopie
Iran	500	4	700	5	12 067	14 757	-	-	12 567	100	15 457	100	8 500	48	11 000	59	21 067	70	26 457	78	Iran
Iraq	212	4	300	4	4 270	5 000	-	-	4 482	82	5 300	75	20	-	30	1	4 502	47	5 330	47	Irak
Jordan																					Jordanie
Kuwait	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Koweït
Lebanon																					Liban
Libyan Arab Republic	119	22	251	36	432	453	-	-	551	100	704	100	769	54	1 096	69	1 320	67	1 800	79	République Arabe Libyenne
Oman	-	-	10	14	20	30	13	30	33	100	70	100	...	...	50	5	...	...	120	12	Oman
Pakistan	1 300	9	2 800	14	300	1 000	100	400	1 700	12	4 200	21	-	-	-	-	1 700	3	4 200	6	Pakistan
Qatar	10	8	108	70	112	45	6	1	128	100	154	100	5	16	36	100	133	83	190	100	Qatar
Saudi Arabia	150	11	500	26	800	1 250	-	-	950	67	1 750	91	700	11	2 500	35	1 650	21	4 250	47	Arabie Saoudite
Somalia	-	-	3	-	-	700	-	5	-	708	77	-	-	800	35	-	-	1 508	47	...	Somalie
Sudan	30	1	55	2	1 106	1 634	698	657	1 834	100	2 346	100	64	4	132	10	1 898	16	2 478	22	Soudan
Syrian Arab Republic																					République Arabe Syrienne
Tunisia	680	30	785	29	1 555	...	-	-	2 235	100	...	...	1 005	34	...	...	3 240	62	...	...	Tunisie
United Arab Emirates																					Emirats arabes unis
Yemen																					Yémen
(Number of countries)	(13)		(13)		(13)	(12)	(13)	(13)	(13)		(12)		(12)	(12)		(12)		(12)		(12)	(Nombre de pays)
EUROPE																					
Algeria	500	9	4 000	57	380	3 000	-	-	880	13	7 000	100	480	6	4 500	50	1 360	9	11 500	67	Algérie
Malta	241	96	256	98	10	5	-	-	251	100	261	100	60	80	63	93	311	95	324	98	Malte
Morocco	3 163	55			768		355		4 286	75			368	4			4 654	29			Maroc
Turkey	...	...	854	5	...	1 364	...	-	...	...	2 218	13	...	...	1 160	5	...	...	3 378	8	Turquie
(Number of countries)	(3)		(3)		(3)	(3)	(3)	(3)	(3)		(3)		(3)	(3)		(3)		(3)		(3)	(Nombre de pays)

Region and country	Urban - Urbaine												Rural with adequate disposal Rurale avec installations adéquates				Total				Région et pays
	connected to public sewerage system raccordée à des égouts publics				household systems - installations privées				Total urban Total urbaine												
					pit privy, septic tank - fosses septiques, puisards, latrines à fosse		buckets seaux														
	1970		1975		1970		1975		1970		1975		1970		1975		1970		1975		
N'000	%	N'000	%	N'000	N'000	N'000	N'000	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%	N'000	%		
SOUTH-EAST ASIA																				ASIE DU SUD-EST	
Bangladesh	500	12	505	5	2 000	2 100	1 200	1 200	3 700	87	3 805	40	100	-	112	-	3 800	6	3 917	5	Bangladesh
Burma	321	6	346	5	1 600	1 804	600	570	2 521	45	2 720	38	7 200	32	7 844	32	9 721	35	10 564	33	Birmanie
Democratic People's Republic of Korea																					République populaire démocratique de Corée
India	40 000	36	45 500	34	14 000	25 000	40 000	45 000	94 000	85	116 500	87	5 000	1	8 700	2	99 000	18	125 200	20	Inde
Indonesia	460	2	460	2	10 000	13 969	-	-	10 460	50	14 429	60	4 250	4	5 635	5	14 710	12	20 064	15	Indonésie
Maldives	-	-	-	-	-	4	-	-	-	-	4	21	-	-	-	-	-	-	4	3	Maldives
Mongolia																					Mongolie
Nepal	40	10	50	9	5	15	10	10	55	14	75	14	5	-	5	-	60	1	80	1	Népal
Sri Lanka	1 100	39	1 300	32	500	783	551	654	2 151	76	2 737	68	6 022	61	6 269	55	8 173	64	9 006	59	Sri Lanka
Thailand	-	-	-	-	3 600	4 150	-	-	3 600	65	4 150	58	2 500	8	13 000	36	6 100	17	17 150	40	Thaïlande
(Number of countries)	(8)		(8)		(8)	(8)	(8)	(8)	(8)		(8)		(8)		(8)		(8)		(8)		(Nombre de pays)
WESTERN PACIFIC																				PACIFIQUE OCCIDENTAL	
Cambodia	739	83			150				889	100			120	2			1 009	14			Cambodge
China																					Chine
Democratic Republic of Viet-Nam																					République démocratique du Viet-Nam
Fiji	36	19	52	23	151	174	-	-	187	100	226	100	293	87	331	93	480	91	557	96	Fidji
Lao Democratic People's Republic	-	-	-	-	-	50	-	-	-	-	50	10	-	-	60	2	-	-	110	3	République démocratique populaire lao
Malaysia	336	11	536	14	1 365	1 742	1 274	1 458	2 975	100	3 736	100	3 259	43	3 669	43	6 234	59	7 405	60	Malaisie
Philippines	480	4	845	5	11 185	11 580	-	-	11 665	90	12 425	76	...	...	12 797	44	...	...	25 222	56	Philippines
Republic of Korea	3 830	29	6 549	40	340	340	3 490	6 265	7 660	59	13 154	80	-	-	8 926	50	7 660	25	22 080	64	République de Corée
Republic of South Viet-Nam	3 500	79			608		300		4 408	100			...	...			...	...			République du Sud Viet-Nam
Singapore	920	51	1 427	63	156	222	736	581	1 812	100	2 230	99	-	-	-	-	1 812	87	2 230	99	Singapour
Tonga	-	-	-	-	19	41	-	-	19	100	41	100	68	100	63	100	87	100	104	100	Tonga
Western Samoa	-	-	-	-	29	43	-	-	29	100	43	100	91	80	123	99	120	84	166	99	Samoa-Occidental
Papua New Guinea	52	23	90	25	83	144	92	130	227	100	364	100	110	5	120	5	337	14	484	18	Papouasie-Nouvelle-Guinée
(Number of countries)	(11)		(9)		(11)	(9)	(11)	(9)	(11)		(9)		(9)		(9)		(9)		(9)		(Nombre de pays)

Note: 1. ... No information.
- Magnitude negligible.

2. Blank space indicates no response.

1. ... Donnée non disponible.
- Quantité négligeable.

2. Espace blanc = aucune réponse n'est parvenue.

COMMUNITY WATER SUPPLY - PROPOSED NEW REGIONAL AND GLOBAL TARGETS FOR ACHIEVEMENT BY 1980, IN THE LIGHT OF PROGRESS MADE IN 1971-1975

Region	Percentage of urban population served									Percentage of rural population with easy access to safe water			Percentage of total population served	
	By house connexions			By public standposts			By either house connexions or by public standposts							
	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished	
	1970	1975		1970	1975		1970	1975		1970	1975		1970	1975
Africa	33	36	45	34	29	35	67	65	80	13	21	35	21	29
Americas	61	67	80 ^a	15	14	15	76	81	95	24	30	50	54	61
Eastern Mediterranean	56	52	60	23	28	30	79	80	90	19	16	25	37	37
Europe	47	67	80	21	14	15	68	81	95	45	63	80	52	70
South-East Asia	35	47	60	15	21	30	50	68	90	9	19	35	17	29
Western Pacific	65	75	85	11	16	15	76	91	100	23	30	35	40	50
Global	50	57	68	17	20	23	67	76	91	14	22	36	29	38

^a Target established in the Ten-Year Health Plan for the Americas.

EXCRETA DISPOSAL - PROPOSED NEW REGIONAL AND GLOBAL TARGETS FOR ACHIEVEMENT BY 1980, IN THE LIGHT OF PROGRESS MADE IN 1971-1975

Region	Percentage of urban population served									Percentage of rural population with adequate disposal			Percentage of total population served	
	By connexion to public sewerage system			By household systems			By either public sewerage or household systems							
	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished		Proposed target 1980	Accomplished	
	1970	1975		1970	1975		1970	1975		1970	1975		1970	1975
Africa	8	13	20	40	67	75	48	80	95	23	21	25	27	31
Americas	36	30	55 ^a	39	50	45	75	80	100	23	22	46	55	57
Eastern Mediterranean	7	10	20	55	53	75	62	63	95	12	14	25	24	30
Europe	31	20	30	12	18	30	43	38	60	5	18	30	20	26
South-East Asia	28	26	35	49	52	60	77	78	95	4	6	15	17	20
Western Pacific	27	24	35	54	57	65	81	81	100	11	43	60	31	55
Global	28	25	38	-	-	56	72	75	94	9	14	24	25	32

^a Minimum target established in the Ten-Year Health Plan for the Americas.

COMMUNITY WATER SUPPLY - INVESTMENTS NEEDED IN THE FIVE-YEAR PERIOD 1976-1980 TO
MEET THE PROPOSED NEW REGIONAL TARGETS FOR 1980

(In millions of US dollars at 1975 price levels)

Region	Urban			Rural	Total
	For population to be served by house connexions	For population to be served by public standposts	Total urban	For population to be served with reasonable access	
Africa	1 230	410	1 640	1 430	3 070
Americas	7 320	1 440	8 760	2 160	10 920
Eastern Mediterranean	990	150	1 140	510	1 650
Europe	280	100	380	300	680
South-East Asia	1 250	390	1 640	1 840	3 480
Western Pacific	720	50	770	120	890
Global	11 790	2 540	14 330	6 360	20 690

Note: Weighted average unit costs per capita for each region from the 1970 survey have been multiplied by an inflation factor to obtain 1975 unit costs. For want of a better index, estimates of rises in consumer prices were based on data published in International Financial Statistics, 29, No. 1, 1976.

EXCRETA DISPOSAL - INVESTMENTS NEEDED IN THE FIVE-YEAR PERIOD 1976-1980 TO
MEET THE PROPOSED NEW REGIONAL TARGETS FOR 1980

(In millions of US dollars at 1975 price levels)

Region	Urban			Rural	Total
	For population to be served by connexion public sewers	For population to be served by household systems	Total urban	For population to be served by adequate disposal	
* Africa	440	380	820	140	960
* Americas	5 620	-	5 620	610	6 230
* Eastern Mediterranean	1 620	1 360	2 980	490	3 470
Europe	340	70	410	40	450
South-East Asia	790	550	1 340	330	1 670
Western Pacific	1 040	330	1 370	240	1 610
Global	9 850	2 690	12 540	1 850	14 390

Note: Weighted average unit costs per capita for each region from the 1970 survey have been multiplied by an inflation factor to obtain 1975 unit costs. For want of a better index, estimates of rises in consumer prices were based on data published in International Financial Statistics, 29, No. 1, 1976.